



BASE LISTING DOCUMENT DATED 11 APRIL 2023

If you are in any doubt about any of the contents of this document, you should obtain independent professional advice.

Hong Kong Exchanges and Clearing Limited (“HKEX”), The Stock Exchange of Hong Kong Limited (the “Stock Exchange”) and Hong Kong Securities Clearing Company Limited (“HKSCC”) take no responsibility for the contents of this document, make no representation as to its accuracy or completeness and expressly disclaim any liability whatsoever for any loss howsoever arising from or in reliance upon the whole or any part of the contents of this document.

Non-collateralised Structured Products

**Base Listing Document relating to
Structured Products to be issued by
BNP Paribas Issuance B.V.**

(Incorporated in the Netherlands with its statutory seat in Amsterdam)

**unconditionally and irrevocably guaranteed by
BNP Paribas**

(incorporated in France with limited liability)

This document, for which we and BNP Paribas (the “**Guarantor**”) accept full responsibility, includes particulars given in compliance with the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited (the “**Listing Rules**”) for the purpose of giving information with regard to us, the Guarantor and our standard warrants (the “**Warrants**”), inline warrants (the “**Inline Warrants**”), callable bull/bear contracts (“**CBBCs**”) and other structured products (together, the “**Structured Products**”) to be listed on the Stock Exchange from time to time. This document may be updated and/or amended from time to time by way of addenda. You must ask us if any addenda to this document have been issued.

Our obligations under the Structured Products are guaranteed by the Guarantor under a guarantee executed by the Guarantor dated as of 11 April 2023 (the “**Guarantee**”). We and the Guarantor, having made all reasonable enquiries, confirm that to the best of our knowledge and belief the information contained in this document is accurate and complete in all material respects and not misleading or deceptive, and there are no other matters the omission of which would make any statement herein or this document misleading.

These are Structured Products involving derivatives. You should not invest in the Structured Products unless you fully understand and are willing to assume the risks associated with them.

The Structured Products are complex products. You should exercise caution in relation to them. Investors are warned that the price of the Structured Products may fall in value as rapidly as it may rise and holders may sustain a total loss of their investment. Prospective purchasers should therefore ensure that they understand the nature of the Structured Products and carefully study the risk factors set out in this document and, where necessary, seek professional advice, before they invest in the Structured Products.

The Structured Products constitute our general unsecured contractual obligations and of no other person, and the Guarantee in respect of the Structured Products constitutes the general unsecured contractual obligations of the Guarantor and of no other person. The Structured Products will rank equally among themselves and with all our other unsecured obligations and all other unsecured obligations of the Guarantor (save for those obligations preferred by law) upon liquidation. If you purchase the Structured Products, you are relying upon our creditworthiness and the creditworthiness of the Guarantor and have no rights under the Structured Products against (a) the company which has issued the underlying securities; (b) the fund which has issued the underlying securities, or its trustee (if applicable) or manager; or (c) the index compiler of any underlying index. If we become insolvent or default on our obligations under the Structured Products or the Guarantor becomes insolvent or defaults on its obligations under the Guarantee, you may not be able to recover all or even part of the amount due under the Structured Products (if any). The Guarantor is subject to the exercise of the bail-in powers under the French legislation for implementation of the Bank Recovery and Resolution Directive.

Sponsor

BNP Paribas Securities (Asia) Limited

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IMPORTANT INFORMATION

You should carefully study the risk factors set out in this document and the Listing Documents.

What is this document about?

This document is for information purposes only and does not constitute an offer, an advertisement or invitation to the public to subscribe for or to acquire any Structured Products.

What documents should you read before investing in the Structured Products?

A launch announcement and supplemental listing document of each series of Structured Products will set out the detailed commercial terms of the relevant series. You must read this document (including any addendum to this document to be issued from time to time) together with such launch announcement and supplemental listing document (including any addendum to such launch announcement and supplemental listing document to be issued from time to time) (together, the “**Listing Documents**”) before investing in any Structured Products. You should carefully study the risk factors set out in the Listing Documents.

Is there any guarantee or collateral for the Structured Products?

Our obligations under the Structured Products are unconditionally and irrevocably guaranteed by the Guarantor. If we become insolvent or default on our obligations under the Structured Products and the Guarantor becomes insolvent or defaults on its obligations under the Guarantee, you can only claim as an unsecured creditor of the Issuer and the Guarantor. In such event, you may not be able to recover all or even part of the amount due under the Structured Products (if any).

What are our and the Guarantor’s credit ratings?

The Issuer’s long term credit ratings as of 6 April 2023 is:

Rating agency

S&P Global Ratings
 (“S&P”)

Rating

A+ (stable
outlook)

Our Guarantor’s long term credit ratings as of 6 April 2023 are:

Rating agency

Moody’s Investors Service,
Inc. (“**Moody’s**”)
S&P

Rating

Aa3 (stable
outlook)
A+ (stable outlook)

The credit ratings are only an assessment by the rating agencies of the Issuer’s and the Guarantor’s overall financial capacity to pay its debts respectively.

A+ is among the top three major credit rating categories and is the fifth highest investment-grade ranking of the ten investment-grade ratings (including + or - sub-grades) assigned by S&P.

Aa3 is among the top three major credit rating categories and is the fourth highest investment-grade ranking of the ten investment-grade ratings (including 1, 2 and 3 sub-grades) assigned by Moody’s.

Please refer to the brief guide in Appendix 5 to this document on what such credit ratings mean.

Rating agencies usually receive a fee from the companies that they rate. When evaluating our and the Guarantor’s creditworthiness, you should not solely rely on our and the Guarantor’s credit ratings because:

- a credit rating is not a recommendation to buy, sell or hold the Structured Products;
- credit ratings of companies may involve difficult-to-quantify factors such as market competition, the success or failure of new products and markets and managerial competence;

- a high credit rating is not necessarily indicative of low risk. Our and the Guarantor's credit ratings as of the above date are for reference only and may be subject to change thereafter. You may visit *www.bnpparibas.com* to obtain information about the credit ratings of us and the Guarantor. Any downgrading of our and the Guarantor's credit ratings could result in a reduction in the value of the Structured Products;
- a credit rating is not an indication of the liquidity or volatility of the Structured Products; and
- a credit rating may be downgraded if the credit quality of the Issuer and/or the Guarantor declines.

The Structured Products are not rated.

Our and the Guarantor's credit ratings are subject to change or withdrawal at any time within each rating agency's sole discretion. You should conduct your own research using publicly available sources to obtain the latest information with respect to our and the Guarantor's credit ratings from time to time.

Is the Issuer or the Guarantor regulated by the Hong Kong Monetary Authority referred to in Rule 15A.13(2) or the Securities and Futures Commission referred to in Rule 15A.13(3)?

The Issuer is not regulated by the Hong Kong Monetary Authority referred to in Rule 15A.13(2) or the Securities and Futures Commission referred to in Rule 15A.13(3). The Hong Kong branch of the Guarantor is regulated by the Hong Kong Monetary Authority. The Guarantor is also regulated by Comité des Etablissements de Crédit et des Entreprises d'Investissement.

Is the Issuer or the Guarantor subject to any litigation?

Save as disclosed in this document, the Issuer, the Guarantor and their respective subsidiaries ("**BNP Group**") are not aware of any litigation or claims of material importance pending or threatened against any of them.

Authorisation for the issue of the Structured Products

The issue of the Structured Products was authorised by our board of directors on 29 April 2022.

Have the Issuer's and the Guarantor's financial positions changed since last financial year-end?

Save as disclosed in Appendix 6 of this document, (i) there has been no material adverse change in the Issuer's financial or trading position since 31 December 2021 and (ii) there has been no material adverse change in the Guarantor's financial or trading position since 31 December 2022.

Do you need to pay any transaction cost?

The Stock Exchange charges a trading fee of 0.00565 per cent., the Securities and Futures Commission ("**SFC**") charges a transaction levy of 0.0027 per cent. and the Financial Reporting Council charges a transaction levy of 0.00015 per cent. for each transaction effected on the Stock Exchange payable by each of the seller and the buyer and calculated on the value of the consideration for the Structured Products. The levy for the investor compensation fund is currently suspended.

Do you need to pay any tax?

You may be required to pay stamp duties, taxes and other charges in accordance with the laws and practices of the country of your purchase in addition to the issue price of each Structured Product. See the section headed "Taxation" for further information.

Placing, sale and grey market dealings

No action has been or will be taken by us that would permit a public offering of any series of Structured Products or possession or distribution of any offering material in relation to any Structured Products in any jurisdiction (other than Hong Kong) where action for the purpose is required. No offers, sales, re-sales, transfers or deliveries of any Structured Products, or distribution of any offering material relating to the Structured Products may be made in or from any jurisdiction except in circumstances which will result in compliance with any applicable laws or regulations and which will not impose any obligation on us or the Guarantor. See the section headed “Placing and Sale” for further information.

Following the launch of a series of Structured Products, we may place all or part of that series with our related party. The Structured Products may be sold to investors in the grey market in the period between the launch date and the listing date. We will report any dealings in Structured Products by any member of the BNP Group in the grey market to the Stock Exchange on the listing date through the website of the HKEX at https://www.hkex.com.hk/?sc_lang=en.

Where can you read the relevant documents?

Copies of the following documents are available on the website of the HKEX at www.hkexnews.hk and our website at www.bnppwarrant.com.hk:

- (a) (i) this document and any addendum to this document; and
- (ii) the launch announcement and supplemental listing document, as long as the relevant series of Structured Products is listed on the Stock Exchange,

which include our latest audited financial statements and any interim or quarterly financial statements and the latest audited financial statements and any interim or quarterly financial statements of the Guarantor; and

- (b) the consent letters of our auditor (with respect to our annual financial statements for the year ended 31 December 2021),

Mazars Accountants N.V., and the Guarantor’s auditors, Deloitte & Associés, PricewaterhouseCoopers Audit and Mazars (the “**Auditors**”).

以上各文件可於香港交易所披露易網站(www.hkexnews.hk)以及本公司網站(www.bnppwarrant.com.hk)瀏覽。

Please refer to (i) the base listing document dated 7 April 2022 (“**2022 BLD**”) for the Guarantor’s Consolidated Financial Statements for the year ended 31 December 2021 and the Statutory Auditors’ report on such consolidated financial statements; and (ii) the addendum to the 2022 BLD dated 29 April 2022 for the Issuer’s annual financial statements for the year ended 31 December 2021 and the independent auditor’s report on such financial statements.

Have the Auditors consented to the inclusion of their report in this document?

As at the date of this document, the Auditors have given and have not withdrawn their written consent to the inclusion of their statutory auditor’s report dated 13 March 2023 on the consolidated financial statements of the Guarantor for the year ended 31 December 2022 in this document and/or the references to their names in the Listing Documents, in the form and context in which they are included. Their report was not prepared for incorporation into this document.

The Auditors do not hold the Guarantor’s shares or shares in its subsidiaries, nor do they have the right (whether legally enforceable or not) to subscribe for or to nominate persons to subscribe for the Guarantor’s securities or securities of any of its subsidiaries.

How can you get further information about BNP Paribas?

You may visit our website at www.bnpparibas.com to obtain further information about us and/or the Guarantor.

You must note that the information on our website will be of a general nature and cannot be relied upon as accurate and/or correct and will not have been prepared exclusively for the purposes of any particular financial instrument issued by us, including the Structured Products.

Authorised representatives

Martin Wong and Kenny Ko, each of 60th Floor, Two International Finance Centre, 8 Finance

Street, Central, Hong Kong, are our authorised representatives and are authorised to accept services of process and notices on our behalf in Hong Kong.

Governing law of the Structured Products

All contractual documentation for the Structured Products will be governed by, and construed in accordance with, the laws of Hong Kong.

The Listing Documents are not the sole basis for making an investment decision

The Listing Documents do not take into account your investment objectives, financial situation or particular needs. Nothing in the Listing Documents should be construed as a recommendation by us, the Guarantor or our respective affiliates to invest in the Structured Products or the underlying asset of the Structured Products.

No person has been authorised to give any information or to make any representations other than those contained in this document in connection with the Structured Products, and, if given or made, such information or representations must not be relied upon as having been authorised by us or the Guarantor.

The Stock Exchange and HKSCC have made no assessment of, nor taken any responsibility for, our financial soundness or the merits of investing in any Structured Products, nor have they verified the accuracy or the truthfulness of statements made or opinions expressed in this document.

This document has not been reviewed by the Securities and Futures Commission. You are advised to exercise caution in relation to the offer of the Structured Products.

Capitalised terms

Unless otherwise specified, capitalised terms used in this document have the meanings set out in the General Conditions set out in Appendix 1 and the Product Conditions applicable to the relevant series of Structured Products set out in Appendices 2, 3 and 4 respectively (together, the “**Conditions**”).

OVERVIEW OF WARRANTS

What is a Warrant?

A Warrant is a type of derivative warrants.

A derivative warrant linked to a share of a company, an unit or share of a fund, a commodity, a commodity future, an index, a currency pair or other assets (each an “**Underlying Asset**”) is an instrument which gives the holder a right to “buy” or “sell” an Underlying Asset at, or derives its value by reference to, a pre-set price/level/exchange rate called the Exercise Price/Strike Price/Strike Level/ Strike Rate on the Expiry Date. It usually costs a fraction of the value of the Underlying Asset.

A derivative warrant may provide leveraged return to you (but conversely, it could also magnify your losses).

How and when can you get back your investment?

Our Warrants are European Style warrants. This means they can only be exercised on the Expiry Date.

A Warrant will, upon exercise on the Expiry Date, entitle you to a cash amount called the “**Cash Settlement Amount**” (net of any Exercise Expenses) (if positive) according to the applicable Conditions.

You will receive the Cash Settlement Amount less any Exercise Expenses upon settlement at expiry. If the Cash Settlement Amount is equal to or less than the Exercise Expenses, no amount is payable to you and you will lose your entire investment.

How do our Warrants work?

The potential payoff upon expiry or exercise of the Warrants is calculated by us by reference to the difference between:

(a) for a Warrant linked to a security, commodity or commodity future, the Exercise Price/Strike Price and Closing Price/Average Price;

(b) for a Warrant linked to an index, the Strike Level and the Closing Level; and

(c) for a Warrant linked to a currency pair, the Strike Rate and the Spot Rate.

Call Warrants

A call Warrant is suitable to you if you hold a bullish view on the price/level/exchange rate of the Underlying Asset during the term of that call Warrant.

A call Warrant will be exercised if the Average Price/ Closing Price/Closing Level/Spot Rate is greater than Exercise Price/Strike Price/Strike Level/Strike Rate (as the case may be). The more the Average Price/ Closing Price/Closing Level/Spot Rate exceeds the Exercise Price/Strike Price/Strike Level/Strike Rate (as the case may be), the higher the payoff upon expiry or exercise. If the Average Price/Closing Price/Closing Level/Spot Rate is at or below the Exercise Price/Strike Price/Strike Level/Strike Rate (as the case may be), you will lose all your investment.

Put Warrants

A put Warrant is suitable to you if you hold a bearish view on the price/level/exchange rate of the Underlying Asset during the term of that put Warrant.

A put Warrant will be exercised if the Average Price/ Closing Price/Closing Level/Spot Rate is below the Exercise Price/Strike Price/Strike Level/Strike Rate (as the case may be). The more the Average Price/ Closing Price/Closing Level/Spot Rate is below the Exercise Price/Strike Price/Strike Level/Strike Rate (as the case may be), the higher the payoff upon expiry or exercise. If the Exercise Price/Strike Price/Strike Level/Strike Rate is at or below the Average Price/Closing Price/Closing Level/Spot Rate (as the case may be), you will lose all your investment.

Where can you find the Product Conditions applicable to our Warrants?

You should review the Product Conditions applicable to each type of the Warrants before your investment.

The Product Conditions applicable to each type of our Warrants are set out in Parts A to F of Appendix 2 (as may be supplemented by any addendum and/or the relevant launch announcement and supplemental listing document).

What are the factors determining the price of a Warrant?

The price of a Warrant generally depends on the prevailing price/level/exchange rate of the Underlying Asset. However, throughout the term of a Warrant, its price/level/exchange rate will be influenced by one or more of the following factors, including:

- (a) the Exercise Price/Strike Price/Strike Level/Strike Rate applicable to that Warrant;
- (b) the value and volatility of the price/level/exchange rate of the Underlying Asset (being a measure of the fluctuation in the price/level/exchange rate of the Underlying Asset);
- (c) the time remaining to expiry: generally, the longer the remaining life of the Warrant, the greater its value;
- (d) interest rates;
- (e) expected dividend payments or other distributions (if any) on the Underlying Asset or on any components comprising the underlying index;
- (f) the liquidity of the Underlying Asset or of the futures contracts relating to the underlying index;
- (g) the supply and demand for the Warrant;
- (h) our related transaction costs; and

- (i) our creditworthiness and the creditworthiness of the Guarantor.

What is your maximum loss?

Your maximum loss in our Warrants will be your entire investment amount plus any transaction costs.

How can you get information about the Warrants after issue?

You may visit the HKEX's website at https://www.hkex.com.hk/products/securities/structured-products/overview?sc_lang=en or our website at <http://www.bnppwarrant.com.hk> to obtain further information on our Warrants or any notice given by us or the Stock Exchange in relation to our Warrants.

OVERVIEW OF INLINE WARRANTS

What is an Inline Warrant?

An Inline Warrant is a type of derivative warrants.

A derivative warrant linked to an Underlying Asset is an instrument which derives its value from the Underlying Asset. It usually costs a fraction of the value of the Underlying Asset.

A derivative warrant may provide leveraged return to you (but conversely, it could also magnify your losses).

How and when can you get back your investment?

Our Inline Warrants are European Style warrants. This means they can only be exercised on the Expiry Date.

An Inline Warrant will, upon exercise on the Expiry Date, entitle you to a cash amount called the “**Cash Settlement Amount**” (net of any Exercise Expenses) (if positive) according to the applicable Conditions.

You will receive the Cash Settlement Amount less any Exercise Expenses upon settlement at expiry. As of the date of this document, no Exercise Expenses are payable for cash settled warrants (including our Inline Warrants).

How do our Inline Warrants work?

Our Inline Warrants carry exotic features and their terms and pricing may be more complicated than the Warrants. Our Inline Warrants provide a pre-fixed potential payoff at either a **capped amount or a floor amount** at expiry.

You will either:

- (i) receive a fixed and capped amount equal to the Maximum Payoff Amount per Inline Warrant at expiry if the Average Price (for an Inline Warrant linked to a share) or Closing Level (for an Inline Warrant linked to an index) is at or below the Upper Strike

Price or Upper Strike Level (as the case may be) and at or above the Lower Strike Price or Lower Strike Level (as the case may be); or

- (ii) receive a fixed and floor amount equal to the Minimum Payoff Amount per Inline Warrant (which may be substantially less than your initial investment) at expiry and may suffer loss in your investment if the Average Price (for an Inline Warrant linked to a share) or Closing Level (for an Inline Warrant linked to an index) is above the Upper Strike Price or Upper Strike Level (as the case may be) or below the Lower Strike Price or Lower Strike Level (as the case may be). You will still receive the Minimum Payoff Amount per Inline Warrant in this scenario because such amount is included in the price you pay for buying our Inline Warrants.

Where can you find the Product Conditions applicable to our Inline Warrants?

You should review the Product Conditions applicable to each type of the Inline Warrants before your investment.

The Product Conditions applicable to each type of our Inline Warrants are set out in Parts A to B of Appendix 3 (as may be supplemented by any addendum and/or the relevant launch announcement and supplemental listing document).

What are the factors determining the price of an Inline Warrant?

The price of an Inline Warrant generally depends on the prevailing price or level of the Underlying Asset. However, throughout the term of an Inline Warrant, its price will be influenced by one or more of the following factors, including:

- (a) the range between the Upper Strike Price or Upper Strike Level and the Lower Strike Price or Lower Strike Level (both inclusive) applicable to that Inline Warrants: generally, the wider the range between the Upper Strike Price or Upper Strike Level

- and the Lower Strike Price or Lower Strike Level (both inclusive) of the Inline Warrants, the greater its value;
- (b) the value or level of the Underlying Asset: generally, the closer the price or level of the Underlying Asset towards the mid-way of the Upper Strike Price or Upper Strike Level and the Lower Strike Price or Lower Strike Level, ignoring interim interest rates and expected dividend payments on the Underlying Asset or on any components comprising the underlying index and assuming all other factors remain constant, the greater the value of the Inline Warrants; conversely, the farther away the price or level of the Underlying Asset from the mid-way of the Upper Strike Price or Upper Strike Level and the Lower Strike Price or Lower Strike Level, ignoring interim interest rates and expected dividend payments on the Underlying Asset or on any components comprising the underlying index and assuming all other factors remain constant, the lower the value of the Inline Warrants;
 - (c) the volatility of the price or level of the Underlying Asset (being a measure of the fluctuation in the price or level of the Underlying Asset over time): generally, if an Inline Warrant is “out-of-the-range” (ie. the price or level of the Underlying Asset falls outside the range between the Upper Strike Price or Upper Strike Level and the Lower Strike Price or Lower Strike Level (both inclusive)), the higher the volatility, the greater the value of the Inline Warrants; conversely, if an Inline Warrant is “in-the-range” (ie. the price or level of the Underlying Asset falls within the range between the Upper Strike Price or Upper Strike Level and the Lower Strike Price or Lower Strike Level (both inclusive)), the higher the volatility, the lower the value of the Inline Warrants;
 - (d) the expected probability of the Average Price or Closing Level falling within the range between the Upper Strike Price or Upper Strike Level and the Lower Strike Price or Lower Strike Level (both inclusive) at expiry;
 - (e) the time remaining to expiry: generally, if an Inline Warrant is out-of-the-range, the longer the remaining life of the Inline Warrant, the greater its value; conversely, if an Inline Warrant is in-the-range, the shorter the remaining life of the Inline Warrant, the greater its value;
 - (f) the interim interest rates;
 - (g) the expected dividend payments or other distributions (if any) on the Underlying Asset or on any components comprising the underlying index;
 - (h) the liquidity of the Underlying Asset or of the futures contracts relating to the underlying index;
 - (i) the supply and demand for the Inline Warrant;
 - (j) our related transaction costs; and
 - (k) our creditworthiness and the creditworthiness of the Guarantor.
- What is your maximum loss?**
- If we become insolvent or default on our obligations under our Inline Warrants or the Guarantor becomes insolvent or defaults on its obligations under the Guarantee, the maximum loss in the Inline Warrants will be your entire investment amount plus any transaction costs.
- Otherwise, if the Average Price or Closing Level (as the case may be) is above the Upper Strike Price or Upper Strike Level (as the case may be) or below the Lower Strike Price or Lower Strike Level (as the case may be) at expiry, the maximum loss in the Inline Warrants will be your entire investment amount less the Minimum Payoff Amount per Inline Warrant multiplied by the number of Inline Warrants purchased plus any transaction costs.

What is your maximum profit?

The potential maximum profit in our Inline Warrants will be capped at the Maximum Payoff Amount per Inline Warrant multiplied by the number of Inline Warrants purchased less your entire investment amount and transaction costs.

You should note that your profit or loss in the Inline Warrants will be affected by the amount invested by you and transaction costs.

How can you get information about the Inline Warrants after issue?

You may visit the HKEX's website at https://www.hkex.com.hk/products/securities/structured-products/overview?sc_lang=en or our website at <https://www.bnppwarrant.com/en/inline-warrant/overview> to obtain further information on Inline Warrants or any notice given by us or the Stock Exchange in relation to our Inline Warrants.

OVERVIEW OF CBBCS

What are CBBCs?

CBBCs are a type of Structured Products that track the performance of an Underlying Asset. CBBCs can be issued on different types of Underlying Assets as prescribed by the Stock Exchange from time to time, including:

- (a) securities listed on the Stock Exchange;
- (b) Hang Seng Index, Hang Seng China Enterprises Index, Hang Seng TECH Index and Hang Seng China H-Financials Index; and/or
- (c) overseas securities, overseas indices, currencies, commodities (such as oil, gold and platinum), commodity futures or other assets as prescribed by the Stock Exchange from time to time.

A list of eligible Underlying Assets for CBBCs is available on the website of the HKEX at https://www.hkex.com.hk/Products/Securities/Structured-Products/Eligible-Underlying-Assets?sc_lang=en.

CBBCs are issued either as callable bull contracts (“**bull CBBCs**”) or callable bear contracts (“**bear CBBCs**”), allowing you to take either bullish or bearish positions on the Underlying Asset.

Bull CBBCs are designed for investors who have an optimistic view on the Underlying Asset. Bear CBBCs are designed for investors who have a pessimistic view on the Underlying Asset.

CBBCs have a mandatory call feature (the “**Mandatory Call Event**”) and, subject to the limited circumstances set out in the relevant Conditions in which a Mandatory Call Event may be reversed, we must terminate our CBBCs upon the occurrence of a Mandatory Call Event. See “What are the mandatory call feature of CBBCs?” below.

There are 2 categories of CBBCs, namely:

- (a) Category R CBBCs; and
- (b) Category N CBBCs.

Your entitlement following the occurrence of a Mandatory Call Event will depend on the category of the CBBCs.

If no Mandatory Call Event occurs, the CBBCs will be exercised automatically on the Expiry Date by payment of a Cash Settlement Amount (if any). The Cash Settlement Amount (if any) payable at expiry represents the difference between the Closing Price/ Closing Level of the Underlying Asset on the Valuation Date and the Strike Price/Strike Level.

The Conditions applicable to CBBCs are set out in Parts A, B and C of Appendix 4 (as may be supplemented by any addendum or the relevant launch announcement and supplemental listing document).

What are the mandatory call feature of CBBCs?

Mandatory Call Event

Subject to the limited circumstances set out in the relevant Conditions in which a Mandatory Call Event may be reversed, we must terminate the CBBCs if a Mandatory Call Event occurs. A Mandatory Call Event occurs if the Spot Price/Spot Level of the Underlying Asset is:

- (a) at or below the Call Price/Call Level (in the case of a series of bull CBBCs); or
- (b) at or above the Call Price/Call Level (in the case of a series of bear CBBCs),

at any time during the Observation Period.

The Observation Period starts from and including the Observation Commencement Date of the relevant CBBCs and ends on and including the Trading Day immediately preceding the Expiry Date.

Subject to the limited circumstances set out in the relevant Conditions in which a Mandatory Call Event may be reversed and such modification and amendment as may be prescribed by the Stock Exchange from time to time:

- (a) all trades in the CBBCs concluded via auto-matching or manually after the time of the occurrence of a Mandatory Call Event; and

- (b) where the Mandatory Call Event occurs during a pre-opening session or closing auction session (if applicable), all auction trades in the CBBCs concluded in such session and all manual trades concluded after the end of the pre-order matching period in such session, will be invalid and cancelled, and will not be recognised by us or the Stock Exchange.

The time at which a Mandatory Call Event occurs will be determined by reference to:

- (a) in respect of CBBCs over single equities (“**Single Equity CBBCs**”) or CBBCs over exchange traded fund (“**ETF**”) (“**ETF CBBCs**”), the Stock Exchange’s automatic order matching and execution system time at which the Spot Price is at or below the Call Price (for a series of bull CBBCs) or is at or above the Call Price (for a series of bear CBBCs); or
- (b) in respect of CBBCs over index (“**Index CBBCs**”), the time the relevant Spot Level is published by the index compiler at which the Spot Level is at or below the Call Level (for a series of bull CBBCs) or is at or above the Call Level (for a series of bear CBBCs),

subject to the rules and requirements as prescribed by the Stock Exchange from time to time.

Category R CBBCs vs. Category N CBBCs

The launch announcement and supplemental listing document for the relevant series of CBBCs will specify whether the CBBCs are Category R CBBCs or Category N CBBCs.

“**Category N CBBCs**” refer to CBBCs for which the Call Price/Call Level is equal to their Strike Price/ Strike Level. In respect of a series of Category N CBBCs, you will not receive any cash payment following the occurrence of a Mandatory Call Event.

“**Category R CBBCs**” refer to CBBCs for which the Call Price/Call Level is different from their Strike Price/Strike Level. In respect of a series of Category R CBBCs, you may receive a cash payment called the “**Residual Value**” (net of any Exercise Expenses) upon the occurrence of a Mandatory Call Event. The amount of the Residual Value payable (if any) is calculated by reference to:

- (a) in respect of a series of bull CBBCs, the difference between the Minimum Trade Price/ Minimum Index Level and the Strike Price/ Strike Level of the Underlying Asset; and
- (b) in respect of a series of bear CBBCs, the difference between the Strike Price/Strike Level and the Maximum Trade Price/Maximum Index Level of the Underlying Asset.

You must read the applicable Product Conditions and the relevant launch announcement and supplemental listing document to obtain further information on the calculation formula of the Residual Value applicable to Category R CBBCs.

You may lose all of your investment in a particular series of CBBCs if:

- (a) in the case of a series of bull CBBCs, the Minimum Trade Price/Minimum Index Level of the Underlying Asset is equal to or less than the Strike Price/Strike Level; or
- (b) in the case of a series of bear CBBCs, the Maximum Trade Price/Maximum Index Level of the Underlying Asset is equal to or greater than the Strike Price/Strike Level.

Where can you find the Product Conditions applicable to our CBBCs?

You should review the Product Conditions applicable to each type of the CBBCs before your investment.

The Product Conditions applicable to each type of our CBBCs are set out in Appendix 4.

How is the funding cost calculated?

The issue price of a series of CBBCs is set by reference to (i) the difference between the initial reference spot price/level of the Underlying Asset as at the launch date of the CBBC and the Strike Price/ Strike Level, plus (ii) if applicable, a funding cost.

The initial funding cost applicable to the CBBCs as of the launch date will be specified in the relevant launch announcement and supplemental listing document for the relevant series.

The funding cost is an amount determined by us based on a number of factors, including but not limited to the Strike Price/Strike Level, the prevailing interest rate and, for Single Equity CBBCs or ETF CBBCs, the expected dividend/distribution yield in respect of the Underlying Asset.

The funding cost may fluctuate throughout the life of the CBBCs as the funding rate changes from time to time.

Further details about the funding cost applicable to a series of CBBCs will be described in the relevant launch announcement and supplemental listing document.

Do you own the Underlying Asset?

CBBCs convey no interest in the Underlying Asset. We may choose not to hold the Underlying Asset or any derivatives contracts linked to the Underlying Asset. There is no restriction through the issue of the CBBCs on the ability of the BNP Group to sell, pledge or otherwise convey all rights, titles and interests in any Underlying Asset or any derivatives products linked to the Underlying Asset.

What are the factors determining the price of a CBBC?

The price of a series of CBBCs tend to follow closely the movement in the value of the Underlying Asset in dollar value (on the assumption of an entitlement ratio of one CBBC to one unit of Underlying Asset).

However, throughout the term of a CBBC, its price will be influenced by a number of factors, including:

- (a) the Strike Price/Strike Level and the Call Price/ Call Level;
- (b) the likelihood of the occurrence of a Mandatory Call Event;
- (c) for Category R CBBCs only, the probable range of the Residual Value payable upon the occurrence of a Mandatory Call Event;
- (d) the time remaining to expiry;
- (e) any change(s) in interim interest rates;

- (f) expected dividend payments or other distribution on the Underlying Asset or on any components comprising the underlying index;
- (g) the probable range of the Cash Settlement Amount;
- (h) the supply and demand for the CBBCs;
- (i) the liquidity of the Underlying Asset or of the future contracts relating to the underlying index;
- (j) our related transaction costs; and/or
- (k) our creditworthiness and the creditworthiness of the Guarantor.

What is your maximum loss?

Your maximum loss in CBBCs will be your entire investment amount plus any transaction cost.

How can you get information about the CBBCs after issue?

You may visit the HKEX's website at https://www.hkex.com.hk/products/securities/structured-products/overview?sc_lang=en or our website at <http://www.bnppwarrant.com.hk> to obtain further information on CBBCs or any notice given by us or the Stock Exchange in relation to our CBBCs.

OVERVIEW OF THE BRRD AND ITS IMPLICATIONS TO THE STRUCTURED PRODUCTS

What is the BRRD?

The Bank Recovery and Resolution Directive (2014/59/EU), as amended (“**BRRD**”) is a legislative development in the European Union (“**EU**”) which was introduced to address the shortcomings in the national laws and regulations of EU Member States for the resolution of failing banks and financial institutions. The BRRD provides that it should be applied by EU Member States from 1 January 2015, except for the Bail-In Power (as described below) which should be applied from 1 January 2016. The implementation date of the BRRD in each EU Member State depends on the implementation legislation enacted, or which will be enacted in each such EU Member State. The BRRD has been implemented in France. In March 2016, the European Commission has adopted a Commission Delegated Regulation setting out a number of regulatory technical standards for the BRRD.

The BRRD provides for the establishment of an EU-wide framework for the recovery and resolution of EU credit institutions and investment firms as well as certain of their group companies falling under the scope of the BRRD. The BRRD requires the governments of all EU Member States to provide their relevant resolution authorities with a set of tools to intervene sufficiently early and quickly in an unsound or failing institution so as to ensure the continuity of that institution’s critical financial and economic functions, while minimising the impact of that institution’s failure on the broader economy and financial system.

The BRRD contains four resolution tools and powers (the “**Resolution Tools**”) which may be used alone or in combination where the relevant resolution authority considers that (a) an affected institution is failing or likely to fail, (b) there is no reasonable prospect that any alternative private sector measures would prevent the failure of such affected institution within a reasonable timeframe, and (c) a resolution action is in the public interest: (i) sale of business — which enables the relevant resolution authorities to direct the sale of the affected institution or the whole or part of its business on commercial terms; (ii) bridge institution — which enables the relevant resolution authorities to transfer all or part of the business of the affected institution to a “bridge institution” (an entity created for this purpose that is wholly or partially in public control); (iii) asset separation — which enables the relevant resolution authorities to transfer impaired or problem assets to one or multiple publicly owned asset management vehicles in order for them to be managed with a view to maximising their value through eventual sale or orderly wind-down (this can be used together with another resolution tool only); and (iv) Bail-In Power (as described in the paragraph headed “What is Bail-In Power” below).

Directive (EU) 2019/879 of the European Parliament and of the Council of 20 May 2019 amending BRRD as regards the loss-absorbing and recapitalisation capacity of credit institutions and investment firms and Regulation (EU) 2019/877 of the European Parliament and of the Council of 20 May 2019 amending the Single Resolution Mechanism Regulation (Regulation 806/2014) as regards the loss-absorbing and recapitalisation capacity of credit institutions and investment firms, have been published on 7 June 2019 in the Official Journal of the European Union. They amend a number of key EU banking directives and regulations, among which the BRRD, the Directive 2013/36/EU of the European Parliament and of the Council of 26 June 2013 on access to the activity of credit institutions and the prudential supervision of credit institutions and investment firms (“**CRD IV**”), the Regulation 2013/575 of the European Parliament and of the Council of 26 June 2013 on prudential requirements for credit institutions and investment firms (“**CRR**”), and the Single Resolution Mechanism.

The BRRD has been implemented in France through Ordinance No.2020-1636 dated 21 December 2020 relating to the resolution regime in the banking sector (the “**Ordinance**”). In particular, the Ordinance has implemented Article 48(7) of BRRD which requires EU Member States to modify their national insolvency law in order to ensure that, in insolvency proceedings, claims resulting from funds rank below any other claims that do not result from own funds as defined by the CRR (the “**Own**

Funds”). The transposition of this provision by the Ordinance has modified the rules governing the order of creditors’ claims applicable to French credit institutions in insolvency proceedings. Subordinated obligations and deeply subordinated obligations of the Guarantor issued before 28 December 2020 will keep their contractual ranking if they are, or have been, fully or partially recognised as Own Funds.

Article L.613-30-3, I, 5° of the French *Code monétaire et financier* states that, as from 28 December 2020, it should not be possible for liabilities of a credit institution that are not Own Funds to rank *pari passu* with Own Funds.

Therefore, a new rank within subordinated obligations has been created for subordinated obligations or deeply subordinated obligations of the Guarantor, issued as from 28 December 2020 if and when they completely cease to constitute tier 2 capital or additional tier 1 capital instruments of the Guarantor. They will rank in priority to tier 2 capital instruments and additional tier 1 capital instruments of the Guarantor in order to comply with article L.613-30-3, I, 5° of the French *Code monétaire et financier*.

Consequently,

- (i) as long as subordinated obligations are recognised as tier 2 capital instruments, they will rank as tier 2 capital instruments, and, if they are no longer recognised as tier 2 capital instruments, they will automatically rank as “**Disqualified Subordinated Obligations**”; and
- (ii) as long as deeply subordinated obligations are recognised as additional tier 1 capital instruments, they will rank as additional tier 1 capital instruments of the Guarantor, and, if they are no longer recognised as additional tier 1 capital instruments, they will automatically rank as disqualified additional tier 1 obligations and will rank *pari passu* with the Disqualified Subordinated Obligations;

without any action from the Guarantor and without obtaining the consent of the creditors of subordinated obligations or any other obligations.

All subordinated obligations or deeply subordinated obligations granted by the Guarantor prior to the date of entry into force of the Ordinance that are, or have been, fully or partially recognised as Own Funds of the Guarantor, rank and as long as they are outstanding will rank as tier 2 capital instruments or additional tier 1 capital instruments of the Guarantor as the case may be, in accordance with their contractual terms.

The implementation of the Resolution Tools with respect to the Guarantor may result in significant structural changes and in a partial or total write down, modification or variation of claims of shareholders and creditors, including the reduction, modification, cancellation or conversion, all, or a portion, of any amounts payable by the Guarantor under the terms of the Guarantee, into other securities of the Guarantor (or of another person), including by means of a variation of the terms of the Guarantee. The exercise of any resolution power under the BRRD by the relevant resolution authorities over the Guarantor could materially adversely affect its creditworthiness and the rights of investors under the Structured Products and the market value of the Structured Products. You as investors in the Structured Products may therefore lose all or a substantial part of your investment in the Structured Products.

It is important to note that certain protections are granted to the creditors of an EU credit institution in case of the exercise of the Resolution Tools (including the Bail-In Power) over such institution. The most important one is the principle known as the “no creditor worse off principle” as provided for in the BRRD. This principle is intended to ensure that the creditors of an affected institution which is subject to the exercise of the Bail-In Power under the BRRD shall not incur greater losses than they would have incurred if such affected institution had been wound up under normal insolvency proceedings. For this purpose, the relevant resolution authorities in the EU have to ensure that it is assessed at the time of exercise of the Bail-In Power whether shareholders and creditors of an affected institution would have received better treatment if such affected institution had entered into normal insolvency proceedings.

The Issuer is not subject to the BRRD

The Issuer is incorporated as a private limited company under Dutch law as an exempt group finance company under the Dutch Financial Supervision Act, and will not be subject to the BRRD.

The Guarantor is subject to the BRRD

The Guarantor is a credit institution incorporated in France and is subject to the BRRD and the French legislation having implemented the BRRD and Regulation (EUR) No 806/2014, as amended.

Under the French legislation having implemented the BRRD, substantial powers are granted to the *Autorité de contrôle prudentiel et de résolution* (“ACPR”), the French resolution authority, and/or to other relevant resolution authorities in the EU, to implement resolution measures (including the use of the Resolution Tools) in respect of a French credit institution (including, for example, the Guarantor) and certain of its affiliates to protect and enhance the stability of the financial system of France if the relevant resolution authorities consider the failure of the relevant entity has become likely and certain other conditions are satisfied.

The Resolution Tools may be exercised over the Guarantor

The exercise of any Resolution Tool or any suggestion of any such exercise under the BRRD over the Guarantor could adversely affect the value of the Structured Products. **You may therefore lose all or a substantial part of your investment in the Structured Products.**

In addition, the resolution powers could be exercised (i) prior to the commencement of any insolvency proceedings in respect of the Guarantor, and (ii) by the relevant resolution authority without your consent or any prior notice to you. It is also uncertain how the relevant resolution authority would assess triggering conditions in different pre-insolvency scenarios affecting the Guarantor under the BRRD. Accordingly, you may not be able to anticipate a potential exercise of any such resolution powers over the Guarantor.

What is “Bail-In Power”?

“Bail-In Power” (as defined in the section headed “Text of the Guarantee of BNP Paribas”) means the power of the relevant resolution authorities to write down, convert to equity, transfer, modify or suspend certain claims of unsecured creditors of a failing institution existing from time to time under, and exercised in compliance with, any laws, regulations, rules or requirements in effect in France, relating to the transposition of the BRRD as amended from time to time, and the instructions, rules and standards created thereunder, pursuant to which, in particular, the obligations of the Guarantor in respect of the Guarantee can be reduced (in part or in whole), cancelled, modified, or converted into shares, other securities or other obligations of the Guarantor or any other person.

Please see the section headed “Text of the Guarantee of BNP Paribas” in this document for further details, in particular clause 6 of the Guarantee with respect to the Bail-In Power.

The Issuer’s obligations under the Structured Products are not subject to the “Bail-In Power”

As the Issuer is not subject to the BRRD, the obligations of the Issuer under the Structured Products will not be subject to the exercise of any Bail-In Power in respect of the Issuer.

However, in the event of a default by the Issuer of its obligations under the Structured Products, and if any Bail-In Power is exercised over the Guarantor with respect to the Guarantee, you may not be able to recover all or even part of the amount due under the Structured Products (if any) from the Guarantor under the Guarantee, or you may receive a different security issued by the Guarantor (or another person) in place of the amount (if any) due to you under the Structured Products by the Issuer, which may be worth significantly less than the amount due to you under the Structured Products at expiry. For further details, please refer to the paragraph headed “Risks relating to the BRRD” under the section “Risk Factors” of this document.

The Guarantor’s obligations with respect to the Guarantee are subject to the “Bail-In Power”

In addition, the Guarantee includes a contractual term regarding the “Bail-In Power” and any liability covered by the Guarantor will be contractually subject to the exercise of any “Bail-In Power” by the relevant resolution authority if such authority should so decide at the relevant time.

By investing in the Structured Products, you acknowledge, accept, consent and agree to be contractually bound by the exercise of any Bail-In Power by the relevant resolution authorities over the Guarantor. You further acknowledge, accept, consent and agree that your rights under the Guarantee are contractually subject to, and will be varied, if necessary, so as to give effect to, the exercise of any Bail-In Power by the relevant resolution authorities.

The effect of the exercise of the Bail-In Power by the relevant resolution authority over the Guarantor may include and result in any of the following, or some combination thereof:

- (a) the reduction of all, or a portion, of the amounts payable by the Guarantor under the terms of the Guarantee (including a reduction to zero);
- (b) the conversion of all, or a portion, of the amounts due under the Guarantee into shares or other securities or other obligations of the Guarantor or of another person, including by means of an amendment, modification or variation of the contractual terms, in which case you agree to accept in lieu of your contractual rights under the terms of the Guarantee any such shares, other securities or other obligations of the Guarantor or another person;
- (c) the cancellation of the Guarantee;
- (d) the amendment or alteration of the maturity of the Guarantee or amendment of the amount of interest payable on the Guarantee, or the date on which the interest becomes payable, including by suspending payment for a temporary period; and/or
- (e) if applicable, the variation of the terms of the Guarantee, if necessary to give effect to the exercise of the Bail-In Power by the relevant resolution authority.

Article L.613-56-9 of the French *Code monétaire et financier* specifies conditions for contractual recognition of the Bail-In Power. Any financial contract entered into by an entity referred to in Section I of Article L.613-34 of the French *Code monétaire et financier* that creates a new obligation or substantially modifies an existing obligation as from 28 December 2020 and which is governed by the law of a third country shall include a clause specifying that the parties acknowledge that such obligation may be subject to the exercise by the relevant resolution authority of the Bail-In Power as if the contract was governed by the law of an EU Member State.

Accordingly, in the event of a default by the Issuer of its obligations under the Structured Products guaranteed by the Guarantee and if any Bail-In Power is exercised over the Guarantor with respect to the Guarantee, you may not be able to recover all or even part of the amount due under the Structured Products (if any) from the Guarantor under the Guarantee, or you may receive a different security issued by the Guarantor (or another person) in place of the amount (if any) due to you under the Structured Products from the Issuer, which may be worth significantly less than the amount due to you under the Structured Products (if any).

In addition, the exercise of the Resolution Tools may also result, after any transfer of all or part of the Guarantor's business or separation of any of its assets, in you as the investors in the Structured Products (even in the absence of any such write down or conversion) being left as the creditors of the Guarantor, whose remaining business or assets is insufficient to support the claims of all or any of the creditors of the Guarantor (including you as the investors in the Structured Products).

Moreover, the relevant resolution authorities may exercise the Bail-In Power without providing any advance notice to, or requiring your further consent.

There are significant risks inherent in the holding of the Structured Products, including the risks in relation to the circumstances in which the amounts due under the Guarantee may be written down or converted to ordinary shares and the implications on investors of the Structured Products (such as a substantial loss), the circumstances in which such investors may suffer loss as a result of holding the Structured Products are difficult to predict and the quantum of any loss incurred by investors in the Structured Products in such circumstances is also highly uncertain. Please refer to the paragraph headed "Risks relating to the BRRD" under the section "Risk Factors" of this document for further details of the relevant risk factors applicable to the Structured Products.

DESCRIPTION OF THE ISSUER

History

Our name is:

BNP Paribas Issuance B.V.

We are a private limited company under Dutch law (“**besloten vennootschap met beperkte aansprakelijkheid**”), having its registered office at Herengracht 595, 1017 CE Amsterdam, the Netherlands and registered with the Commercial Register under number 33215278. We were incorporated on 10 November 1989.

Business

Our objects are:

- (a) to borrow, lend out and collect monies, including but not limited to the issue or the acquisition of debentures, debt instruments, financial instruments such as, among others, warrants and certificates of any nature, with or without indexation based on, inter alia, shares, basket of shares, stock exchange indexes, currencies, commodities or futures on commodities, and to enter into related agreements;
- (b) to finance enterprises and companies;
- (c) to establish and to in any way participate in, manage and supervise enterprises and companies;
- (d) to offer advice and to render services to enterprises and companies with which the company forms a group of companies, and to third parties;
- (e) to grant security, to bind the company and to encumber assets of the company for the benefit of enterprises and companies with which the company forms a group of companies, and of third parties;
- (f) to acquire, manage, exploit and dispose of registered property and asset value in general;
- (g) to trade in currencies, securities and asset value in general;
- (h) to exploit and trade in patents, trademark rights, licenses, know-how and other industrial rights of ownership;
- (i) to engage in industrial, financial and commercial activities of any nature,

and all other things as may be deemed incidental or conducive to the attainment of the above objects, in the broadest sense of the word.

Share capital

The issued share capital is 45,379 euros, divided in 45,379 shares of one euro each.

All shares are registered shares and no share certificates have been issued.

Management

Management Board

Our management will be composed of a Management Board with one or several members appointed by the general meeting of shareholders.

Duties of the Management Board

Within the limits of the constitutional documents, the Management Board will be responsible for our management.

Delegation of management

BNP Paribas is our sole shareholder. On 31 January 2016, BNP Paribas appointed as sole member of the Management Board BNP Paribas Finance B.V., a company established and existing under the laws of the Netherlands, with its registered office at Herengracht 595, 1017 CE Amsterdam, the Netherlands. Messrs. Edwin Herskovic, Cyril Le Merrer, Geert Lippens, Folkert van Asma, Richard Daelman and Matthew Yandle as directors of BNP Paribas Finance B.V. have the power to take all necessary measures in relation to the issue of securities of BNP Paribas Issuance B.V..

DESCRIPTION OF THE GUARANTOR

History

1966: Creation of BNP

The merger of BNCI and CNEP to form BNP represented the largest restructuring operation in the French banking sector since the end of the Second World War.

1968: Creation of Compagnie Financière de Paris et des Pays-Bas

1982: Nationalisation of BNP and Compagnie Financière de Paris et des Pays-Bas at the time of the nationalisation of all French banks

In the 1980s, deregulation of the banking sector and the growing tendency of borrowers to raise funds directly on the financial market transformed the banking business in France and worldwide.

1987: Privatisation of Compagnie Financière de Paribas

With 3.8 million individual shareholders, Compagnie Financière de Paribas had more shareholders than any other company in the world. Compagnie Financière de Paribas owned 48% of the capital of Compagnie Bancaire.

1993: Privatisation of BNP

BNP's return to the private sector represented a new start. The 1990s were marked by a change in the level of profitability of the Bank, which had the highest return on equity of any major French institution in 1998. This period was marked by the launch of new banking products and services, the development of activities on the financial markets, expansion in France and at the international level, and preparation for the advent of the euro.

1998: Creation of Paribas

On 12 May 1998, the merger between Compagnie Financière de Paribas, Banque Paribas and Compagnie Bancaire was approved.

1999: A momentous year for the Group

Following an unprecedented double tender offer and a stock market battle waged over six months, BNP was in position to carry out a merger of equals with Paribas. For both groups, this was the most important event since their privatisation. It gave rise to a new Group with tremendous prospects. At a time of economic globalisation, the merger created a leading player in the European banking sector.

2000: Creation of BNP Paribas

BNP and Paribas merged on 23 May 2000.

The new Group derived its strength from the two major financial and banking lines from which it descends. It has two goals: to create value for shareholders, clients and employees by building the bank of the future, and to become a leading global player.

- 2006: Acquisition of BNL in Italy
- BNP Paribas acquired BNL, Italy's 6th-largest bank. This acquisition transformed BNP Paribas, providing it with access to a second domestic market in Europe. In both Italy and France, all of the Group's businesses can now develop their activities by leveraging a nationwide banking network.
- 2009: Merger with the Fortis group
- BNP Paribas took control of Fortis Bank and BGL (Banque Générale du Luxembourg).
- 2012: Launch of Hello bank!
- 2015: Acquisition of BGZ Polska
- In Poland, which will become BNP Paribas Bank Polska.
- 2018: Acquisition of Nickel
- Which offers banking solutions that are accessible to all, directly online or at tobacconists, without conditions of resources.
- 2020: Agreement with Deutsche Bank
- For the takeover of its Prime Brokerage business.
- 2023: Closing of the sale of Bank of the West to BMO Financial Group

Business

BNP Paribas is a French multinational bank and financial services company with its registered office located at 16 boulevard des Italiens 75009 Paris, France, and its corporate website in English is <http://www.bnpparibas.com/en>.

BNP Paribas, together with its consolidated subsidiaries (the “**BNP Paribas Group**”) is a global financial services provider, conducting retail, corporate and investment banking, private banking, asset management, insurance and specialized and other financial activities throughout the world.

The BNP Paribas Group, one of Europe's leading providers of banking and financial services, has four domestic retail banking markets in Europe, namely in Belgium, France, Italy and Luxembourg.

It operates in 65 countries and has nearly 190,000 employees, including nearly 145,000 in Europe.

BNP Paribas' organisation evolved in 2021, and is now based on three operating divisions: Commercial, Personal Banking & Services (CPBS), Investment & Protection Services (IPS) and Corporate & Institutional Banking (CIB). Within this framework, the Group's new organisation effective from 2022 is as follows:

- Commercial, Personal Banking & Services division, covers:
 - o Commercial & Personal Banking in the euro zone:
 - Commercial & Personal Banking in France (CPBF),
 - BNL banca commerciale (BNL bc), Italian Commercial & Personal Banking,

- Commercial & Personal Banking in Belgium (CPBB),
- Commercial & Personal Banking in Luxembourg (CPBL).
- o Commercial & Personal Banks outside the euro zone, organised around:
 - Europe-Mediterranean, covering Commercial & Personal Banking outside the euro zone and the United States, in particular in Central and Eastern Europe and Turkey,
 - BancWest in the United States.
- o Specialised businesses:
 - Arval and BNP Paribas Leasing Solutions,
 - BNP Paribas Personal Finance,
 - BNP Paribas Personal Investors,
 - New digital business lines (Nickel, Floa, Lyf).
- Investment & Protection Services division, combines:
 - o Insurance (BNP Paribas Cardif),
 - o Wealth and Asset Management (BNP Paribas Asset Management, BNP Paribas Wealth Management and BNP Paribas Real Estate), the management of the BNP Paribas Group's portfolio of unlisted and listed industrial and commercial investments (BNP Paribas Principal Investments).
- Corporate and Institutional Banking (CIB) division, combines:
 - o Global Banking,
 - o Global Markets,
 - o Securities Services.

BNP Paribas SA is the parent company of the BNP Paribas Group.

Capital Stock

As at 31 December 2022, BNP Paribas' share capital stood at €2,468,663,292 consisting of 1,234,331,646 shares with a par value of €2 each.

For up-to-date financial information, including quarterly results since the last fiscal year end, please refer to <http://invest.bnpparibas.com/en>.

Board of Directors

The following table sets forth the names of the current members of the Board of Directors, their current function at the Bank, their business address and their principal business activities outside of the Bank as at 31 December 2022, except where specified:

Jean LEMIERRE	
Principal function: Chairman of the Board of directors of BNP Paribas	
Date of birth: 6 June 1950	Offices⁽¹⁾ held in listed or unlisted companies of the BNP Paribas Group, in France or abroad
Nationality: French	BNP Paribas ^(*) , Chairman of the Board of directors
Term start and end dates: 19 May 2020 - 2023 AGM	TEB Holding AS, director
Date first appointed to the Board of directors: 1 December 2014 ratified by the Annual General Meeting of 13 May 2015	Offices⁽¹⁾ held in listed or unlisted companies outside the BNP Paribas Group, in France or abroad
Number of BNP Paribas shares held ⁽¹⁾ : 41,345 ⁽²⁾	TotalEnergies ^(*) , director
Business address: 3, rue d'Antin 75002 PARIS FRANCE	Participation⁽¹⁾ in specialised committees of French or foreign companies
Education	TotalEnergies, member of the Corporate Governance and Ethics Committee and member of the Strategy & CSR Committee
Graduate of the Institut d'Études Politiques de Paris	Others⁽¹⁾
Graduate of the École Nationale d'Administration	Centre d'Études Prospectives et d'Informations Internationales (CEPII), Chairman
Law degree	Paris Europlace, Vice-Chairman
	Association française des entreprises privées (Afed), member of the Board of directors
	Institut de la Finance durable (IFD), member of the Board of directors
	Institute of International Finance (IIF), member
	International Advisory Council of China Development Bank (CDB), member
	International Advisory Council of China Investment Corporation (CIC), member
	International Advisory Panel (IAP) of the Monetary Authority of Singapore (MAS), member

Offices held at 31 December in previous financial years <i>(the companies mentioned are the parent companies of the groups in which the functions were carried out)</i>			
2021:	2020:	2019:	2018:
Chairman of the Board of directors: BNP Paribas	Chairman of the Board of directors: BNP Paribas	Chairman of the Board of directors: BNP Paribas	Chairman of the Board of directors: BNP Paribas
Director: TEB Holding AS, TotalEnergies SA	Director: TEB Holding AS, Total SA	Director: TEB Holding AS, Total SA	Director: TEB Holding AS, Total SA
Chairman: Centre d'Études Prospectives et d'Informations Internationales (CEPII)	Chairman: Centre d'Études Prospectives et d'Informations Internationales (CEPII)	Chairman: Centre d'Études Prospectives et d'Informations Internationales (CEPII)	Chairman: Centre d'Études Prospectives et d'Informations Internationales (CEPII)
Vice-Chairman: Paris Europlace	Vice-Chairman: Paris Europlace	Vice-Chairman: Paris Europlace	Vice-Chairman: Paris Europlace
Member: Board of directors of the Association française des entreprises privées (Afed), Institute of International Finance (IIF), Orange International Advisory Board, International Advisory Council of China Development Bank (CDB), International Advisory Council of China Investment Corporation (CIC), International Advisory Panel (IAP) of the Monetary Authority of Singapore (MAS)	Member: Board of directors of the Association française des entreprises privées (Afed), Institute of International Finance (IIF), Orange International Advisory Board, International Advisory Council of China Development Bank (CDB), International Advisory Council of China Investment Corporation (CIC), International Advisory Panel (IAP) of the Monetary Authority of Singapore (MAS)	Member: Board of directors of the Association française des entreprises privées (Afed), Institute of International Finance (IIF), Orange International Advisory Board, International Advisory Council of China Development Bank (CDB), International Advisory Council of China Investment Corporation (CIC), International Advisory Panel (IAP) of the Monetary Authority of Singapore (MAS)	Member: Board of directors of the Association française des entreprises privées (Afed), Institute of International Finance (IIF), Orange International Advisory Board, International Advisory Council of China Development Bank (CDB), International Advisory Council of China Investment Corporation (CIC), International Advisory Panel (IAP) of the Monetary Authority of Singapore (MAS)

(1) At 31 December 2022.

(2) Including 1,419 BNP Paribas shares held under the Company Savings Plan.

(*) Listed company.

Jean-Laurent BONNAFÉ

Principal function: Director and Chief Executive Officer of BNP Paribas

Date of birth: 14 July 1961

Nationality: French

Term start and end dates: 17 May 2022 - 2025 AGM

Date first appointed to the Board of directors: 12 May 2010

Number of BNP Paribas shares held ⁽¹⁾: 109,674⁽²⁾

Business address: 3, rue d'Antin
75002 PARIS
FRANCE

Education

Graduate of the École Polytechnique

Ingénieur en chef des Mines

Offices⁽¹⁾ held in listed or unlisted companies of the BNP Paribas Group, in France or abroad

BNP Paribas^(*), Director and Chief Executive Officer

Offices⁽¹⁾ held in listed or unlisted companies outside the BNP Paribas Group, in France or abroad

Pierre Fabre Group:

Pierre Fabre SA, director

Pierre Fabre Participations, director

Participation⁽¹⁾ in specialised committees of French or foreign companies

Pierre Fabre SA, member of the Strategic Committee

Others⁽¹⁾

Association Française des Banques (AFB), Chairman

Fédération Bancaire Française (FBF), member of the Executive Committee

Bank Policy Institute, member of the Board of directors

Association pour le Rayonnement de l'Opéra de Paris, Chairman

La France s'engage foundation, director

Offices held at 31 December in previous financial years

(the companies mentioned are the parent companies of the groups in which the functions were carried out)

2021:	2020:	2019:	2018:
Director and Chief Executive Officer: BNP Paribas	Director and Chief Executive Officer: BNP Paribas	Director and Chief Executive Officer: BNP Paribas	Director and Chief Executive Officer: BNP Paribas
Chairman: Association pour le Rayonnement de l'Opéra de Paris, Entreprise pour l'Environnement	Chairman: Association pour le Rayonnement de l'Opéra de Paris, Entreprise pour l'Environnement	Chairman: Association pour le Rayonnement de l'Opéra de Paris, Entreprise pour l'Environnement	Chairman: Association pour le Rayonnement de l'Opéra de Paris
Director: La France s'engage, Pierre Fabre SA	Director: La France s'engage, Pierre Fabre SA	Director: Carrefour, La France s'engage, Pierre Fabre SA	Vice-Chairman: Entreprises pour l'Environnement
Vice-Chairman of the Executive Committee: Fédération Bancaire Française (FBF)	Member of the Executive Committee: Fédération Bancaire Française (FBF)	Member of the Executive Committee: Fédération Bancaire Française (FBF)	Member of the Executive Committee: Fédération Bancaire Française (FBF)

(1) At 31 December 2022.

(2) Includes 28,299 BNP Paribas shares held as units in the shareholders' fund under the Company Savings Plan.

(*) Listed company.

Jacques ASCHENBROICH
Principal function: Chairman of Orange

Date of birth: 3 June 1954

Nationality: French

Term start and end dates: 19 May 2020 - 2023 AGM

Date first appointed to the Board of directors: 23 May 2017

Number of BNP Paribas shares held ⁽¹⁾: 1,000

Business address: 111, quai du President-Roosevelt
92130 ISSY-LES-MOULINEAUX
FRANCE

Education

Graduate of the École des Mines

Corps des Mines

Offices⁽¹⁾ held in listed or unlisted companies of the BNP Paribas Group, in France or abroad

BNP Paribas^(*), director

Offices⁽¹⁾ held under the principal function

Orange^(*), Chairman of the Board of directors

Other offices⁽¹⁾ held in listed or unlisted companies outside the BNP Paribas Group, in France or abroad

TotalEnergies^(*), director

Participation⁽¹⁾ in specialised committees of French or foreign companies

BNP Paribas, Chairman of the Corporate Governance, Ethics, Nominations and CSR Committee and member of the Financial Statements Committee

TotalEnergies, member of the Corporate Governance and Ethics Committee and of the Remuneration Committee.

Others⁽¹⁾

École Nationale Supérieure Mines ParisTech, Chairman

Club d'affaires franco-japonais, Co-Chairman

Association française des entreprises privées (Afed), member of the Board of directors

Institut de la Finance durable (IFD), member of the Board of directors

Offices held at 31 December in previous financial years

(the companies mentioned are the parent companies of the groups in which the functions were carried out)

2021:	2020:	2019:	2018:
Chairman and Chief Executive Officer: Valeo Group	Chairman and Chief Executive Officer: Valeo Group	Chairman and Chief Executive Officer: Valeo Group	Chairman and Chief Executive Officer: Valeo Group
Director: BNP Paribas, TotalEnergies	Director: BNP Paribas, Veolia Environnement	Director: BNP Paribas, Veolia Environnement	Director: BNP Paribas, Veolia Environnement
Member: Board of directors of the Association française des entreprises privées (Afed)	Member: Board of directors of the Association française des entreprises privées (Afed)	Member: Board of directors of the Association française des entreprises privées (Afed)	Chairman: École Nationale Supérieure Mines ParisTech
Chairman: École Nationale Supérieure Mines ParisTech	Chairman: École Nationale Supérieure Mines ParisTech	Chairman: École Nationale Supérieure Mines ParisTech	Co-Chairman: Club d'affaires franco-japonais
Co-Chairman: Club d'affaires franco-japonais	Co-Chairman: Club d'affaires franco-japonais	Co-Chairman: Club d'affaires franco-japonais	

(1) At 31 December 2022.

(*) Listed company.

Juliette BRISAC

Principal function: Chief Operating Officer of BNP paribas Group Company Engagement Department

Date of birth: 22 May 1964

Nationality: French

Term start and end dates: 18 May 2021 - 2024 AGM

Date first appointed to the Board of directors: 18 May 2021

Number of BNP Paribas shares held⁽¹⁾: 10,128⁽²⁾

Business address: Millénaire 4

35, rue de la Gare

75019 PARIS

FRANCE

Offices⁽¹⁾ held in listed or unlisted companies of the BNP Paribas Group, in France or abroad

BNP Paribas^(*), director representing employee shareholders
Supervisory Board of the FCPE Actionnariat Monde of BNP Paribas,
Chairwoman

Participation⁽¹⁾ in specialised committees of French or foreign companies

BNP Paribas, member of the Financial Statements Committee

Education

Master's degree in Economics and DESS in Banking & Finance from
the University of Paris I Panthéon Sorbonne

Graduate of the Institut français des Administrateurs

Certified auditor of the Cycle des hautes études pour le
développement économique (CHEDE)

Offices held at 31 December in previous financial years

(the companies mentioned are the parent companies of the groups in which the functions were carried out)

2021:

Director: BNP Paribas

Chairwoman: Supervisory Board of the FCPE Actionnariat Monde of BNP Paribas

(1) At 31 December 2022.

(2) Including 4,576 BNP Paribas shares held under the Company Savings Plan.

(*) Listed company.

Pierre André de CHALENDAR
Principal function: Chairman of Compagnie de Saint-Gobain

Date of birth: 12 April 1958

Nationality: French

Term start and end dates: 18 May 2021 - 2024 AGM

Date first appointed to the Board of directors: 23 May 2012

Number of BNP Paribas shares held ⁽¹⁾: 7,000

Business address: Tour Saint-Gobain
12 place de l'Iris
92096 LA DÉFENSE CEDEX
FRANCE

Education

Graduate of École Supérieure des Sciences Économiques et Commerciales (ESSEC)

Graduate of the École Nationale d'Administration

Offices⁽¹⁾ held in listed or unlisted companies of the BNP Paribas Group, in France or abroad

BNP Paribas^(*), director

Offices⁽¹⁾ held under the principal function

Compagnie de Saint-Gobain^(*), Chairman of the Board of directors
Saint-Gobain Corporation, director

Other offices⁽¹⁾ held in listed or unlisted companies outside the BNP Paribas Group, in France or abroad

Veolia Environnement^(*), director

Participation⁽¹⁾ in specialised committees of French or foreign companies

BNP Paribas, Chairman of the Remuneration Committee and member of the Corporate Governance, Ethics, Nominations and CSR Committee
Veolia Environnement, member of the Nominations Committee

Others⁽¹⁾

Conseil de surveillance de l'Essec, Chairman

La Fabrique de l'Industrie, Co-Chairman

Association française des entreprises privées (AfeP), member of the Board of directors

Offices held at 31 December in previous financial years

(the companies mentioned are the parent companies of the groups in which the functions were carried out)

2021:	2020:	2019:	2018:
Chairman: Compagnie de Saint-Gobain	Chairman and Chief Executive Officer: Compagnie de Saint-Gobain	Chairman and Chief Executive Officer: Compagnie de Saint-Gobain	Chairman and Chief Executive Officer: Compagnie de Saint-Gobain
Director: BNP Paribas, Veolia Environnement	Director: BNP Paribas	Director: BNP Paribas	Director: BNP Paribas
Member: Board of directors of the Association française des entreprises privées (AfeP)	Member: Board of directors of the Association française des entreprises privées (AfeP)	Member: Board of directors of the Association française des entreprises privées (AfeP)	
Chairman: La Fabrique de l'Industrie, Conseil de surveillance de l'Essec	Chairman: La Fabrique de l'Industrie, Conseil de surveillance de l'Essec	Chairman: La Fabrique de l'Industrie, Conseil de surveillance de l'Essec	

(1) At 31 December 2022.

(*) Listed company.

Monique COHEN
Principal function: Senior Advisor of Apax Partners

Date of birth: 28 January 1956

Nationality: French

Term start and end dates: 19 May 2020 - 2023 AGM

Date first appointed to the Board of directors: 12 February 2014,
ratified by the Annual General Meeting of 14 May 2014

Number of BNP Paribas shares held: 9,620

Business address: 1, rue Paul-Cézanne
75008 PARIS
FRANCE

Education

Graduate of the École Polytechnique

Master's degree in Mathematics

Master's degree in Business Law

Offices⁽¹⁾ held in listed or unlisted companies of the BNP Paribas Group, in France or abroad

BNP Paribas^(*), director

Offices⁽¹⁾ held under the principal function

Proxima Investments SA, Chairwoman of the Board of directors

Fides Holdings, Chairwoman of the Board of directors

Fides Acquisitions, member of the Supervisory Board

Other offices⁽¹⁾ held in listed or unlisted companies outside the BNP Paribas Group, in France or abroad

Hermès^(*), Vice-Chairwoman of the Supervisory Board

Safran^(*), lead independent director

Participation⁽¹⁾ in specialised committees of French or foreign companies

BNP Paribas, Chairwoman of the Internal Control, Risk Management and Compliance Committee and member of the Corporate Governance, Ethics, Nominations and CSR Committee

Hermès, Chairwoman of the Audit and Risks Committee

Safran, Chairwoman of the Nominations and Remuneration Committee

Offices held at 31 December in previous financial years

(the companies mentioned are the parent companies of the groups in which the functions were carried out)

2021:	2020:	2019:	2018:
Chairwoman of the Board of directors: Proxima Investments SA, Fides Holdings	Chairwoman of the Board of directors: Proxima Investments SA, Fides Holdings	Chairwoman of the Board of directors: Proxima Investments SA, Fides Holdings	Chairwoman of the Board of directors: Proxima Investments SA, Fides Holdings
Vice-Chairwoman of the Supervisory Board: Hermès	Vice-Chairwoman of the Supervisory Board: Hermès	Vice-Chairwoman of the Supervisory Board: Hermès	Vice-Chairwoman of the Supervisory Board: Hermès
Director: BNP Paribas, Safran	Director: BNP Paribas, Safran	Director: BNP Paribas, Safran,	Director: BNP Paribas, Safran,
Member of the Supervisory Board: Fides Acquisitions	Member of the Supervisory Board: Fides Acquisitions	Member of the Supervisory Board: Apax Partners SAS	Member of the Supervisory Board: Apax Partners SAS
		Member of the Supervisory Board: Fides Acquisitions	Member of the Supervisory Board: Fides Acquisitions

(1) At 31 December 2022.

(*) Listed company.

Wouter DE PLOEY (until 17 May 2022)

Principal function: Chief Executive Officer of ZNA (hospital group in antwerp, Belgium)

Date of birth: 5 April 1965

Nationality: Belgian

Term start and end dates: 23 May 2019 - 2022 AGM

Date first appointed to the Board of directors: 26 May 2016

Number of BNP Paribas shares held ⁽¹⁾: 1,000

Business address: Leopoldstraat 26
2000 ANTWERP
BELGIUM

Education

Master's degree and Doctorate in Economics from the University of Michigan, Ann Arbor (United States of America)

Master's degree in Economics (Magna cum Laude) and Philosophy, University of Leuven (Belgium)

Offices⁽¹⁾ held in listed or unlisted companies of the BNP Paribas Group, in France or abroad

BNP Paribas^(*), director

Offices⁽¹⁾ held in listed or unlisted companies outside the BNP Paribas Group, in France or abroad

Vanbreda Risk & Benefits NV, director

Unibreda NV, director

Participation⁽¹⁾ in specialised committees of French or foreign companies

BNP Paribas, member of the Financial Statements Committee

Others⁽¹⁾

Gasthuiszusters Antwerpen, director

Regroupement GZA-ZNA, director

BlueHealth Innovation Center, director

Chamber of Commerce bureau, VOKA Antwerp - Waasland, Vice-Chairman

Offices held at 31 December in previous financial years

(the companies mentioned are the parent companies of the groups in which the functions were carried out)

2021:	2020:	2019:	2018:
Director: BNP Paribas, Vanbreda Risk & Benefits NV, Unibreda NV, BlueHealth Innovation Center, Gasthuiszusters Antwerpen, Regroupement GZA-ZNA	Director: BNP Paribas, Vanbreda Risk & Benefits NV, Unibreda NV, BlueHealth Innovation Center, Gasthuiszusters Antwerpen, Regroupement GZA-ZNA	Director: BNP Paribas, Vanbreda Risk & Benefits NV, Unibreda NV, BlueHealth Innovation Center, Gasthuiszusters Antwerpen, Regroupement GZA-ZNA	Director: BNP Paribas, Vanbreda Risk & Benefits NV, Unibreda NV, BlueHealth Innovation Center, Gasthuiszusters Antwerpen, Regroupement GZA-ZNA
Vice-Chairman: Chamber of Commerce bureau, VOKA Antwerp - Waasland	Vice-Chairman: Chamber of Commerce bureau, VOKA Antwerp - Waasland	Vice-Chairman: Chamber of Commerce bureau, VOKA Antwerp - Waasland	Vice-Chairman: Chamber of Commerce bureau, VOKA Antwerp - Waasland

(1) At 17 May 2022.

(*) Listed company.

Hugues EPAILLARD

Principal function: Real estate business manager

Date of birth: 22 June 1966

Nationality: French

Term start and end dates: elected by BNP Paribas executive employees for three years from 16 February 2021 - 15 February 2024

Date first elected to the Board of directors: 16 February 2018

Number of BNP Paribas shares held ⁽¹⁾: 526⁽²⁾

Business address: 83, La Canebière
13001 MARSEILLE
FRANCE

Offices⁽¹⁾ held in listed or unlisted companies of the BNP Paribas Group, in France or abroad

BNP Paribas^(*), director

Participation⁽¹⁾ in specialised committees of French or foreign companies

BNP Paribas, member of the Internal Control, Risk Management and Compliance Committee and of the Remuneration Committee

Others⁽¹⁾

Action Logement Services, director and Chairman of the Risk Committee

Judge at the Marseille Employment Tribunal, Management section
Commission Paritaire de la Banque (AFB — Recourse Commission), member

Offices held at 31 December in previous financial years

(the companies mentioned are the parent companies of the groups in which the functions were carried out)

2021:	2020:	2019:	2018:
Director: BNP Paribas	Director: BNP Paribas	Director: BNP Paribas	Director: BNP Paribas

(1) At 31 December 2022.

(2) Including 497 BNP Paribas shares held under the Company Savings Plan.

(*) Listed company.

Rajna GIBSON-BRANDON
Principal function: Professor in Finance at the University of Geneva

Date of birth: 20 December 1962
Nationality: Swiss
Term start and end dates: 18 May 2021 - 2024 AGM
Date first appointed to the Board of directors: 28 November 2018

Number of BNP Paribas shares held⁽¹⁾: 1,000
Business address: 40, Boulevard Pont d'Arve
 CH-1211 GENEVA 4
 SWITZERLAND

Education

Doctorate in Social & Economic Sciences (Specialisation in Finance),
 University of Geneva

Offices⁽¹⁾ held in listed or unlisted companies of the BNP Paribas Group, in France or abroad

BNP Paribas^(*), director

Offices⁽¹⁾ held in listed or unlisted companies outside the BNP Paribas Group, in France or abroad

Swiss National Bank, member of the Bank Council Swisox, director

Participation⁽¹⁾ in specialised committees of French or foreign companies

BNP Paribas, member of the Internal Control, Risk Management and Compliance Committee

Others⁽¹⁾

Geneva Finance Research Institute, Deputy director
 Geneva Institute for Wealth Management Foundation, director and Chairwoman
 Strategic Committee and Sustainable Finance Supervisory Committee in Geneva, member
 RepRisk, member of the academic advisory board

Offices held at 31 December in previous financial years

(the companies mentioned are the parent companies of the groups in which the functions were carried out)

2021:	2020:	2019:	2018:
Director: BNP Paribas	Director: BNP Paribas	Director: BNP Paribas,	Director: BNP Paribas,
Chairwoman:	Chairwoman:	Applic8 SA	Applic8 SA
Bülach Investment Professionals' Scientific and Training Board	Bülach Investment Professionals' Scientific and Training Board	Chairwoman:	Chairwoman:
Director and Chairwoman:	Director:	Bülach Investment Professionals' Scientific and Training Board	Bülach Investment Professionals' Scientific and Training Board
Geneva Institute for Wealth Management Foundation	Geneva Institute for Wealth Management Foundation	Director:	Director:
Deputy Director:	Deputy Director:	Geneva Institute for Wealth Management Foundation	Geneva Institute for Wealth Management Foundation
Geneva Finance Research Institute	Geneva Finance Research Institute	Deputy Director:	Deputy Director:
Member:	Member:	Geneva Finance Research Institute	Geneva Finance Research Institute
Strategic Committee and Sustainable Finance Supervisory Committee in Geneva, RepRisk academic advisory board	Strategic Committee and Sustainable Finance Supervisory Committee in Geneva	Member:	Member:
		Strategic Committee and Sustainable Finance Supervisory Committee in Geneva	Strategic Committee and Sustainable Finance Supervisory Committee in Geneva

(1) At 31 December 2022.

(*) Listed company.

Marion GUILLOU
Principal function: Director of companies

Date of birth: 17 September 1954

Nationality: French

Term start and end dates: 17 May 2022 - 2025 AGM

Date first appointed to the Board of directors: 15 May 2013

Number of BNP Paribas shares held ⁽¹⁾: 1,000

Business address: 42, rue Scheffer
75116 PARIS
FRANCE

Education

Graduate of the École Polytechnique

Graduate of the École Nationale du Génie Rural, des Eaux et des Forêts Doctor of Food Sciences

Graduate of the Institut français des Administrateurs

Offices⁽¹⁾ held in listed or unlisted companies of the BNP Paribas Group, in France or abroad

BNP Paribas^(*), director

Offices⁽¹⁾ held in listed or unlisted companies outside the BNP Paribas Group, in France or abroad

Veolia Environnement^(*), director

Participation⁽¹⁾ in specialised committees of French or foreign companies

BNP Paribas, member of the Corporate Governance, Ethics, Nominations and CSR Committee and of the Remuneration Committee Veolia Environnement, member of the Research, Innovation and Sustainable Development Committee and the Remuneration Committee

Others⁽¹⁾

Fonds de préservation de la biodiversité des plantes cultivées et de leurs apparentées sauvages, Chairwoman

Care — France (NGO), Vice-Chairwoman

Bioversity International, member of the Board of directors

International Centre for Tropical Agriculture (CIAT), member of the Board of directors

Bioversity International - CIAT Alliance, member of the Board of directors

Institut français des relations internationales (IFRI), member of the Board of directors

Haut conseil pour le Climat, member

Offices held at 31 December in previous financial years

(the companies mentioned are the parent companies of the groups in which the functions were carried out)

2021:

Director: BNP Paribas, Veolia Environnement

Chairwoman: Fonds de dotation pour la préservation de la biodiversité des espèces cultivées et de leurs apparentées sauvages

Member: Board of directors of Care — France (NGO), Board of directors of Bioversity International, Board of directors of the International Centre for Tropical Agriculture (CIAT), Board of directors of Bioversity - CIAT Alliance, Board of directors of IFRI, Haut conseil pour le climat

2020:

Director: BNP Paribas, Veolia Environnement

Member: Board of directors of Care — France (NGO), Board of directors of Bioversity International, Board of directors of the International Centre for Tropical Agriculture (CIAT), Board of directors of Bioversity - CIAT Alliance, Board of directors of IFRI

2019:

Director: BNP Paribas, Imerys, Veolia Environnement

Member: Board of directors of Universcience, Board of directors of Care - France (NGO), Board of directors of Bioversity International, Board of directors of the International Centre for Tropical Agriculture (CIAT), Board of directors of Bioversity - CIAT Alliance, Board of directors of IFRI

2018:

Chairwoman of the Board of directors: IAVFF-Agreenium (public institution)

Director: BNP Paribas, Imerys, Veolia Environnement

Member: Board of directors of Universcience, Board of directors of Care - France (NGO), Board of directors of Bioversity International, Board of directors of the International Centre for Tropical Agriculture (CIAT), Board of directors of IFRI

(1) At 31 December 2022.

(*) Listed company.

Lieve LOGGHE (since 17 May 2022)
Principal function: Chief Financial Officer of the Euronav Group

Date of birth: 11 July 1968

Nationality: Belgian

Term start and end dates: 17 May 2022 - 2025 AGM

Date first appointed to the Board of directors: 17 May 2022

Number of BNP Paribas shares held⁽¹⁾: 1,000

Business address: 20 De Gerlachekaai
2000 ANTWERP
BELGIUM

Education

Master's degree in economics from the University of Brussels,

Master's degree in accounting from the Vlerick School for

Management

Master's degree in taxation from the EHSAL Management School

Offices⁽¹⁾ held in listed or unlisted companies of the BNP Paribas Group, in France or abroad

BNP Paribas^(*), director

Offices⁽¹⁾ held in listed or unlisted companies outside the BNP Paribas Group, in France or abroad

TINCC BV, director

Participation⁽¹⁾ in specialised committees of French or foreign companies

BNP Paribas, member of the Financial Statements Committee

Others⁽¹⁾

ODISEE, director and member of the Audit Committee

(1) At 31 December 2022.

(*) Listed company.

Christian NOYER
Principal function: Honorary Governor of Banque de France

Date of birth: 6 October 1950

Nationality: French

Term start and end dates: 18 May 2021 - 2024 AGM

Date first appointed to the Board of directors: 18 May 2021

(Mr. Christian Noyer served as non-voting director (*censeur*) of BNP Paribas from 1 May 2019 to 17 May 2021)

Number of BNP Paribas shares held⁽¹⁾: 2,000

Business address: 9, rue de Valois
75001 PARIS
FRANCE

Education

Graduate of École Nationale d'Administration

Graduate of the Institut d'Études Politiques de Paris

Masters in Law from the University of Paris

Law degree from the University of Rennes

Offices⁽¹⁾ held in listed or unlisted companies of the BNP Paribas Group, in France or abroad

BNP Paribas^(*), director

Offices⁽¹⁾ held in listed or unlisted companies outside the BNP Paribas Group, in France or abroad

Power Corporation Canada^(*), director

Setl Ltd, director

Participation⁽¹⁾ in specialised committees of French or foreign companies

BNP Paribas, Chairman of the Financial Statements Committee

Power Corporation Canada, member of the Governance and

Nominating Committee and the Related Party and Conduct Review

Committee

Others⁽¹⁾

Institut pour l'Éducation Financière du Public (IEFP), Chairman IFRI

Foundation, director

Group of Thirty (G30), member

Offices held at 31 December in previous financial years

(the companies mentioned are the parent companies of the groups in which the functions were carried out)

2021:

Director: Power Corporation
Canada,
Groupe NSIA Banque, Setl Ltd

2020:

Director: Power Corporation
Canada,
Groupe NSIA Banque, Lloyd's
of London, Setl Ltd

2019:

Director: Power Corporation
Canada,
Groupe NSIA Banque, Lloyd's
of London, Setl Ltd

(1) At 31 December 2022.

(*) Listed company.

Daniela SCHWARZER

Principal function: Director of the Open Society Foundation for Europe and Eurasia

Date of birth: 19 July 1973

Nationality: German

Term start and end dates: 19 May 2020 - 2023 AGM

Date first appointed to the Board of directors: 14 May 2014

Number of BNP Paribas shares held ⁽¹⁾: 1,000

Business address: Jägerstraße 54
10117 BERLIN
GERMANY

Education

Doctorate in Economics from the Free University of Berlin Master's degree in Political Science and in Linguistics, University of Tübingen

Offices⁽¹⁾ held in listed or unlisted companies of the BNP Paribas Group, in France or abroad

BNP Paribas^(*), director

Offices⁽¹⁾ held in listed or unlisted companies outside the BNP Paribas Group, in France or abroad

Covivio^(*), director

Participation⁽¹⁾ in specialised committees of French or foreign companies

BNP Paribas, member of the Corporate Governance, Ethics, Nominations and CSR Committee

Others⁽¹⁾

Jacques-Delors Institute, member of the Board of directors

United Europe Foundation, member of the Board of directors

Deutsche Gesellschaft für Auswärtige Politik, member of the Board of directors

Fondation Jean Monnet, member of the Board of directors

Offices held at 31 December in previous financial years

(the companies mentioned are the parent companies of the groups in which the functions were carried out)

2021:

Director: BNP Paribas

Member: Board of directors of the Jacques-Delors Institute, Board of directors of the United Europe Foundation, Open Society Foundation, Advisory Committee Board of directors of Deutsche Gesellschaft für Auswärtige Politik, Board of directors of the Fondation Jean Monnet

Special advisor to the Vice-President of the European Commission

2020:

Director: BNP Paribas

Member: Board of directors of the Jacques-Delors Institute, Board of directors of the United Europe Foundation, Open Society Foundation, Advisory Committee, Federal Security Academy, Advisory Committee

Research Professor at Johns-Hopkins University, Department of European and Eurasian Studies

Special advisor to the Vice-President of the European Commission

2019:

Director: BNP Paribas

Member: Board of directors of the Jacques-Delors Institute, Board of directors of the United Europe Foundation, Open Society Foundation, Advisory Committee, Federal Security Academy, Advisory Committee

Research Professor at Johns-Hopkins University, Department of European and Eurasian Studies

2018:

Director: BNP Paribas

Member: Board of directors of the Jacques-Delors Institute, Board of directors of the United Europe Foundation, Open Society Foundation, Advisory Committee

Research Professor at Johns-Hopkins University, Department of European and Eurasian Studies

(1) At 31 December 2022.

(*) Listed company.

Michel TILMANT
Principal function: Director of companies

Date of birth: 21 July 1952

Nationality: Belgian

Term start and end dates: 17 May 2022 - 2025 AGM

Date first appointed to the Board of directors: 12 May 2010

(Mr. Michel Tilmant served as non-voting director (*censeur*) of BNP Paribas from 4 November 2009 to 11 May 2010)

Number of BNP Paribas shares held ⁽¹⁾: 1,000

Business address: Rue du Moulin
10 B-1310 LA HULPE
BELGIUM

Education

Graduate of the University of Louvain

Offices⁽¹⁾ held in listed or unlisted companies of the BNP Paribas Group, in France or abroad

BNP Paribas^(*), director

Offices⁽¹⁾ held under the principal function

Strafin sprl, manager

Other offices⁽¹⁾ held in listed or unlisted companies outside the BNP Paribas Group, in France or abroad

Groupe Lhoist SA, director

Foyer Group:

CapitalatWork Foyer Group SA, Chairman

Foyer SA, director

Foyer Finance SA, director

Participation⁽¹⁾ in specialised committees of French or foreign companies

BNP Paribas, member of the Internal Control, Risk Management and Compliance Committee

Groupe Lhoist SA, Chairman of the Audit Committee

Foyer SA, member of the Nomination and Remuneration Committee

Others⁽¹⁾

Royal Automobile Club of Belgium, member of the Board of directors

Zoute Automobile Club, member of the Board of directors

Offices held at 31 December in previous financial years

(the companies mentioned are the parent companies of the groups in which the functions were carried out)

2021:

Chairman: CapitalatWork Foyer Group SA

Director: BNP Paribas Foyer SA, Foyer Finance SA, Groupe Lhoist SA, Sofina SA

Manager: Strafin sprl

Member: Board of directors of Royal Automobile Club of Belgium, Board of directors of Zoute Automobile Club

2020:

Chairman: CapitalatWork Foyer Group SA

Director: BNP Paribas Foyer SA, Foyer Finance SA, Groupe Lhoist SA, Sofina SA

Manager: Strafin sprl

Member: Board of directors of Royal Automobile Club of Belgium, Board of directors of the Zoute Automobile Club, Board of directors of Université Catholique de Louvain

2019:

Chairman: CapitalatWork Foyer Group SA

Director: BNP Paribas Foyer SA, Foyer Finance SA, Groupe Lhoist SA, Sofina SA

Manager: Strafin sprl

Member: Board of directors of Royal Automobile Club of Belgium, Board of directors of the Zoute Automobile Club, Board of directors of Université Catholique de Louvain
Senior advisor: Cinven Ltd

2018:

Chairman: CapitalatWork Foyer Group SA

Director: BNP Paribas Foyer SA, Foyer Finance SA, Groupe Lhoist SA, Sofina SA

Manager: Strafin sprl

Member: Board of directors of Royal Automobile Club of Belgium, Board of directors of Université Catholique de Louvain
Senior advisor: Cinven Ltd

(1) At 31 December 2022.

(*) Listed company.

Sandrine VERRIER
Principal function: Production and sales support assistant

Date of birth: 9 April 1979

Nationality: French

Term start and end dates: elected by BNP Paribas technician employees for three years from 16 February 2021 - 15 February 2024

Date first elected to the Board of directors: 16 February 2015

Number of BNP Paribas shares held ⁽¹⁾: 20

Business address: 150, rue du Faubourg-Poissonnière
75010 PARIS FRANCE

Offices⁽¹⁾ held in listed or unlisted companies of the BNP Paribas Group, in France or abroad

BNP Paribas^(*), director

Participation⁽¹⁾ in specialised committees of French or foreign companies

BNP Paribas, member of the Financial Statements Committee

Others⁽¹⁾

Regional Economic, Social and Environmental Council of Ile de France, member

Offices held at 31 December in previous financial years

(the companies mentioned are the parent companies of the groups in which the functions were carried out)

2021:	2020:	2019:	2018:
Director: BNP Paribas	Director: BNP Paribas	Director: BNP Paribas	Director: BNP Paribas

(1) 31 December 2022.

(*) Listed company.

Fields WICKER-MIURIN

Principal function: Director of companies

Date of birth: 30 July 1958

Nationalities: British and American

Term start and end dates: 19 May 2020 - 2023 AGM

Date first appointed to the Board of directors: 11 May 2011

Number of BNP Paribas shares held ⁽¹⁾: 1,000

Business address: 63 Queen Victoria Street
LONDON EC4N 4UA
UNITED KINGDOM

Education

Graduate of the Institut d'Études Politiques de Paris

Master's degree from the School of Advanced International Studies,
Johns Hopkins University

BA, University of Virginia

Offices⁽¹⁾ held in listed or unlisted companies of the BNP Paribas Group, in France or abroad

BNP Paribas^(*), director

Offices⁽¹⁾ held in listed or unlisted companies outside the BNP Paribas Group, in France or abroad

SCOR SE^(*), director

Acquis Exchange Plc^(*), director

Participation⁽¹⁾ in specialised committees of French or foreign companies

BNP Paribas, member of the Financial Statements Committee, the Remuneration Committee and the Internal Control, Risk Management and Compliance Committee

SCOR SE, member of the Strategic Committee, member of the Risk Committee, member of the Nominations Committee, member of the Crisis Management Committee, member of the Sustainable Development Committee and Chairwoman of the Remuneration Committee

Acquis Exchange Plc, Chairwoman of the Nomination and Remuneration Committee

Others⁽¹⁾

Leaders' Quest, Co-founder and Partner

Board of the Royal College of Art, Vice-Chairwoman and Chair of the Planning and Resources Committee

Offices held at 31 December in previous financial years

(the companies mentioned are the parent companies of the groups in which the functions were carried out)

2021:	2020:	2019:	2018:
Director: BNP Paribas, SCOR SE, Prudential Plc	Director: BNP Paribas, Prudential Plc, SCOR SE	Director: BNP Paribas, Prudential Plc, SCOR SE	Director: BNP Paribas, Prudential Plc, SCOR SE
Co-founder and Partner: Leaders' Quest	Co-founder and Partner: Leaders' Quest	Co-founder and Partner: Leaders' Quest	Co-founder and Partner: Leaders' Quest
Vice-Chairwoman: Board of the Royal College of Art		Independent member of the Ministry Council and Chairwoman of the Audit and Risks Committee: UK Department of Digital, Culture, Media and Sports	Independent member of the Ministry Council and Chairwoman of the Audit and Risks Committee: UK Department of Digital, Culture, Media and Sports

(1) At 31 December 2022.

(*) Listed company.

Legal proceedings and arbitration

BNP Paribas (the “**Bank**”) is party as a defendant in various claims, disputes and legal proceedings (including investigations by judicial or supervisory authorities) in a number of jurisdictions arising in the ordinary course of its business, including inter alia in connection with its activities as market counterparty, lender, employer, investor and taxpayer.

The related risks have been assessed by the Bank and are subject, where appropriate, to provisions disclosed in note 4.p “Provisions for liabilities and charges” of the consolidated Financial Statements at 31 December 2022; a provision is recognized when it is probable that an outflow of resources embodying economic benefits will be required to settle an obligation arising from a past event and a reliable estimate can be made of the amount of the obligation.

The main contingent liabilities related to pending legal, governmental, or arbitral proceedings as of 31 December 2022 are described below. The Bank currently considers that none of these proceedings is likely to have a material adverse effect on its financial position or profitability; however, the outcome of legal or governmental proceedings is by definition unpredictable.

The Bank and certain of its subsidiaries are defendants in several actions pending before the United States Bankruptcy Court for the Southern District of New York brought by the Trustee appointed for the liquidation of Bernard L. Madoff Investment Securities LLC (“**BLMIS**”). These actions, known generally as “clawback claims”, are similar to those brought by the BLMIS Trustee under the U.S. Bankruptcy Code and New York state law against numerous institutions, and seek recovery of approximately USD 1.3 billion allegedly received by BNP Paribas entities from BLMIS or indirectly through BLMIS-related “feeder funds” in which BNP Paribas entities held interests.

As a result of certain decisions of the Bankruptcy Court and the United States District Court between 2016 and 2018, the majority of the BLMIS Trustee’s actions were either dismissed or substantially narrowed. However, those decisions were either reversed or effectively overruled by subsequent decisions of the United States Court of Appeals for the Second Circuit issued on 25 February 2019 and 30 August 2021. As a result, the BLMIS Trustee may seek to re-file certain claims that were previously dismissed. BNP Paribas has substantial and credible defenses to these actions and is defending against them vigorously.

Litigation was brought in Belgium by minority shareholders of the previous Fortis Group against the Société fédérale de Participations et d’Investissement, Ageas and BNP Paribas seeking (amongst other things) damages from BNP Paribas as restitution for part of the BNP Paribas Fortis shares that were contributed to BNP Paribas in 2009, on the ground that the transfer of these shares was null and void. On 29 April 2016, the Brussels Commercial court decided to stay the proceedings until the resolution of the pending Fortis criminal proceeding in Belgium. The criminal proceeding, in which the Public Prosecutor had requested a dismissal, is definitively closed, as the Council Chamber of the Brussels Court of first instance issued on 4 September 2020 a ruling (which since became final) that the charges were timebarred. Certain minority shareholders are continuing the civil proceedings against BNP Paribas and the Société fédérale de Participations et d’Investissement before the Brussels Commercial court; BNP Paribas continues to defend itself vigorously against the allegations of these shareholders.

Like many other financial institutions in the banking, investment, mutual funds and brokerage sectors, the Bank has received or may receive requests for information from, or be subject to investigations by supervisory, governmental or self-regulatory agencies. The Bank responds to such requests, and cooperates with the relevant authorities and regulators and seeks to address and remedy any issues that may arise.

On 26 February 2020, the Paris Criminal Court found BNP Paribas Personal Finance guilty of misleading commercial practice and concealment of this practice. BNP Paribas Personal Finance was ordered to pay a fine of EUR 187,500 and damages and legal fees to the civil plaintiffs. The damages

award was of immediate effect. BNP Paribas Personal Finance filed an appeal on the merits on 6 March 2020. It also sought to suspend the immediate effectiveness of the judgment, which the court rejected by decision dated 25 September 2020. BNP Paribas Personal Finance paid to the civil plaintiffs the damages awarded, without prejudice to the pending appeal before the Court of Appeal of Paris and to the civil legal proceedings that are otherwise ongoing.

There are no other legal, governmental or arbitral proceedings (including any such proceedings which are pending or threatened) that could have, or during the last twelve months have had, significant effects on the Bank's financial condition or profitability.

RISK MANAGEMENT

Governance

The specialised committees of the Board of directors, which examine the risks taken and the risk policies on a Group scale, are:

- the Internal Control, Risk Management and Compliance Committee (CCIRC);
- the Joint Committee that combines the CCIRC and the Financial Statements Committee;
- the Corporate Governance, Ethics, Nominations and CSR Committee (CGEN).

In line with the Group's Risk Appetite Statement, Executive Management provides broad guidelines for risk management through Group-level governance bodies.

Main Group-level governance bodies have the following roles:

- Capital Committee: validates the Group's objectives in terms of solvency ratios and Total Loss-Absorbing Capacity (TLAC and MREL) requirements in case of resolution as well as the trajectory to achieve these targets, monitors the compliance with this trajectory and, when relevant, proposes corrective actions to achieve target solvency ratios. As the Group's competent Executive Management authority for all issues related to the internal credit and operational risks model, the Capital Committee is informed of decisions made in the MARCo Committees (Model Approval and Review Committee);
- Group ALM Treasury Committee (Group ALCo) is responsible for the management of the liquidity risk, interest rate risk in the banking book and structural foreign exchange risk over the whole Group;
- Group Supervision and Control Committee (GSCC) brings together the Group's control functions at Executive Management level and takes a Group-wide approach to tackling all aspects of risk exposure;
- Acquisitions Committee decides on acquisitions, disposals and external partnerships for operations under its jurisdiction as part of the Group's general investment approval procedure. The Acquisitions Committee reviews the strategic relevance of the proposed projects from the Group's point of view, as well as the various components of the business plans, including synergies and execution risks. In particular, it ensures the intrinsic profitability of projects (measured by Return on Investment), as well as the impact on the Group's solvency, liquidity and profitability, and their adequacy with the Group's Risk Appetite Statement;

- the Sustainable Finance Strategic Committee (SFSC) aims to validate the Group's Sustainable Finance strategy and commitments in this area. It approves the overall strategy in terms of sustainable finance, decides the main focuses of sustainable finance commercial policies and monitors their operational implementation. Where necessary, it also validates cross-functional infrastructure choices ensuring expertise and consistency in the implementation of regulatory requirements and the Group's commitments in methods, analyses, risk management, data, tools, standards and reporting related to sustainable finance;
- the General Management Credit Committee (CCDG) is the Group's highest authority concerning credit and counterparty risks. This committee decides primarily on credit requests exceeding the amount of individual delegations attributed to divisions and business lines or relating to transactions of a specific nature or which would deviate from the principles of the General Credit Policy. A Compliance representative may attend CCDG meetings when an opinion on financial security is needed;
 - the General Management Doubtful Committee (CDDG) is the Group's highest level decision-making committee in terms of specific provisioning and recognitions of losses relative to the Group's customer exposures;
 - the Financial Markets Risk Committee (FMRC) is the body which governs the Group's risk profile of the capital markets activities; its tasks include, among others, analysing market and counterparty risks and setting limits for capital markets activities;
 - the Country Envelope Committees determine the Group's risk appetite by setting limits for medium-to-high-risk countries in view of risk in relation to country, market conditions, business strategies and aspects of risk and compliance;
 - the Risk & Development Policy Committees (RDPC) have the dual objective of defining an appropriate risk policy for any given subject which may be a business activity, a product, a geographic area (region or country), a customer segment or economic sector, and of investigating development opportunities in relation to the subject in question;
 - the Group IT Risk Committee (GITRC) defines and oversees the BNP Paribas Group's IT risk profile. This is the highest authority in terms of technological and cybersecurity risk management.

Specific Adaptation Measures Linked to Crisis Situation

The invasion of Ukraine led to the establishment of crisis committees at all levels of the Group for close monitoring of the main impacts as well as the application of the sanctions that were introduced following this invasion in the activities concerned, allowing rapid decision-making adapted to the evolving context.

On credit risk, close portfolio monitoring was implemented within the divisions and business lines level in order to analyse and manage in particular direct risks. This monitoring also includes the indirect impacts which, in addition to the context of exit the health crisis, have particularly affected certain sectors through rising energy and commodity prices or supply chains disruptions.

Risk Management Organisation

Position of the Control Functions

Risk management is central to the banking business and is one of the cornerstones of operations for the BNP Paribas Group. BNP Paribas has an internal control system covering all types of risks to which the Group may be exposed, organised around three lines of defence:

- as the first line of defence, internal control is the business of every employee, and the heads of the operational activities are responsible for establishing and running a system for identifying, assessing and managing risks according to the standards defined by the functions exercising an independent control in respect of the second line of defence;
- the main control functions within BNP Paribas ensuring the second line of defence are the Compliance, RISK and LEGAL Functions. Their Heads report directly to Chief Executive Officer and account for the performance of their missions to the Board of directors via its specialised committees;
- General Inspection provides a third line of defence. It is responsible for the periodic control.

General Responsibilities of the Risk and Compliance Functions

Responsibility for managing risks primarily lies with the divisions and business lines that are at the origin of the underlying transactions. RISK continuously performs a second-line control over credit and counterparty risks, market risk, interest rate and foreign exchange rate risks on the banking book, liquidity risks, insurance risks, and operational risk, including technological and cybersecurity risks, over data protection risks, modelling risks and environmental and social risk factors, as well as the associated governance risks. As part of this role, it must ascertain the soundness and sustainability of the business commercial developments and their overall alignment with the risk appetite target set by the Group. RISK's remit includes formulating recommendations on risk policies, analysing the risk portfolio on a forward-looking basis, approving customers loans and trading limits, guaranteeing the quality and effectiveness of monitoring procedures, controlling the maturity of the processes and underlying operational risks and defining or validating risk measurement methods. RISK is also responsible for ensuring that all the risk implications of new businesses or products have been adequately assessed.

Compliance has identical responsibilities as regards compliance and reputation risks and it plays an important oversight and reporting role in the process of validating new products, new business activities and exceptional transactions. By issuing opinions and decisions, and performing oversight and second-level controls, Compliance provides reasonable assurance as to the effectiveness and coherence of the compliance control framework applicable to the Group's operations and to the protection of its reputation.

Organisation of the Risk and Compliance Functions

Approach

The RISK organisation fully complies with the principles of independence, vertical integration, and decentralisation issued by the Group's Management for the Group's main control functions (Compliance, RISK, LEGAL, and a third line of defence, General Inspection). Hence within RISK:

- all the teams in charge of risks, including those in operational entities have been integrated in the function with reporting lines to the Chief Risk Officers of these entities;
- the Chief Risk Officers of the entities report to RISK.

This organisation enables the governance of risk management activities to be strengthened, especially regarding model risk management, through RISK Independent Review and Control (RISK IRC) team, reporting directly to the Chief Risk Officer (CRO) which groups together the teams in charge of the independent review of the risk methodologies and models. This team is also in charge of the independent review of operational risk of RISK Function, with the organisation described in section 5.9 *Operational Risk* of the BNP Paribas 2022 Universal registration document.

In accordance with international standards and French regulations, Compliance manages the system for monitoring compliance and reputation risks for all of the Group's businesses in France and abroad. The system for monitoring compliance and reputation risks is described in section 5.9.

Independent and hierarchically integrated on a global basis, Compliance brings together all employees reporting to the function. Its organisation is based on its guiding principles (independence, integration, decentralisation and subsidiarity of the function, dialogue with the business lines) through local teams (operating divisions, CPBS, IFS and CIB), areas of expertise, and departments in charge of transverse missions.

Role of the Chief Risk Officer

The Group Chief Risk Officer reports directly to the Chief Executive Officer and sits on the Executive Committee of BNP Paribas. He has line authority over all RISK employees. He can veto the decisions which are not in line with the Risk Appetite Statement, concerning the risks under RISK competency.

The Group Chief Risk Officer has no connection, in terms of authority, with the Heads of Core Businesses, business lines and territories. He also has direct and independent access to the Board of directors of BNP Paribas, *via* the Internal Control, Risks and Compliance Committee (CCIRC).

This positioning serves the following purposes:

- ensuring the objectivity of risk control, by removing any involvement in commercial relationships;
- making sure senior management is warned of any deterioration in risk and is rapidly provided with objective and comprehensive information on the status of risks;
- enabling the dissemination, throughout the Bank, of high and uniform risk management standards and practices;
- ensuring the quality of risk assessment methods and procedures by calling on professional risk managers in charge of evaluating and enhancing these methods and procedures in light of the best practices implemented by international competitors.

Role of the Chief Compliance Officer

The Chief Compliance Officer reports to the Chief Executive Officer and is a member of the BNP Paribas Executive Committee. She has direct and independent access to the Board of directors and in particular to its specialised committee, the Internal Control, Risk Management and Compliance Committee (CCIRC), and can thus inform it of any event likely to have a significant impact on the Group. Lastly, the CCIRC periodically interviews her, without the effective managers being present.

The Chief Compliance Officer has no operational activity outside of the non-compliance and reputation risk management framework and no commercial activity, which guarantees her independence of action. She exercises hierarchical supervision over all the Compliance teams within the various business units, geographical areas and functions.

Risk Culture

One of the Group's Core Founding Principles

The BNP Paribas Group has a strong risk and compliance culture.

Executive Management has chosen to include the risk culture in three of its key corporate culture documents:

- Code of conduct:

The Group adopted a new Code of conduct in 2016. It applies to all employees and defines the rules for our conduct in line with the core values of our corporate culture. For example, employees are reminded in the Code of conduct that the Group's interests are protected by responsible risk-taking in a strict control environment. The Code of conduct, updated in 2021, also includes rules for protecting customers' interests, financial security, market integrity, professional ethics and anti-bribery and corruption, which all play an important role in mitigating non-compliance and reputation risks;

- Responsibility Charter:

Executive Management drew up a formal Responsibility Charter, inspired by the Group's core values (the "**BNP Paribas Way**"), management principles and Code of conduct. One of the four commitments is "Being prepared to take risks, while ensuring close risk control".

The Group sees rigorous risk control as part of its responsibility, both to clients and to the financial system as a whole. The Bank's decisions on the commitments it makes are reached after a rigorous and concerted process, based on a strong, shared risk culture which pervades all levels of the Group. This is true both for risks linked to lending activities, where loans are granted only after in-depth analysis of the borrower's situation and the project to be financed, and for market risks arising from transactions with clients — these are assessed on a daily basis, tested against stress scenarios, and subject to limits.

As a strongly diversified Group, both in terms of geography and businesses, BNP Paribas is able to balance risks and their consequences as they materialise. The Group is organised and managed in such a way that any difficulties arising in one business area will not jeopardise another in the Bank;

- the Group's mission and commitments:

The mission of BNP Paribas is to finance the economy and advise its clients, by supporting them with their projects, their investments, and the management of their savings, guided by strong ethical principles. Through these activities, BNP Paribas wants to have a positive impact on stakeholders and on society, and be one of the most trustworthy players in the sector. BNP Paribas' 12 commitments as a Responsible Bank include in particular the commitment to apply the highest ethical standards and rigorously manage environmental, social, and governance risks.

Spreading the Risk Culture

Robust risk management is an integral part of the Bank's principles. A culture of risk management and control has always been one of its top priorities.

BNP Paribas launched the Risk Culture, a Group-wide initiative, giving it the objective of reinforcing the communication of the best practices in risk management. Sponsored by four functions: Compliance, LEGAL, Human Resources (HR), and RISK, Risk Culture is designed for the benefit of all staff and intervenes on all types of risks to which the Group may be exposed, including credit, market, liquidity, operational, non-compliance, regulatory, environmental and social risks.

Taking an adaptive and participative approach, this initiative supports the business lines and functions in their process of understanding risks, for example in transformation projects or when onboarding new employees.

In particular, it takes special care to ensure that conduct and behaviour requirements are well integrated, beyond the mission of transmitting knowledge. It provides entities with resources that they can use for their information, acculturation and support for employee skills development in all aspects of the risk culture.

In conjunction with operational entities, Risk Culture actions mainly consist of:

- ensuring the dissemination of information and professional development in the area of risk management, by means of conferences and the publication of educational articles or videos;
- facilitating the sharing of knowledge between the various players in the Bank, in particular changes in the Bank's business lines, news on regulatory requirements and new ways of working. The experts of the Group are invited to expand documentary resources which can be accessed by employees through various communication channels available within the Group.

In all its initiatives, Risk Culture promotes the six fundamental risk management practices that are key to developing a robust risk culture. They serve as a reminder to staff about the importance of clearly understanding and anticipating risks with a long-term perspective, being disciplined with risks taken and reporting swiftly and transparently on risk management.

Lastly, the risk culture is also spread throughout the Group by linking compensation to performance and risk, under a system that was strengthened in this area since 2015 for those employees whose decisions entail a significant risk component.

Risk Appetite

Definition and Objectives

The Group does not have a specific risk appetite target, but some risks are inherent to its business and therefore to the achievement of its strategic objectives. It has prepared a Risk Appetite Statement and Risk Appetite Framework, which should be seen as the Group's formal statement of its tolerance to the risks to which it is exposed as it implements its strategy.

The Risk Appetite Statement is approved on a yearly basis, or more frequently if necessary, by the Board of directors on the proposal of Executive Management. Consistent with the Group's strategy and in light of the environment in which it operates, this document sets out the qualitative risk principles it intends to follow in its business activities, as well as a quantitative mechanism for supervising the Group's risk profile indicators through quantitative metrics and thresholds. This system covers both the quantifiable and non-quantifiable risks to which it is exposed.

The Group's risk appetite is determined by Executive Management, during various committees it chairs (CCDG, FMRC, Group ALCo, and Capital Committee), which are tasked with managing the Group's different types of risk exposure. The Group's strategic processes, such as budget, capital and liquidity management, are in line with the Risk Appetite Statement. Certain Risk Appetite Statement indicators are included in the budget exercise and their expected values in the budget are cross-checked against the thresholds in the Risk Appetite Statement.

The Group's Risk Appetite Statement reflects the core values of its risk culture. It states that the Group's risk culture and its commitments as a responsible bank are at the heart of its strategy. The Statement reaffirms the Group's mission: to finance the economy, advise its clients, and help to finance their projects, guided by strong ethical principles. The Group's strategy underpinning its risk appetite is founded on the core principles that have guided its development: a balance between business activities to deliver profitability and stability, a customer-focused business model and an integrated banking model to optimise services to the latter. This strategy also factors in developments in the banking industry, including the trend towards a digital model, and an uncertain macro-economic outlook, marked by the increase of inflation and interest rates in a context of high geopolitical risk.

Risk Principles

The risk principles aim to define the types of risk the Group is prepared to accept in support of its business strategy. They include the following in particular:

- diversification and risk-adjusted profitability:

The Group seeks to generate sustainable, client-driven, risk adjusted profits. Sustainable profitability will be achieved based on selectivity and controlled evolution of BNP Paribas' assets, and the pursuit of a diversified business model. Whilst the Group accepts some level of earnings volatility, it remains attentive to contain, at all times, the level of maximum potential losses in an adverse scenario;

- solvency and profitability:

BNP Paribas has sufficient capital to cope with stress scenarios and to meet regulatory capitalisation standards in force. In the course of serving its clients, BNP Paribas accepts exposure to risks when it earns a proper return over an acceptable time frame, and when its potential impacts seem acceptable;

- funding and liquidity:

The Group ensures that the diversification of and balance between its resources and uses of funds correspond to a conservative funding strategy, allowing it to withstand adverse liquidity scenarios. The Group makes sure that it complies with the regulatory liquidity ratios in force;

- credit risk:

The Group only accepts exposure on customers it knows well, based on comprehensive information, and pays close attention to the structure of the financing it grants. The Group builds and maintains a diversified risk portfolio, avoiding large concentrations (especially on single names, industries and countries) and ensures that it complies with the concentration policies in force;

- market risk:

The Group manages market risks (interest rates, equities, currencies, commodities) within the following framework:

- for activities in the capital markets that are customer-focused, BNP Paribas intends to keep its market risk profile in line with this customer-focused business mode,
- interest rate risk associated with its banking book with the aim of stabilising its results on an ongoing basis to within acceptable limits;

- operational risk:

The Group aims to protect its customers, employees and shareholders from operational risk. To do so it has developed a risk management infrastructure based on identifying potential risks, strategies to mitigate risk, and actions to raise awareness of these risks. Some specific risks have resulted in the definition of dedicated principles, in particular:

- non-compliance risk:

The Group is committed to compliance with all applicable laws and regulations. It undertakes to implement a system to manage the risk of non-compliance, including through special programmes dedicated to the most important regulations for its business,

- information, communication and technology risk:

The Group endeavours to reduce the risks related to the security of its information through various awareness actions, enhanced supervision of outsourced activities, heightened protection of terminals, incident monitoring, and a technology watch over IT vulnerabilities and attacks;

- insurance activities:

BNP Paribas Cardif is exposed mainly to credit, underwriting and market risks. The entity closely monitors its exposures and profitability, taking into account its risks and the adequacy of its capital with regard to solvency rules. It endeavours to contain potential losses in adverse scenarios at acceptable levels;

- risk associated with social and environmental responsibility:

The Group is particularly sensitive to its customers' performance in terms of social and environmental responsibility, believing that this could have a material impact on its customers' risk profile and, consequently, their solvency, in addition to being a major reputational risk. BNP Paribas takes social and environmental risks into consideration when assessing customer-related risks. The Group also tracks these risks as part of the conduct of its own business, the conduct of its counterparties' business and of its investments on its own behalf or on behalf of third parties.

Supervision of Risk Profile Indicators

The Risk Appetite Statement sets out the indicators that measure the Group's risk profile for its risk exposure categories.

Risk level thresholds are assigned to each metric. When these thresholds are reached, they trigger an established process to inform Executive Management and the Board of directors, and if need be, to implement action plans.

These indicators are monitored quarterly in the risk dashboards presented to the CCIRC.

For example, the following ratios are included in the Risk Appetite Statement indicators:

- the solvency ratios (CET1, Tier 1, total own funds, TLAC and leverage ratio);
- the balance of the breakdown of risk-weighted assets by business line;
- the cost of risk on loans outstandings (in annualised basis points) and doubtful loans on gross outstandings ratio;
- the liquidity ratios (LCR and NSFR).

Stress Testing

To ensure dynamic risk supervision and management, the Group has implemented a comprehensive stress testing framework.

Stress Testing Framework

The stress testing framework forms an integral part of the risk management and financial monitoring system and is used with a threefold objective of forward-looking risk management, planning of regulatory resources and liquidity requirements, and optimisation of the deployment of these resources within the Group, mainly through the Group's and its main entities' ICAAP and ILAAP processes.

Different types of stress tests

There are two types of stress tests:

- regulatory stress tests:

These involve primarily the stress tests requested by the European Banking Authority, the European Central Banks, or any other supervisory authority.

In 2022, the ECB conducted a climate stress test among 104 financial institutions under its supervision. The exercise included i) a questionnaire designed to assess the climate stress testing infrastructure of banks, ii) information on revenues generated in sectors deemed to be exposed to climate change and on greenhouse gas emissions of major clients in these sectors, and iii) several climate stress tests in a number of transition and physical risk scenarios. Given that climate stress tests are new and remain in learning phase, the exercise had no capital implication. The ECB did not disclose any bank-specific information. The exercise demonstrated the good level of progress achieved by BNP Paribas in climate stress testing. The Group recognises the relevance of scenario analysis to assess the possible impacts of climate risk, given its forward-looking nature. The Group however also considers that climate stress testing is a developing activity, which is less mature than traditional stress tests involving macro-economic or capital markets scenarios. Results of climate scenarios analyses should be used in a way that reflects this lesser maturity.

In 2021, the EBA and the ECB conducted EU-wide stress tests of the 50 largest European banks. As in previous years, macroeconomic scenarios and a certain number of methodological assumptions were applied to all banks for comparison purposes. A macroeconomic stress scenario of unprecedented severity over a period of three consecutive years (the “**adverse scenario**”) was used to test the impact on exposure to credit, market, operational and revenue

(rates and commission) risks. This was done in a context already under stress due to the health crisis. This was the second European regulatory stress test completed under the new IFRS 9 accounting standard to analyse its impact on the 2020 crisis year and on a period of renewal of a major macroeconomic crisis.

In 2019, the ECB had conducted liquidity stress tests on 103 European banks. This exercise consisted of a sensitivity analysis to assess changes in the banks' net liquidity position in different impact scenarios that may arise in the event of the bank experiencing a liquidity crisis. The shocks applied to assets and liabilities were defined using observed liquidity crises that have impacted banks in Europe and were calibrated for different levels of severity. This liquidity stress test showed the Group's comfortable liquidity position. BNP Paribas will participate in 2023 in the next stress test organised by the EBA.

- internal stress tests:
 - stress tests dedicated to risk anticipation: they contribute to the forward-looking risk management, in particular of credit, market, counterparty, interest rates in the banking book, operational, activity and liquidity risks. The results of the transverse stress tests are used, among other purposes, to formulate the Bank's risk appetite and periodically measure its risk profile. They are periodically submitted to Group Executive Management as well as the Board of directors' Internal Control, Risk Management and Compliance Committee (CCIRC) through the quarterly Group risk dashboard. Moreover, *ad hoc* stress testing is performed, when appropriate, within Risk & Development Policy Committees, portfolio reviews or Country Strategic Committees to identify and assess areas of vulnerability within the Group's portfolios,
 - stress tests for the budget process: they contribute to three-year capital planning. Stress tests are carried out annually as part of the budget process and are included in the ICAAP and the ILAAP. They are reviewed at divisional and business line level before being consolidated at Group level to provide a comprehensive view of the impact on the Bank's capital, liquidity and earnings,

The purpose of stress testing in the budget process is to assess the impact of an adverse macroeconomic scenario on the Group and its activities. These stress tests are part of the yearly budget process which is run on the basis of baseline and adverse scenarios. The impact of the adverse scenario is measured on profit and loss (revenues, cost of risk, *etc.*), balance-sheet, risk-weighted assets, and capital.

The calculated final output is a range of projected Group's solvency ratios, as well as possible adjustment measures. The scenarios used, the outcomes of the stress tests and the proposed possible adjustment measures (such as reducing exposures to a sub-segment cost reduction initiatives, or changes in funding or liquidity policies, *etc.*) are included in the budget synthesis report presented to the Group Executive Management at the end of the budget process.

In addition, in the Group's ICAAP, its solvency can be analysed in adverse scenarios other than an adverse budget scenario, defined by risk topics occasionally identified by the Group,

- reverse stress tests: they were conducted as part of the Bank's recovery and resolution plan and ICAAP. Reverse stress tests consist of identifying scenarios likely to result in a drop in the Bank's solvency ratios to below levels set in advance in line with the methods of use in question. These exercises enable any areas where the Bank is fragile in terms of changes in certain risk factors to be detected and facilitate in-depth analyses of the remedial actions that could be implemented by business lines or Group-wide.

Governance and implementation

This framework is based on a well-defined governance, with responsibilities shared between the Group and operational entities in order to encourage operational integration and relevance. Since 2017, the Group has set up a Stress Testing and Extended Planning (STEP) programme serving both the Group and its subsidiaries and business lines. The aim of the STEP programme is continue to respond effectively to the various regulatory stress tests, such as the EBA and ECB ones, and to develop internal stress test practices required for proper risk management and Group resource planning.

Finance, RISK and ALM Treasury functions have created a shared team — Stress Testing and Financial Simulations (“STFS”), responsible for implementing the STEP programme and its deployment across the Group’s entities and activities.

The STFS team is responsible in particular for:

- the definition and the implementation of the Group’s target structure in terms of stress testing and ICAAP while covering the associated organisational issues, modelisation, IT systems and governance;
- the performance of all of the Group’s stress testing exercises, relying in particular on existing teams within RISK and Finance Functions;
- the support of the stress test and ICAAP initiatives of the Group’s business lines and legal entities in order to ensure overall consistency and streamline procedures;
- the coordination of the Group’s financial simulation system and its adaptation to the challenges of SREP;
- the Group’s risk identification process;
- the production of the Group’s ICAAP report and, for certain risks, the quantification of internal capital.

Stress test methodologies are tailored to the main categories of risk and subject to independent review.

Stress tests may be run at Group, business line or portfolio level, dedicated to one or more risk types and on a more or less large number of variables depending on the pursued objective. Where appropriate, the results of quantitative models may be adjusted on the basis of expert judgement.

Since its creation, the Group’s stress testing framework has evolved continuously in order to integrate the most recent developments in stress tests, whether in terms of methodologies or improved operational integration in the Group’s management processes. In this context, the Group is engaged in the development of a climate stress testing infrastructure, covering scenarios (see below), data and models and methodologies, as well as encompassing both transition and physical risks, which are the two main risk types into which climate risk materialises.

Internal Stress Test Scenario Definition

In stress testing exercises, it is common practice to distinguish the baseline scenario from adverse (and favourable, where applicable) scenarios. A macroeconomic scenario is typically a set of macroeconomic and financial variables (GDP and its components, inflation, employment and unemployment, interest and exchange rates, stock prices, commodity prices, *etc.*) projected over a given future period.

Macroeconomic stress tests

Baseline scenario

The baseline scenario is considered as the most likely scenario over the projection horizon. The baseline scenario is constructed by Group Economic Research in collaboration with various functions and business lines possessing a specific expertise, in particular:

- Group ALM Treasury for interest rates;
- Wealth Management for equity indices;
- BNP Paribas Real Estate regarding commercial real estate;
- local economists when regional expertise is required;
- Stress Testing & Financial Simulations (STFS) for coordination and overall consistency of the scenario.

The global scenario is made up of regional and national scenarios (eurozone, France, Italy, Belgium, Spain, Germany, United Kingdom, Poland, Turkey, United States, Japan, China, India, Russia, *etc.*) consistent with each other.

Adverse scenario

An adverse scenario describes one or several potential shocks to the economic and financial environment — *i.e.* the materialisation of one or several risks to the baseline scenario — over the projection horizon. An adverse scenario is thus always designed in relation to a baseline scenario. The shocks associated with the adverse scenario are translated in the set of macroeconomic and financial variables listed above in the form of deviations from their value in the baseline scenario. The adverse scenario is constructed by STFS in collaboration with the same functions and business lines as for requested for the baseline scenario.

Construction of scenarios

The baseline, adverse and favourable scenarios are revised quarterly by STFS to monitor the Bank's risk appetite metrics and credit provision calculations within the framework of IFRS 9 (see part 2.h of the consolidated and financial statements).

They are validated in meetings involving the Group Executive Management for scenarios used in the Group's budget process (second and third quarters of the year). For the other two quarterly exercises in March and December, scenarios are validated jointly by the Group Chief Risk Officer and the Group Chief Financial Officer.

The scenarios are then used to calculate expected losses (or profit and loss impact in the case of market risks) over the year for all Group portfolios:

- for portfolios exposed to credit or counterparty risk and for the equity portfolio of the banking book: this calculation measures the impact of the scenario on the cost of risk and risk-weighted assets due to the deterioration of the portfolio quality resulting from the macroeconomic scenario, or adverse moves in equity prices. Credit risk stress tests are performed on the Bank's entire portfolio for all regions and all prudential portfolios, namely Retail, Corporates and Institutions;
- for market portfolios: the changes in value and their profit and loss impact are calculated by simulating a one-time shock, which is consistent with the overall scenario.

The above calculations and related methodologies for stress tests on credit and market risks are coordinated centrally at Group level by STFS team. They also involve various teams of experts at Group and territory's levels in their implementation and design.

Lastly, in an adverse budget scenario, risks appertaining to the Group and its business activities and not forming part of the adverse macroeconomic scenario are added. They are identified and quantified either by the Group's businesses or centrally for those likely to impact the Group as a whole.

Climate stress tests

Beyond macroeconomic stress tests, the field of climate stress tests is developing rapidly. In this context, the Group is engaged in the analysis, adaptation and creation of transition and physical risk scenarios.

With regard to the risk of transition, the analysis and adaptation work are based at this stage on the work of the NGFS (Network for Greening the Financial System), pioneer in this field. For the Group's internal requirements in terms of climate stress tests, the NGFS scenarios can be adjusted and adapted, so that they are more in touch with most recent developments (*e.g.* at the macroeconomic level) or that they are more specifically adapted to the Group's portfolios. In addition, in collaboration with other companies and institutions, the Group is taking part in the Iris initiative to define transition scenarios with more precise sectoral aspects. That are relevant to assess transition risk.

The physical risk scenarios used by the Group at this stage focus on geographies with significant Retail Banking activities in Europe.

RISK FACTORS

Not all of the risk factors described below will be applicable to a particular series of the Structured Products. Please consider all risks carefully prior to investing in any Structured Products and consult your professional independent financial adviser and legal, accounting, tax and other advisers with respect to any investment in the Structured Products. Please read the following section together with the risk factors set out in the relevant launch announcement and supplemental listing document.

General risks in relation to us and the Guarantor

Structured Products are unsecured obligations

The Structured Products are not secured on any of our or the Guarantor's assets or any collateral. Each series of Structured Products will constitute our general unsecured contractual obligations and the general unsecured contractual obligations of the Guarantor and of no other person and will rank pari passu with our other unsecured contractual obligations and the unsecured and unsubordinated debt of the Guarantor. At any given time, the number of Structured Products outstanding may be substantial.

Creditworthiness

If you purchase our Structured Products, you are relying upon our creditworthiness and the creditworthiness of the Guarantor and have no rights under the Structured Products against:

- (a) any company which issues the underlying shares;
- (b) the fund which issues the underlying securities or its trustee (if applicable) or manager; or
- (c) any index compiler of the underlying index.

As our obligations under the Structured Products are unsecured, we do not guarantee the repayment of capital invested in any Structured Product.

If we become insolvent or default on our obligations under the Structured Products or the Guarantor becomes insolvent or defaults on its obligations under the Guarantee, you can only claim as our or the Guarantor's unsecured creditor regardless of the performance of the

underlying asset and you may not be able to recover all or even part of the amount due under the Structured Products (if any).

Any downgrading of the Guarantor's rating by rating agencies such as Moody's or S&P could result in a reduction in the trading value of the Structured Products.

No deposit liability or debt obligation

In respect of cash settled Structured Products, we have the obligation to deliver to you the Cash Settlement Amount (net of any Exercise Expenses) in accordance with the Conditions of each series of Structured Products upon expiry.

It is not our intention by the issue of any Structured Product (expressed, implicit or otherwise) to create a deposit liability of us or the Guarantor or a debt obligation of any kind.

Conflicts of interest

The BNP Group engages in commercial, banking and other activities for our own account or the account of others and, in connection with our other business activities, may possess or acquire material information about the Underlying Assets to which the relevant Structured Product is linked. Such activities may involve or otherwise affect the Underlying Assets in a manner that may cause consequences adverse to you or otherwise create conflicts of interests in connection with the issue of Structured Products by us. Such actions and conflicts may include, without limitation, the purchase and sale of securities and/or exercise of creditor rights. The BNP Group:

- (a) has no obligation to disclose such information about the Underlying Assets or such activities. The BNP Group and our respective officers and directors may engage in any such activities without regard

to the issue of Structured Products by us or the effect that such activities may directly or indirectly have on any Structured Product;

- (b) may from time to time engage in transactions involving the Underlying Assets for its accounts and/or for accounts under its management and/or to hedge against the market risk associated with issuing the Structured Products. Such transactions may have a positive or negative effect on the price/level of the Underlying Assets and consequently upon the value of the relevant series of Structured Products;
- (c) may from time to time act in other capacities with regard to the Structured Products, such as in an agency capacity and/or as the liquidity provider; and/or
- (d) may issue other derivative instruments in respect of the Underlying Assets and the introduction of such competing products into the market place may affect the value of the relevant series of Structured Products.

General risks in relation to Structured Products

You may lose all your investment in the Structured Products

Structured Products involve a high degree of risk, and are subject to a number of risks which may include interest rate, foreign exchange, time value, market and/or political risks. Structured Products may expire worthless.

Generally speaking, options, warrants and equity linked instruments are priced primarily on the basis of the price/level/exchange rate of the Underlying Asset, the volatility of the Underlying Asset's price/ level/exchange rate and the time remaining to expiry of the Structured Product.

The price of Structured Products generally may fall in value as rapidly as they may rise and you should be prepared to sustain a significant or total loss of the purchase price of the Structured Products. Assuming all other factors are held constant, the more the underlying share price, unit price, index level or exchange rate of a Structured Product moves in a direction against you, the greater the risk that you will lose all or a significant part of your investment.

The risk of losing all or any part of the purchase price of a Structured Product means that, in order to recover and realise a return on your investment, you must generally anticipate correctly the direction, timing and magnitude of any change in the price/ level/exchange rate of the Underlying Asset as may be specified in the relevant launch announcement and supplemental listing document.

Changes in the price/level/exchange rate of an Underlying Asset can be unpredictable, sudden and large and such changes may result in the price/level/ exchange rate of the Underlying Asset moving in a direction which will negatively impact upon the return on your investment. You therefore risk losing your entire investment (or, in the case of Inline Warrants, a substantial part of your investment) if the price/level/exchange rate of the relevant Underlying Asset does not move in your anticipated direction.

The value of the Structured Products may be disproportionate with or opposite to movement in the price/level/exchange rate of the Underlying Assets

An investment in Structured Products is not the same as owning the Underlying Assets or having a direct investment in the Underlying Assets. The market values of Structured Products are linked to the relevant Underlying Assets and will be influenced (positively or negatively) by it or them but any change may not be comparable and may be disproportionate. It is possible that while the price/ level/exchange rate of the Underlying Assets is moving up, the value of the Warrant or CBBC is falling. In the case of Inline Warrants, generally, ignoring interim interest rates and expected dividend payments on the Underlying Asset or on any components comprising the underlying index and assuming all other factors remain constant, the closer the price/level of the Underlying Asset towards the mid-way of the Upper Strike Price/Upper Strike Level and the Lower Strike Price/Lower Strike Level, the greater the value of the Inline Warrants; conversely, the farther the price/level of the Underlying Asset from the mid-way of the Upper Strike Price/Upper Strike Level and the Lower Strike Price/Lower Strike Level, the lower the value of the Inline Warrants.

If you intend to purchase any series of Structured Products to hedge against the market risk

associated with investing in an Underlying Asset specified in the relevant launch announcement and supplemental listing document, you should recognise the complexities of utilising Structured Products in this manner. For example, the value of the Structured Products may not exactly correlate with the price/ level/exchange rate of the Underlying Asset. Due to fluctuations in supply and demand for Structured Products, there is no assurance that their value will correlate with movements of the Underlying Asset. The Structured Products may not be a perfect hedge to the Underlying Asset or portfolio of which the Underlying Asset forms a part.

It may not be possible to liquidate the Structured Products at a level which directly reflects the price/ level/exchange rate of the Underlying Asset or portfolio of which the Underlying Asset forms a part. Therefore, it is possible that you could suffer substantial losses in the Structured Products in addition to any losses suffered with respect to investments in or exposures to the Underlying Asset.

Possible illiquidity of secondary market

It is not possible to predict if and to what extent a secondary market may develop in any series of Structured Products and at what price such series of Structured Products will trade in the secondary market and whether such market will be liquid or illiquid. The fact that the Structured Products are listed does not necessarily lead to greater liquidity than if they were not listed.

If any series of Structured Products are not listed or traded on any exchange, pricing information for such series of Structured Products may be difficult to obtain and the liquidity of that series of Structured Products may be adversely affected.

The liquidity of any series of Structured Products may also be affected by restrictions on offers and sales of the Structured Products in some jurisdictions.

Transactions in off-exchange Structured Products may be subject to greater risks than dealing in exchange-traded Structured Products. To the extent that any Structured Products of a series is closed out, the number of Structured Products outstanding in that series will decrease, which may result in a lessening of the liquidity of Structured Products. A lessening of the liquidity

of the affected series of Structured Products may cause, in turn, an increase in the volatility associated with the price of such Structured Products.

While we have appointed, or will appoint, a liquidity provider for the purposes of making a market for each series of Structured Products, there may be circumstances outside our control or the appointed liquidity provider's control where the appointed liquidity provider's ability to make a market in some or all series of Structured Products is limited, restricted and/or, without limitation, frustrated. The more limited the secondary market, the more difficult it may be for you to realise the value of the Structured Products prior to expiry.

Interest rates

Investments in the Structured Products may involve interest rate risk with respect to the currency of denomination of the Underlying Assets and/or the Structured Products. A variety of factors influence interest rates such as macro economic, governmental, speculative and market sentiment factors. Such fluctuations may have an impact on the value of the Structured Products at any time prior to valuation of the Underlying Assets relating to the Structured Products.

Time decay

The settlement amount of certain series of Structured Products at any time prior to expiration may be less than the trading price of such Structured Products at that time. The difference between the trading price and the settlement amount will reflect, among other things, a "time value" of the Structured Products. The "time value" of the Structured Products will depend partly upon the length of the period remaining to expiration and expectations concerning the price/level/exchange rate of the Underlying Assets. The value of a Warrant or CBBC will decrease over time. The value of an Inline Warrant is likely to decrease over time when the price or level of the Underlying Asset falls outside the range between the Upper Strike Price or Upper Strike Level and the Lower Strike Price or Lower Strike Level (both inclusive), ignoring interim interest rates and expected dividend payments on the Underlying Asset or on

any components comprising the underlying index and assuming all other factors remain constant. Therefore, the Structured Products should not be viewed as products for long term investments.

Exchange rate risk

There may be an exchange rate risk in the case of cash settled Structured Products where the Cash Settlement Amount will be converted from a foreign currency into the Settlement Currency. Exchange rates between currencies are determined by forces of supply and demand in the foreign exchange markets. These forces are, in turn, affected by factors such as international balances of payments and other economic and financial conditions, government intervention in currency markets and currency trading speculation. Fluctuations in foreign exchange rates, foreign political and economic developments and the imposition of exchange controls or other foreign governmental laws or restrictions applicable to such investments may affect the foreign currency market price and the exchange rate-adjusted equivalent price of the Structured Products. Fluctuations in the exchange rate of any one currency may be offset by fluctuations in the exchange rate of other relevant currencies.

Possible early termination for illegality or impracticability

If the Conditions provide for termination due to illegality and we determine in good faith and in a commercially reasonable manner that, for reasons beyond our control, the performance of (i) our obligations under the relevant Structured Products or (ii) our Guarantor's obligations under the Guarantee has become illegal or impracticable, we may terminate early the relevant Structured Products. If we terminate early the relevant Structured Products, we will, if and to the extent permitted by applicable law, pay an amount determined by us in good faith and in a commercially reasonable manner to be the fair market value of the relevant Structured Products notwithstanding the illegality or impracticability less our cost of unwinding the underlying hedging arrangements. Such amount may be substantially less than your initial investment and may be zero.

Foreign Account Tax Compliance withholding may affect payments on the Structured Products

Sections 1471 through 1474 of the U.S. Internal Revenue Code of 1986, as amended ("FATCA"), impose a new reporting regime and a potential 30% United States withholding tax with respect to (i) certain payments from sources within the United States, and (ii) "foreign passthru payments", a term not presently defined, made to certain non-U.S. financial institutions that do not comply with the requirements of FATCA or investors that fail to provide information necessary to determine whether they are exempt from FATCA withholding.

Prospective investors should refer to the section "Taxation — Taxation in the United States of America — Foreign Account Tax Compliance Act."

Modification to the Conditions

Under the Conditions, we may, without your consent, effect any modification of the terms and conditions applicable to the Structured Products which, in our opinion, is:

- (a) not materially prejudicial to the interest of the holders of the Structured Products generally (without considering the circumstances of any individual Holder or the tax or other consequences of such modification in any particular jurisdiction);
- (b) of a formal, minor or technical nature;
- (c) to correct a manifest error; or
- (d) necessary in order to comply with mandatory provisions of the laws or regulations of Hong Kong.

Risks in relation to the Underlying Asset

You have no right to the Underlying Asset

Unless specifically indicated in the Conditions, you will not be entitled to:

- (a) voting rights or rights to receive dividends or other distributions or any other rights that a holder of the underlying shares or units would normally be entitled to; or

- (b) voting rights or rights to receive dividends or other distributions or any other rights with respect to any company constituting any underlying index.

Valuation risk

An investment in Structured Products may involve valuation risks in relation to the Underlying Asset to which the particular series of Structured Products relate. The price/level/exchange rate of the Underlying Asset may vary over time and may increase or decrease by reference to a variety of factors which may include corporate actions, macro economic factors, market trends, speculation and/or (where the Underlying Asset is an index) changes in the formula for or the method of calculating the index.

Where the Structured Products are linked to certain Underlying Asset in a developing financial market, you should note a developing financial market differs from most developed markets in various aspects, including the growth rate, government involvement and control, level of development and foreign exchange control. Any rapid or significant changes in the economic, political or social condition and the government policies of the developing financial market may result in large fluctuations in the value or level of the Underlying Asset. Such fluctuations may affect the market value of the Structured Products and hence your investment return.

Where the Structured Products are linked to a currency pair as the Underlying Asset, you should note that the foreign exchange market can be very volatile and unpredictable. Exchange rate of the currencies may fluctuate as a result of market, economic and/or political conditions in the principal financial centres of the countries of the currencies and also in other countries. For example, it can be affected by change of governments' monetary or foreign exchange policies, rates of inflation, interest rate levels and the extent of governmental surpluses or deficits in the relevant countries. Such fluctuations may affect the market value of the Structured Products and hence your investment return.

You must be experienced in dealing in these types of Structured Products and must understand the risks associated with dealing in such products. You should reach an investment decision only

after careful consideration, with your advisers, of the suitability of any Structured Product in light of your particular financial circumstances, the information regarding the relevant Structured Product and the particular Underlying Asset to which the value of the relevant Structured Product relates.

Adjustment related risk

Certain events relating to the Underlying Asset require or, as the case may be, permit us to make certain adjustments or amendments to the Conditions. You have limited anti-dilution protection under the Conditions. We may, in our sole discretion:

- (a) in respect of Structured Products relating to single equities or ETF, adjust, among other things, the Entitlement, the Exercise Price/Strike Price, the Upper Strike Price/Lower Strike Price and the Call Price (if applicable) upon exercise or any other terms (including without limitation the closing price of the Underlying Asset) of any series of Structured Products for events such as rights issue, bonus issue, subdivision, consolidation, restructuring event or certain cash distribution;
- (b) in respect of Structured Products relating to an index, determine the Closing Level;
- (c) in respect of Structured Products relating to a commodity or commodity futures, adjust, among other things, the Closing Price and if applicable, the Price Source and/or the Exchange Rate; or
- (d) in respect of Structured Products relating to a currency pair, adjust, among other things, the Spot Rate and the Settlement Exchange Rate (if applicable).

However, we are not obliged to make an adjustment for every event that may affect an Underlying Asset, in which case the market price of the Structured Products and the return upon the expiry of the Structured Products may be affected.

In the case of Structured Products which relate to an index, the level of the index may be published by the index compiler at a time when one or more components comprising the index are not trading. If this occurs on the Valuation Date which does

not constitute a Market Disruption Event under the Conditions, then the Closing Level of the index is calculated by reference to the remaining components in the index. In addition, certain events relating to the index (including a material change in the formula or the method of calculating the index or a failure to publish the index) permit us to determine the level of the index on the basis of the formula or method last in effect prior to such change in formula or method.

Suspension of trading

If an Underlying Asset is suspended from trading or dealing for whatever reason on the market on which it is listed or dealt in (including the Stock Exchange), trading in the relevant series of Structured Products may be suspended for a similar period. In addition, if an Underlying Asset is an index and the calculation and/or publication of the index level by the index compiler is suspended for whatever reasons, trading in the relevant series of Structured Products may be suspended for a similar period. The value of the Warrants and CBCs will decrease over time, while the value of an Inline Warrant is likely to decrease over time when the price or level of the Underlying Asset falls outside the range between the Upper Strike Price or Upper Strike Level and the Lower Strike Price or Lower Strike Level (both inclusive), ignoring interim interest rates and expected dividend payments on the Underlying Asset or on any components comprising the underlying index and assuming all other factors remain constant. You should note that in the case of a prolonged suspension period, the market price of the Structured Products may be subject to a significant impact of time decay of such prolonged suspension period and may fluctuate significantly upon resumption of trading after the suspension period of the Structured Products. This may adversely affect your investment in the Structured Products.

Delay in settlement

Unless otherwise specified in the relevant Conditions, in the case of any termination or expiry, as the case may be, of Structured Products, there may be a time lag between the date on which the Structured Products are terminated or expired, and the time the applicable

settlement amount is paid to you. Any such delay between the time of termination or expiry and the payment of the settlement amount will be specified in the relevant Conditions.

However, such delay could be significantly longer, particularly in the case of a delay in the termination or expiry of such Structured Products arising from a determination by us that a Market Disruption Event, Settlement Disruption Event or delisting of the underlying shares or units or shares in the underlying fund has occurred at any relevant time or that adjustments are required in accordance with the Conditions.

That applicable settlement amount may change significantly during any such period, and such movement or movements could decrease or modify the settlement amount or entitlement value (as the case may be) of the Structured Products.

You should note that in the event of there being a Settlement Disruption Event or a Market Disruption Event, payment of the Cash Settlement Amount may be delayed as more fully described in the Conditions.

Risk specific to underlying asset adopting the multiple counters model

Where the Underlying Asset adopts the multiple counters model for trading its units or shares on the Stock Exchange in Hong Kong dollars (“HKD”) and one or more foreign currencies (such as Renminbi and/or United States Dollars) (each a “**Foreign Currency**”) separately, the novelty and relatively untested nature of the Stock Exchange’s multiple counters model may bring the following additional risks:

- (a) the Structured Products may be linked to the HKD-traded units or shares or the Foreign Currency traded units or shares. If the Underlying Asset is the units or shares traded in one currency counter, movements in the trading prices of the units or shares traded in another currency counter should not directly affect the price of the Structured Products;
- (b) if there is a suspension of inter-counter transfer of such units or shares between different currency counters for any reason, such units or shares will only be able to be traded in the relevant currency counter on

the Stock Exchange, which may affect the demand and supply of such units or shares and have an adverse effect on the price of the Structured Products; and

- (c) the trading price on the Stock Exchange of the units or shares traded in one currency counter may deviate significantly from the trading price on the Stock Exchange of units or shares traded in another currency counter due to different factors, such as market liquidity, foreign exchange conversion risk, supply and demand in each counter and exchange rate fluctuation. Changes in the trading price of the Underlying Asset in the relevant currency counter may adversely affect the price of the Structured Products.

Risks relating to Structured Products over funds

In the case of Structured Products which relate to the units or shares of a fund:

- (a) the BNP Group is not able to control or predict the actions of the trustee (if applicable) or the manager of the relevant fund. Neither the trustee (if applicable) nor the manager of the relevant fund (i) is involved in the offer of any Structured Product in any way, or (ii) has any obligation to consider the interest of the holders of any Structured Product in taking any actions that might affect the value of any Structured Product; and
- (b) we have no role in the relevant fund. The trustee (if applicable) or manager of the relevant fund is responsible for making investment and other trading decisions with respect to the management of the relevant fund consistent with its investment objectives and in compliance with the investment restrictions as set out in the constitutive documents of the relevant fund. The manner in which the relevant fund is managed and the timing of actions may have a significant impact on the performance of the relevant fund. Hence, the market price of the relevant units or shares is also subject to these risks.

Exchange traded funds

In the case of Structured Products linked to units or shares of an ETF, you should note that:

- (a) an ETF is exposed to the economic, political, currency, legal and other risks of a specific sector or market related to the underlying asset pool or index or market that the ETF is designed to track;
- (b) there may be disparity between the performance of the ETF and the performance of the underlying asset pool or index or market that the ETF is designed to track as a result of, for example, failure of the tracking strategy, currency differences, fees and expenses; and
- (c) where the underlying asset pool or index or market that the ETF tracks is subject to restricted access, the efficiency in the creation or redemption of units or shares to keep the price of the ETF in line with its net asset value may be disrupted, causing the ETF to trade at a higher premium or discount to its net asset value. Hence, the market price of the Structured Products will also be indirectly subject to these risks.

Synthetic exchange traded funds

Additionally, where the Underlying Asset comprises the units or shares of an ETF adopting a synthetic replication investment strategy to achieve its investment objectives by investing in financial derivative instruments linked to the performance of an underlying asset pool or index that the ETF is designed to track (“**Synthetic ETF**”), you should note that:

- (a) investments in financial derivative instruments will expose the Synthetic ETF to the credit, potential contagion and concentration risks of the counterparties who issued such financial derivative instruments. As such counterparties are predominantly international financial institutions, the failure of one such counterparty may have a negative effect on other counterparties of the Synthetic ETF.

Even if the Synthetic ETF has collateral to reduce the counterparty risk, there may still

be a risk that the market value of the collateral has fallen substantially when the Synthetic ETF seeks to realise the collateral; and

- (b) the Synthetic ETF may be exposed to higher liquidity risk if the Synthetic ETF invests in financial derivative instruments which do not have an active secondary market.

The above risks may have a significant impact on the performance of the relevant ETF or Synthetic ETF and hence the market price of Structured Products linked to such ETF or Synthetic ETF.

ETF investing through the QFI regimes and/or China Connect

Where the Underlying Asset comprises the units or shares of an ETF (“**China ETF**”) issued and traded outside Mainland China with direct investment in the Mainland China’s securities markets through the Qualified Foreign Institutional Investor regime and Renminbi Qualified Foreign Institutional Investor regime (collectively, “**QFI regimes**”) and/or the Shanghai-Hong Kong Stock Connect and/or Shenzhen-Hong Kong Stock Connect (collectively, “**China Connect**”), you should note that, amongst others:

- (a) the novelty and untested nature of China Connect make China ETFs riskier than traditional ETFs investing directly in more developed markets. The policy and rules for the QFI regimes and China Connect prescribed by the Mainland China government are new and subject to change, and there may be uncertainty to their interpretation and/or implementation. The uncertainty and change of the laws and regulations in Mainland China may adversely impact on the performance of China ETFs and the trading price of the relevant units or shares;
- (b) a China ETF primarily invests in securities traded in the Mainland China’s securities markets and is subject to concentration risk. Investment in the Mainland China’s securities markets (which are inherently stock markets with restricted access) involves certain risks and special considerations as compared with investment in more developed economies or markets, such as greater political, tax, economic,

foreign exchange, liquidity and regulatory risks. The operation of a China ETF may also be affected by interventions by the applicable government(s) and regulators in the financial markets;

- (c) trading of securities invested by a China ETF under China Connect will be subject to a daily quota which is utilised on a first-come-first-serve basis under the China Connect. In the event that the daily quota under China Connect is reached, the manager may need to suspend creation of further units or shares of such China ETF, and therefore may affect the liquidity in unit or share trading of such China ETF. In such event, the trading price of a unit or share of such China ETF is likely to be at a significant premium to its net asset value, and may be highly volatile. The People’s Bank of China and the State Administration of Foreign Exchange have jointly published the detailed implementation rules removing the investment quota under the QFI regimes with effect from 6 June 2020; and
- (d) there are risks and uncertainties associated with the current Mainland Chinese tax laws applicable to a China ETF investing in the Mainland China through the QFI regimes and/or China Connect. Although such China ETF may have made a tax provision in respect of potential tax liability, the provision may be excessive or inadequate. Any shortfall between the provisions and actual tax liabilities may be covered by the assets of such China ETF and may therefore adversely affect the net asset value of such China ETF and the market value and/or potential payout of the Structured Products.

The above risks may have a significant impact on the performance of the relevant units or shares and the price of the Structured Products.

Please read the offering documents of the relevant China ETF to understand its key features and risks.

Real estate investment trust (“REIT”)

Where the Underlying Asset comprises the units of a REIT, you should note that the investment objective of a REIT is to invest in a real estate portfolio. Each REIT is exposed to risks relating to investments in real estate, including but not

limited to (a) adverse changes in political or economic conditions; (b) changes in interest rates and the availability of debt or equity financing, which may result in an inability by the REIT to maintain or improve the real estate portfolio and finance future acquisitions; (c) changes in environmental, zoning and other governmental rules; (d) changes in market rents; (e) any required repair and maintenance of the portfolio properties; (f) breach of any property laws or regulations; (g) the relative illiquidity of real estate investment; (h) real estate taxes; (i) any hidden interests in the portfolio properties; (j) any increase in insurance premiums and (k) any uninsurable losses.

There may also be disparity between the market price of the units of a REIT and the net asset value per unit. This is because the market price of the units of a REIT also depends on many factors, including but not limited to (a) the market value and perceived prospects of the real estate portfolio; (b) changes in economic or market conditions; (c) changes in market valuations of similar companies; (d) changes in interest rates; (e) the perceived attractiveness of the units of the REIT against those of other equity securities; (f) the future size and liquidity of the market for the units and the REIT market generally; (g) any future changes to the regulatory system, including the tax system and (h) the ability of the REIT to implement its investment and growth strategies and to retain its key personnel.

The above risks may have a significant impact on the performance of the relevant units and the price of the Structured Products.

Commodity market risk

Where the Underlying Asset comprises the units or shares of an ETF whose value relates directly to the value of a commodity, you should note that fluctuations in the price of the commodity could materially adversely affect the value of the underlying units or shares. Commodity market is generally subject to greater risks than other markets. The price of a commodity is highly volatile. Price movement of a commodity is influenced by, among other things, interest rates, changing market supply and demand relationships, trade, fiscal, monetary and exchange control programmes and policies of governments, and international political and economic events and policies.

Risk Relating to Inline Warrants

The Inline Warrants are exotic warrants and are not comparable to the Warrants

The Inline Warrants are exotic warrants with different terms and risk and return profile compared to standard call or put Warrants listed on the Stock Exchange and are not comparable to the Warrants. The Inline Warrants carry exotic features and their terms and pricing may be more complicated than the Warrants. The Inline Warrants may behave quite differently from the Warrants and other exotic warrants in its response to the price levels/levels or movements in the price/level of the Underlying Asset. The pricing structure of the Inline Warrants requires investors to assess accurately the value of the Inline Warrants in relation to the expected probability of the Average Price/Closing Level falling within the range between the Upper Strike Price/Upper Strike Level and the Lower Strike Price/Lower Strike Level (both inclusive). The Inline Warrants are highly complicated and risky financial instruments and may be difficult for investors to properly value and/or to use as a hedging tool. You should carefully review and understand the Conditions, including the exotic features, before deciding to invest in the Inline Warrants. In particular, you should note that the Inline Warrants provide a pre-fixed potential payoff at either **a capped amount or a floor amount** at expiry. If the Average Price/Closing Level falls outside the range between the Lower Strike Price/Lower Strike Level and the Upper Strike Price/Upper Strike Level (both inclusive), you will receive a lower fixed and floor amount equal to the Minimum Payoff Amount per Inline Warrant (which may be substantially less than your initial investment) at expiry and may suffer loss in your investment. You will still receive the Minimum Payoff Amount per Inline Warrant in this scenario because such amount is included in the price you pay for buying the Inline Warrants.

Do not invest in the Inline Warrants unless you fully understand them and are willing to assume the risks associated with them.

Maximum potential payoff is fixed and capped

If the Average Price/Closing Level stays within the range between the Lower Strike Price/Lower Strike Level and the Upper Strike Price/Upper Strike Level (both inclusive), we will only pay

you a fixed and capped amount equal to the Maximum Payoff Amount per Inline Warrant at expiry. This is the maximum potential payoff under the Inline Warrants.

Rejection of orders and trades at the price above HK\$1

You should note that any orders and reported trades of Inline Warrants at the price above HK\$1 will be automatically rejected upon their entry to the Stock Exchange's trading system. The Stock Exchange and its recognised exchange controller, HKEX, will not incur any liability (whether based on contract, tort (including, without limitation, negligence), or any other legal or equitable grounds and without regard to the circumstances giving rise to any purported claim except in the case of wilful misconduct on the part of the Stock Exchange and/or HKEX) for any direct, consequential, special, indirect, economic, punitive, exemplary or any other loss or damage suffered or incurred by us or any other party arising from or in connection with such rejection of orders and trades, including without limitation, any delay, failure, mistake or error in such rejection of orders and trades.

We and our affiliates shall not have any responsibility for any losses suffered as a result of such rejection of orders and trades in any circumstances.

Prohibition on the sale of certain binary options in European retail markets

There have been regulatory concerns over the sale of certain binary options to retail investors across the European Union in recent years. Such binary options are typically traded over-the-counter with bespoke structures and are very short-term, making them extremely speculative in nature. Until recently, the European Securities and Markets Authority (“ESMA”) implemented a temporary ban on the marketing, distribution or sale of binary options to retail customers in the European Union except for securitised binary options. The temporary ban expired and was lifted by ESMA on 1 July 2019 based on the fact that most national competent authorities within the European Union had taken permanent national product intervention measures relating to binary options that are at least as stringent as ESMA's measure. For example, the Financial Conduct Authority (“FCA”) in the United Kingdom (a

then European Union member) imposed a permanent ban effective from 2 April 2019 on the marketing, distribution or sale of all binary options (including securitised binary options) to retail customers in the United Kingdom while the Federal Financial Supervisory Authority (“BaFin”) in Germany and the Autorite des Marches Financiers (“AMF”) of France had also permanently banned the marketing, distribution or sale of binary options (other than securitised binary options) to retail customers.

The Inline Warrants are a form of securitised binary options. Unlike the binary options in the European retail markets as described above, the Inline Warrants listed on the Stock Exchange have a more standardised structure and relatively longer period to expiry (with a minimum duration of 6 months before expiry).

Irrespective of the differences between the Inline Warrants listed on the Stock Exchange and the binary options in Europe, you should nevertheless note the approach taken by the European regulators over binary options. The Inline Warrants are complex products. You should fully understand the structure and terms and conditions of the Inline Warrants and are willing to assume the risks associated with them before investing in the Inline Warrants.

Risk Relating to CBBCs

Correlation between the price of a CBBC and the price/level of the Underlying Asset

When the Underlying Asset of a CBBC is trading at a price/level close to its Call Price/Call Level, the price of that CBBC tends to be more volatile and any change in the value of that CBBC at such time may be incomparable and disproportionate with the change in the price/level of the Underlying Asset.

Payout under CBBCs

It is expected that the value of each entitlement of CBBCs tends to follow closely the value of the Underlying Asset. However, you are warned that the price of CBBCs will be determined not only by the trading value of the Underlying Asset but also by the impact of financing costs and/or dividends during the period in which the CBBCs

are held by you. In particular, when the value of the Underlying Asset is close to the Call Price/Call Level, the price of the CBBCs will be more volatile.

Mandatory Call Event is irrevocable

A Mandatory Call Event is irrevocable unless it is triggered as a result of any of the following events:

- (a) system malfunction or other technical errors of HKEX (such as the setting up of wrong Call Price/Call Level and other parameters); or
- (b) manifest errors caused by the relevant third party price source (such as miscalculation of the index level by the relevant index compiler),

and in each case, we agree with the Stock Exchange that such Mandatory Call Event is to be revoked within such time as specified in the relevant launch announcement and supplemental listing document following the trading day on which the Mandatory Call Event is triggered. Upon revocation of the Mandatory Call Event, trading of the CBBCs will resume and any trade cancelled after such Mandatory Call Event will be reinstated.

Non-recognition of Post MCE Trades

The Stock Exchange and its recognised exchange controller, HKEX, shall not incur any liability (whether based on contract, tort (including, without limitation, negligence)), or any other legal or equitable grounds and, without regard to the circumstances giving rise to any purported claim (except in the case of wilful misconduct on the part of the Stock Exchange and/or HKEX) for any direct, consequential, special, indirect, economic, punitive, exemplary or any other loss or damage suffered or incurred by us or any other party arising from or in connection with the Mandatory Call Event or the suspension of trading (“**Trading Suspension**”) or the non-recognition of trades after a Mandatory Call Event (“**Non-Recognition of Post MCE Trades**”), including, without limitation, any delay, failure, mistake or error in the Trading Suspension or Non-Recognition of Post MCE Trades.

The BNP Group shall not have any responsibility towards you for any losses suffered as a result of the Trading Suspension and/or Non-Recognition of Post MCE Trades, in connection with the occurrence of a Mandatory Call Event, the resumption of trading of the CBBCs or reinstatement of any Post MCE Trades cancelled as a result of the reversal of any Mandatory Call Event, notwithstanding that such Trading Suspension and/or Non-Recognition of Post MCE Trades occur as a result of an error in the observation of the event.

Residual Value may not include residual funding cost

For Category R CBBCs, the Residual Value (if any) payable by us following the occurrence of a Mandatory Call Event may or may not include the residual funding cost for the CBBCs. You may not receive any residual funding cost back from us upon early termination of a Category R CBBC upon a Mandatory Call Event.

Delay in announcements of a Mandatory Call Event

The Stock Exchange will notify the market as soon as practicable after the CBBC has been called upon the occurrence of a Mandatory Call Event. You must however be aware that there may be delay in the announcement of a Mandatory Call Event due to technical errors or system failures and other factors that are beyond our control or the control of the Stock Exchange.

Our hedging activities may adversely affect the price/level of the Underlying Asset

Any member of the BNP Group may carry out activities that minimise our risks related to the CBBCs, including effecting transactions for our own account or for the account of our customers and hold long or short positions in the Underlying Asset (whether for risk reduction purposes or otherwise). In addition, in connection with the offering of any CBBCs, we and/or any member of the BNP Group may enter into one or more hedging transactions with respect to the Underlying Asset. In connection with such hedging or market-making activities or with respect to proprietary or other trading activities by us and/or any member of the BNP Group may enter into transactions in the Underlying Asset which may affect the market price, liquidity or price/level of the Underlying Asset and/or the

value of CBBCs and which could be deemed to be adverse to your interests. The BNP Group is likely to modify our hedging positions throughout the life of the CBBCs whether by effecting transactions in the Underlying Asset or in derivatives linked to the Underlying Asset. Further, it is possible that the advisory services which the BNP Group provides in the ordinary course of our business could lead to an adverse impact on the value of the Underlying Asset.

Unwinding of hedging arrangements

The trading and/or hedging activities of the BNP Group related to CBBCs and/or other financial instruments issued by us from time to time may have an impact on the price/level of the Underlying Asset and may trigger a Mandatory Call Event. In particular, when the Underlying Asset is trading close to the Call Price/Call Level, our unwinding activities may cause a fall or rise (as the case may be) in the trading price/level of the Underlying Asset, leading to a Mandatory Call Event.

In respect of Category N CBBCs, the BNP Group may unwind any hedging transactions entered into by us in relation to the CBBCs at any time even if such unwinding activities may trigger a Mandatory Call Event.

In respect of Category R CBBCs, before the occurrence of a Mandatory Call Event, the BNP Group may unwind our hedging transactions relating to the CBBCs in proportion to the amount of the CBBCs we repurchase from time to time. Upon the occurrence of a Mandatory Call Event, the BNP Group may unwind any hedging transactions in relation to the CBBCs. Such unwinding activities after the occurrence of a Mandatory Call Event may affect the trading price/level of the Underlying Asset and consequently the Residual Value of the CBBCs.

Adjustment related risk

We will make such adjustments as we consider appropriate as a consequence of certain corporate actions or index adjustment events affecting the Underlying Asset. Please refer to the subsection "Adjustment related risk" under the section "Risks in relation to the Underlying Asset".

In addition, for Single Equity CBBCs and ETF CBBCs, if the Underlying Asset ceases to be listed on the Stock Exchange during the term of

the CBBCs, we may make adjustments and amendments to the rights attaching to the CBBCs pursuant to Condition 6 of the Product Conditions of the relevant CBBCs set out in Part A and Part C of Appendix 4. Such adjustments and amendments will be conclusive and binding on you.

Risk relating to the legal form of the Structured Products

Each Structured Product will be represented by a global certificate registered in the name of HKSCC Nominees Limited (or such other nominee company as may be used by HKSCC from time to time in relation to the provision of nominee services to persons admitted for the time being by HKSCC as a participant of Central Clearing and Settlement System ("CCASS")). A risk of investing in a security that is issued in global registered form and held on your behalf within a clearing system effectively means that evidence of your title, as well as the efficiency of ultimate delivery of the Cash Settlement Amount, will be subject to the General Rules of CCASS and CCASS Operational Procedures ("CCASS Rules"). You should be aware of the following risks:

- (a) you will not receive definitive certificates where the Structured Products remain in the name of HKSCC Nominees Limited for the entire life of the Structured Products;
- (b) any register that is maintained by us or on our behalf, whilst available for inspection by you, will not be capable of registering any interests other than that of the legal title owner, in other words, it will record at all times that the Structured Products are being held by HKSCC Nominees Limited;
- (c) you will have to rely solely upon your brokers/ custodians and the statements you receive from such party as evidence of your interest in the investment;
- (d) notices or announcements will be published on the HKEX's website and/or released by HKSCC to its participants via CCASS in accordance with the CCASS Rules. You will need to check the HKEX's website regularly and/or rely on your brokers/custodians to obtain such notices/announcements; and

(e) following the Expiry Date and the determination by us as to the Cash Settlement Amount, our obligations to you will be duly performed by payment of the Cash Settlement Amount (net of any Exercise Expenses) to HKSCC Nominees Limited as the “holder” of the Structured Products. HKSCC or HKSCC Nominees Limited will then distribute the received Cash Settlement Amount (net of any Exercise Expenses) to the respective CCASS participants in accordance with the CCASS Rules.

Potential fee arrangements with brokers and potential conflicts of interest of brokers

To the extent permissible by the applicable laws, regulations, codes and guidelines and/or recommendations (whether imposed by applicable law or by competent regulatory authorities) in effect from time to time, we may or may not enter into fee arrangements with brokers with respect to the Structured Products or dealings in, or related to, the relevant Underlying Asset. You should note that brokers with whom we have a fee arrangement (if any) do not, and cannot be expected to, deal exclusively in, or related to, the Structured Products or any relevant Underlying Asset and may from time to time engage in other dealings for their own accounts and/or for the accounts of their clients. Potential conflicts of interests may arise from the different roles played by such brokers in connection with their dealings in, or related to, the Structured Products, the relevant Underlying Asset and/or other financial products (including those issued by other institutions over the same relevant Underlying Asset). A broker’s interests (economic or otherwise) in each role may potentially affect the Structured Products and/or the relevant Underlying Asset in a manner that may cause adverse consequences to you if you invest in the Structured Products.

Effect of the combination of risk factors unpredictable

Two or more risk factors may simultaneously have an effect on the value of a series of Structured Products such that the effect of any individual risk factor may not be predictable. No assurance can be given as to the effect any combination of risk factors may have on the value of a series of Structured Products.

Risks relating to the BRRD

Regulatory action(s) by the relevant resolution authorities in the event that the Guarantor is failing or likely to fail could materially affect the value of the Structured Products, and you may not be able to recover all or even part of the amount due by the Issuer under the Structured Products (if any)

The Guarantor is a bank incorporated in France and is subject to the BRRD and the French legislation having implemented the BRRD, and Regulation (EU) No 806/2014, as amended. The BRRD provides for the establishment of an EU framework for the recovery and resolution of credit institutions and investment firms falling under the scope of the BRRD. The BRRD requires the governments of all EU Member States to provide their relevant resolution authorities with a set of tools to intervene sufficiently early and quickly in an unsound or failing institution so as to ensure the continuity of that institution’s critical financial and economic functions, while minimising the impact of that institution’s failure on the broader economy and financial system.

Under French legislation implementing the BRRD, substantial powers are granted to the ACPR and/or other relevant resolution authorities in the EU, to implement resolution measures in respect of a relevant entity (including, for example, the Guarantor) to protect and enhance the stability of the financial system of France if the relevant resolution authorities consider the failure of the relevant entity has become likely and certain other conditions are satisfied.

These powers include share transfer powers, property transfer powers (including powers for the partial transfer of property, rights and liabilities), and resolution instrument powers (including powers to make special bail-in provisions) over the relevant affected financial institution(s). In connection with the exercise of these powers under the BRRD, the relevant resolution authorities may take various actions in relation to certain liabilities of the Guarantor (including the Guarantee granted by the Guarantor over the Issuer’s liabilities due under the Structured Products if such authorities

consider amounts due under any such guarantee to fall within the scope of the Bail-In Power) without your consent, including (if applicable, among other things):

- (a) transferring the Guarantee to another person (such as parent undertaking or a bridge institution) notwithstanding any restrictions on transfer under the terms of the Guarantee;
- (b) the reduction of all, or a portion, of the amounts payable by the Guarantor under the terms of the Guarantee (including a reduction to zero);
- (c) the conversion of all, or a portion, of the amounts due under the Guarantee into shares or other securities or other obligations of the Guarantor or of another person, including by means of an amendment, modification or variation of the terms of the Guarantee, in which case you agree to accept in lieu of your contractual rights under the terms of the Guarantee any such shares, other securities or other obligations of the Guarantor or another person;
- (d) the cancellation of the Guarantee;
- (e) the amendment or alteration of the maturity of the Guarantee or amendment of the amount of interest payable on the Guarantee, or the date on which the interest becomes payable, including by suspending payment for a temporary period; and/or
- (f) if applicable, the variation of the terms of the Guarantee, if necessary to give effect to the exercise of the Bail-In Power by the relevant resolution authority.

The exercise of any resolution power or any suggestion of such exercise under the BRRD over the Guarantor could adversely affect the value of the Structured Products, and you may not be able to recover all or even part of the amount due under the Structured Products (if any). **You may therefore lose all or a substantial part of your investment in the Structured Products.**

In addition, the resolution powers could be exercised (i) prior to the commencement of any insolvency proceedings in respect of the Guarantor, and (ii) by the relevant resolution

authorities without your consent or any prior notice to you. It is also uncertain how the relevant resolution authorities would assess triggering conditions in different pre-insolvency scenarios affecting the Guarantor under the BRRD. Accordingly, you may not be able to anticipate a potential exercise of any such resolution powers over the Guarantor and/or the Guarantee.

By investing in the Structured Products, you acknowledge, accept, consent and agree to be bound by the exercise of any Bail-In Power by the relevant resolution authorities

By investing in the Structured Products, you acknowledge, accept, consent and agree to be contractually bound by the exercise of any Bail-In Power by the relevant resolution authorities over the Guarantor. You further acknowledge, accept, consent and agree that your rights under the Guarantee are contractually subject to, and will be varied, if necessary, so as to give effect to, the exercise of any Bail-In Power by the relevant resolution authorities over the Guarantor. Accordingly, if any Bail-In Power is exercised over the Guarantor, you may not be able to recover all or even part of the amount due under the Structured Products (if any), or you may receive a different security issued by the Guarantor (or another person) in place of the amount due to you under the Structured Products (if any), which may be worth significantly less than the amount due to you under the Structured Products (if any). Moreover, the relevant resolution authorities may exercise the Bail-In Power without providing any advance notice to, or requiring your further consent. Please refer to the section headed “Text of the Guarantee of BNP Paribas” in this document for further details, in particular clause 6 of the Guarantee with respect to the Bail-In Power.

Financial Institutions (Resolution) Ordinance

The Financial Institutions (Resolution) Ordinance (Cap. 628, the Laws of Hong Kong) (the “**FIRO**”) was enacted by the Legislative Council of Hong Kong in June 2016. The FIRO (except Part 8, section 192 and Division 10 of Part 15 thereof) came into operation on 7 July 2017.

The FIRO provides a regime for the orderly resolution of financial institutions with a view to avoiding or mitigating the risks otherwise posed

by their non-viability to the stability and effective working of the financial system of Hong Kong, including the continued performance of critical financial functions. The FIRO seeks to provide the relevant resolution authorities with a range of powers to bring about timely and orderly resolution in order to stabilise and secure continuity for a failing authorised institution in Hong Kong. In particular, it is envisaged that subject to certain safeguards, the relevant resolution authority would be provided with powers to affect contractual and property rights as well as payments (including in respect of any priority of payment) that creditors would receive in resolution, including but not limited to powers to write off, or convert into equity, all or a part of the liabilities of the failing financial institution.

The Issuer is not subject to and bound by the FIRO. However, the Guarantor, as an authorised institution regulated by the Hong Kong Monetary Authority, is subject to and bound by the FIRO. The exercise of any resolution power by the relevant resolution authority under the FIRO in respect of the Guarantor may have a material adverse effect on the value of the Structured Products, and as a result, you may not be able to recover all or any amount due under the Structured Products.

TAXATION

The following section is of a general nature and is not intended to provide guidance to you. This section relates to you if you are the absolute beneficial owner of the Structured Products and may not apply equally to you. If you are in any doubt as to your tax position on purchase, ownership, transfer, holding or exercise of any Structured Product, you are strongly advised to consult your own tax advisers.

General

You may be required to pay stamp duties, taxes and other charges in accordance with the laws and practices of the country of purchase in addition to the issue price of each Structured Product.

Taxation in Hong Kong

The following paragraph, which is intended as a general guide only, is based on current law and practice in Hong Kong. It summarises certain aspects of taxation in Hong Kong which may be applicable to the Structured Products but is not purported to be a comprehensive description of all tax considerations which may be of relevance.

Profits Tax

No tax is payable in Hong Kong by withholding or otherwise in respect of:

- (a) dividends of any company;
- (b) distributions of any trust authorised as a collective investment scheme by the SFC under section 104 of the Securities and Futures Ordinance (Cap 571, The Laws of Hong Kong) or otherwise approved by the SFC; or
- (c) any capital gains arising on the sale of the underlying shares or Structured Products, except that Hong Kong profits tax may be chargeable on any such gains in the case of certain persons carrying on a trade, profession or business in Hong Kong.

Stamp Duty

You do not need to pay any stamp duty in respect of purely cash settled Structured Products.

Taxation in the Netherlands

The following paragraph, which is intended as a general guide only, is based on current law and practice in the Netherlands. It summarises certain aspects of taxation in the Netherlands which may be applicable to the Structured Products but is not purported to be a comprehensive description of all tax considerations which may be of relevance.

Registration, Stamp, Transfer or Turnover Taxes

No Dutch registration, stamp, transfer or turnover taxes or other similar duties or taxes should be due in the Netherlands in direct connection with the offering and issue of the Structured Products by us or in respect of the signing and delivery of this document and/or the relevant launch announcement and supplemental listing document.

Withholding Tax

No Netherlands withholding tax should be due on payments of principal and/or interest.

Income Tax or Capital Gain Tax

You will not be subject to Netherlands taxes on income or capital gains in direct connection with the acquisition or holding of debt or any payment under the Structured Products or in respect of any gain realised on the disposal or redemption of the Structured Products, provided that:

- (a) you are neither a resident nor deemed to be a resident nor has opted to be treated as a resident in the Netherlands; and
- (b) you do not have an enterprise or an interest in an enterprise which, in whole or in part, is carried on through a permanent establishment or a permanent representative

in the Netherlands and to which permanent establishment or permanent representative the Structured Products are attributable; and

(c) if you are a legal person, an open limited partnership (“open commanditaire vennootschap”), another company with a capital divided into shares or a special purpose fund (“doelvermogen”):

(i) you do not have a substantial interest* in our share capital, or in the event that you do have such an interest, such interest forms part of the assets of an enterprise; and

(ii) you do not have a deemed Netherlands enterprise to which enterprise the Structured Products are attributable, including but not limited to, activities such as serving as a management or supervisory board member of a Dutch resident company;

or

(d) if you are a natural person:

(i) you do not derive income and/or capital gains from activities in the Netherlands other than business income (as described under (b) above), to which activities the Structured Products are attributable; and

(ii) you or a person related to you by law, contract, consanguinity or affinity to the degree specified in the tax laws of the Netherlands do not have, or are not deemed to have, a substantial interest* in our share capital.

Inheritance Tax

No gift, estate or inheritance tax will arise in the Netherlands on the transfer by way of gift or inheritance of the Structured Products if the donor or the deceased at the time of the gift or the death is neither a resident nor a deemed resident of the Netherlands, unless:

(a) at the time of the gift or death, the Structured Products are attributable to an enterprise or part of an enterprise that is carried out through a permanent establishment or a permanent representative in the Netherlands; or

(b) the donor of the Structured Products dies within 180 days of making the gift, and is a Dutch resident or deemed resident on the date of death.

Furthermore, in relation to the implications in respect of registration, stamp, transfer or turnover taxes, withholding tax, income tax or capital gain tax and inheritance tax in the Netherlands summarised above, it is assumed that:

(a) neither the remuneration, nor the indebtedness of the remuneration, on the Structured Products is, in whole or in part, legally or actually, contingent upon the profits or the distribution of profits by us or any of our affiliated companies; and

(b) the Structured Products will be treated as our debt obligations and cannot, partly or wholly, be reclassified as equity nor actually function as equity for Dutch tax purposes as referred to in Section 10(1)(d) of the Dutch Corporate Income Tax Act (Wet op de vennootschapsbelasting 1969).

Exchange of Information

If we pay interest directly to, or secure our payment for the immediate benefit of, a holder of Structured Products that is (i) an individual, (ii) a resident of another EU Member State or designated jurisdiction and (iii) the beneficial owner of that interest, we must verify the holder of the Structured Products' identity and place of residence and provide information regarding that holders and the interest payments concerned to the Dutch tax authorities. This obligation does not apply if the interest is paid to, or secured for the benefit of, a holder of the Structured Products via a bank or other paying agent as defined in Dutch tax law. In that case similar or other obligations may apply with respect to the bank or the other paying agent.

* An interest in our share capital should not be considered as a substantial interest if you, and if you are a natural person, your spouse, registered partner, certain other relatives or certain persons sharing your household, do not own or hold, alone or together, whether directly or indirectly, the ownership of, or certain rights over, shares or rights resembling shares representing five per cent. or more of our total issued and outstanding capital or our issued and outstanding capital of any class of shares.

Taxation in the United States of America

Foreign Account Tax Compliance Act

FATCA imposes on a foreign financial institution (“**FFI**”) a new reporting regime and the requirement to potentially apply a 30% United States withholding tax with respect to (i) certain payments from sources within the United States, including interest (and original issue discount), dividends or other fixed, determinable, annual or periodic income or (ii) amounts that are “foreign passthru payments”, a term not currently defined under FATCA (any such withholding being “**FATCA Withholding**”).

The United States and a number of other jurisdictions, including the Netherlands, have negotiated intergovernmental agreements (“**IGAs**”) to facilitate the implementation of FATCA and modify FATCA requirements in IGA jurisdictions. Under the current provisions of IGAs, an FFI generally would not be required under FATCA or an IGA to deduct any FATCA Withholding with respect to payments on instruments such as the Structured Products. There can be no assurance, however, that the Issuer will not in the future be required to deduct FATCA Withholding from payments it makes on such instruments.

Even if FATCA Withholding would be required in the future under FATCA or an IGA with respect to payments on instruments such as the Structured Products, such withholding would not apply to foreign passthru payments earlier than two years after the date of publication in the Federal Register of the final regulations defining “foreign passthru payment”. Any Structured Products characterised as debt for United States federal income tax purposes that are issued on or prior to the date that is six months after the date on which final regulations defining “foreign passthru payments” are filed with the Federal Register generally would be grandfathered for purposes of withholding on foreign passthru payments.

Holders of the Structured Products should consult their own tax advisors regarding how FATCA may apply to their investment in the Structured Products. If the Issuer determines that FATCA Withholding is appropriate with respect to the Structured Products, we (or an applicable withholding agent) will withhold tax at the applicable statutory rate without being required to pay any additional amounts with respect to amounts so withheld.

FATCA is particularly complex. The above description is based in part on regulations, official guidance and model IGAs, all of which are subject to change or may be implemented in a materially different form. Prospective investors should consult their tax advisers on how these rules may apply to the Issuer and to payments they may receive in connection with the Structured Products.

TO ENSURE COMPLIANCE WITH IRS CIRCULAR 230, EACH TAXPAYER IS HEREBY NOTIFIED THAT: (A) ANY TAX DISCUSSION HEREIN IS NOT INTENDED OR WRITTEN TO BE USED, AND CANNOT BE USED BY THE TAXPAYER FOR THE PURPOSE OF AVOIDING U.S. FEDERAL INCOME TAX PENALTIES THAT MAY BE IMPOSED ON THE TAXPAYER; (B) ANY SUCH TAX DISCUSSION WAS WRITTEN TO SUPPORT THE PROMOTION OR MARKETING OF THE TRANSACTIONS OR MATTERS ADDRESSED HEREIN; AND (C) THE TAXPAYER SHOULD SEEK ADVICE BASED ON THE TAXPAYER'S PARTICULAR CIRCUMSTANCES FROM AN INDEPENDENT TAX ADVISER.

PLACING AND SALE

General

No action has been or will be taken by us that would permit a public offering of any series of Structured Products or possession or distribution of any offering material in relation to the Structured Products in any jurisdiction (other than in Hong Kong) where action for that purpose is required.

No offers, sales or deliveries of any Structured Products, or distribution of any offering material relating to the Structured Products may be made in or from any jurisdiction except in circumstances which will result in compliance with any applicable laws or regulations and will not impose any obligation on us or the Guarantor. In the event that we contemplate a placing, placing fees may be payable in connection with any issue and we may, at our discretion, allow discounts to placees.

United States of America

Each series of Structured Products has not been, and will not be registered under the United States Securities Act of 1933, as amended (the “**Securities Act**”), and trading in the Structured Products has not been and will not be approved by the United States Commodity Futures Trading Commission under the United States Commodity Exchange Act, as amended. We have not been registered as an investment company pursuant to the United States Investment Company Act of 1940, as amended.

The Structured Products may not at any time be offered, sold, delivered, traded or exercised, directly or indirectly, in the United States or to, or for the account or benefit of, a U.S. person and a U.S. person may not, at any time, directly or indirectly, maintain a position in the Structured Products. Offers, sales, trading or delivery of the Structured Products in the United States or to, or for the account or benefit of, U.S. persons may constitute a violation of United States laws governing securities and commodities trading.

We will not offer, sell or deliver any Structured Products within the United States or to, or for the account or benefit of, U.S. persons, and all dealers participating in the distribution of the Structured Products will not be permitted by us to offer, sell, deliver or trade, at any time, directly or indirectly, any Structured Products in the United States or to, or for the account or benefit of, any U.S. person.

Each purchaser of Structured Products will be deemed by its acceptance of the Structured Products to have represented and agreed, on its behalf and on behalf of any investor accounts for which it is purchasing the Structured Products, that it has not and will not purchase, offer, sell, deliver or trade, at any time, directly or indirectly, any Structured Products in the United States or to, or for the account or benefit of, any U.S. person.

Each purchaser acknowledges that we and the dealers will rely upon the truth and accuracy of the foregoing representations and agreements, and agrees that if any of the representations or warranties deemed to have been made by such purchaser by its purchase of Structured Products are no longer accurate, it shall promptly notify us and the relevant dealer. If acquiring Structured Products as a fiduciary or agent for one or more investor accounts, each purchaser represents that it has sole investment discretion with respect to each such account and full power to make the foregoing representations and agreements on behalf of each such account.

Terms used herein, including, “**United States**” and “**U.S. person**”, have the meanings given to them by Regulation S under the Securities Act.

European Economic Area

Each dealer represents and agrees, and each further dealer appointed in respect of the Structured Products will be required to represent and agree, that it has not offered, sold or otherwise made available and will not offer, sell, or otherwise make available any Structured Products which are the subject of the offering as contemplated by this base listing document to any

retail investor in the European Economic Area. For the purposes of this provision:

- a) the expression “**retail investor**” means a person who is one (or more) of the following:
 - i. a retail client as defined in point (11) of Article 4(1) of Directive 2014/65/EU (as amended, “**MiFID II**”); or
 - ii. a customer within the meaning of Directive (EU) 2016/97 (as amended, the Insurance Distribution Directive), where that customer would not qualify as a professional client as defined in point (10) of Article 4(1) of MiFID II; or
 - iii. not a qualified investor as defined in Regulation (EU) 2017/1129 (as amended and superseded, the Prospectus Regulation); and
- b) the expression “**offer**” includes the communication in any form and by any means of sufficient information on the terms of the offer and the Structured Products to be offered so as to enable an investor to decide to purchase or subscribe for the Structured Products.

United Kingdom

Each dealer represents and agrees, and each further dealer appointed in respect of the Structured Products will be required to represent and agree, that it has not offered, sold or otherwise made available and will not offer, sell or otherwise make available any Structured Products which are the subject of the offering as contemplated by this base listing document to any retail investor in the United Kingdom. For the purposes of this provision:

- a) the expression “**retail investor**” means a person who is one (or more) of the following:
 - i. a retail client, as defined in point (8) of Article 2 of Regulation (EU) No 2017/565 as it forms part of domestic law by virtue of the European Union (Withdrawal) Act 2018 (“**EUWA**”); or

- ii. a customer within the meaning of the provisions of the Financial Services and Markets Act, as amended (the “**FSMA**”) and any rules or regulations made under the FSMA to implement Directive (EU) 2016/97, where that customer would not qualify as a professional client, as defined in point (8) of Article 2(1) of Regulation (EU) No 600/2014 as it forms part of domestic law by virtue of the EUWA; or
 - iii. not a qualified investor as defined in Article 2 of Regulation (EU) 2017/1129 as it forms part of domestic law by virtue of the EUWA; and
- b) the expression an “**offer**” includes the communication in any form and by any means of sufficient information on the terms of the offer and the Structured Products to be offered so as to enable an investor to decide to purchase or subscribe for the Structured Products.

Each dealer further represents and agrees, and each further dealer appointed in respect of the Structured Products will be required to further represent and agree, that:

- (a) in respect of Structured Products having a maturity of less than one year: (i) it is a person whose ordinary activities involve it in acquiring, holding, managing or disposing of investments (as principal or agent) for the purposes of its business; and (ii) it has not offered or sold and will not offer or sell any Structured Products other than to persons whose ordinary activities involve them in acquiring, holding, managing or disposing of investments (as principal or agent) for the purposes of their businesses or who it is reasonable to expect will acquire, hold, manage or dispose of investments (as principal or agent) for the purposes of their businesses where the issue of the Structured Products would otherwise constitute a contravention of Section 19 of the FSMA by the Issuer;

- (b) it has only communicated or caused to be communicated and will only communicate or cause to be communicated an invitation or inducement to engage in investment activity (within the meaning of section 21 of the FSMA) received by it in connection with the issue or sale of any Structured Products in circumstances in which section 21(1) of the FSMA does not apply to the Issuer or the Guarantor; and

- (c) it has complied and will comply with all applicable provisions of the FSMA with respect to anything done by it in relation to any Structured Products in, from or otherwise involving the United Kingdom.

TEXT OF THE GUARANTEE OF BNP PARIBAS

Our obligations under the Structured Products are guaranteed by the Guarantor under the Guarantee executed by the Guarantor by way of deed poll and dated as of 11 April 2023. The text of the Guarantee is set out below.

“THIS GUARANTEE is made by way of deed poll by BNP Paribas (the “**Guarantor**”) in favour of the holders for the time being of the Structured Products (as defined below) (each a “**Holder**”) and dated as of 11 April 2023. WHEREAS: —

- (A) The Guarantor has agreed to guarantee all contractual obligations of BNP Paribas Issuance B.V. (the “**Issuer**”) set out under the terms and conditions in respect of each series of structured products (including, without limitation, standard warrants, inline warrants, callable bull/bear contracts or other types of structured products) (together, the “**Structured Products**”) pursuant to a base listing document dated 11 April 2023 (“**Base Listing Document**”, which expression shall include any amendment and/or supplement thereto and any replacement or further issue of any base listing document issued by the Issuer from time to time in respect of Structured Products (and whether or not issued pursuant to any condition imposed by the Securities and Futures Commission pursuant to the Securities and Futures Ordinance or by The Stock Exchange of Hong Kong Limited (the “**Stock Exchange**”) pursuant to the Rules Governing the Listing of Securities on the Stock Exchange)) and listed on the Stock Exchange.
- (B) Terms defined in the Conditions of the Structured Products shall have the same meanings in this Deed of Guarantee except where the context requires otherwise. References to “Conditions” are to the terms and conditions set out in the Base Listing Document.

NOW THIS DEED WITNESSES as follows:

- 1 **Guarantee:** The Guarantor unconditionally and irrevocably guarantees by way of deed poll to each Holder that, if for any reason the Issuer does not pay any sum payable by it or perform any other contractual obligation set out under the terms and conditions in respect of any Structured Product on the date specified for such payment or performance the Guarantor will, in accordance with the Conditions pay that sum in the currency in which such payment is due in immediately available funds or, as the case may be, perform or procure the performance of the relevant obligation on the due date for such performance. In case of the failure of the Issuer to satisfy such obligations as and when the same become due, the Guarantor hereby undertakes to make or cause to be made such payment or satisfy or cause to be satisfied such obligations as though the Guarantor were the principal obligor in respect of such obligation.

Any such payment in accordance with this Clause 1 shall constitute a complete discharge of the Guarantor’s obligations in respect of such Structured Products.

- 2 **Guarantor as Principal Obligor:** As between the Guarantor and the holder of each Structured Product but without affecting the Issuer’s obligations, the Guarantor will be liable under this Guarantee as if it were the sole principal obligor and not merely a surety. Accordingly, it will not be discharged, nor will its liability be affected, by anything which would not discharge it or affect its liability if it were the sole principal obligor (including (1) any time, indulgence, waiver or consent at any time given to the Issuer or any other person, (2) any amendment to any of the Conditions or to any security or other guarantee or indemnity, (3) the making or absence of any demand on the Issuer or any other person for payment or performance of any other obligation in respect of any Structured Product, (4) the enforcement or absence of enforcement of any Structured Product or of any security or other guarantee or indemnity, (5) the release of any such

security, guarantee or indemnity, (6) the dissolution, amalgamation, reconstruction or reorganisation of the Issuer or any other person, or (7) the illegality, invalidity or unenforceability of or any defect in any provision of the Conditions or any of the Issuer's obligations under any of them).

- 3 **Guarantor's Obligations Continuing:** The Guarantor's obligations under this Guarantee are and will remain in full force and effect by way of continuing security until no sum remains payable and no other obligation remains to be performed under any Structured Product (in each case subject to its exercise). Furthermore, those obligations of the Guarantor are additional to, and not instead of, any security or other guarantee or indemnity at any time existing in favour of any person, whether from the Guarantor or otherwise. The Guarantor irrevocably waives all notices and demands of any kind.
- 4 **Discharge by the Issuer:** If any payment received by, or other obligation discharged to or to the order of, the holder of any Structured Product is, on the subsequent bankruptcy or insolvency of the Issuer, avoided under any laws relating to bankruptcy or insolvency, such payment or obligation will not be considered as having discharged or diminished the liability of the Guarantor and this Guarantee will continue to apply as if such payment or obligation had at all times remained owing due by the Issuer.
- 5 **Indemnity:** As a separate and alternative stipulation, the Guarantor unconditionally and irrevocably agrees (1) that any sum or obligation which, although expressed to be payable under the Structured Products, is for any reason (whether or not now existing and whether or not now known or becoming known to the Issuer, the Guarantor or the holder of any Structured Product) not recoverable from the Guarantor on the basis of a guarantee will nevertheless be recoverable from it as if it were the sole principal obligor and will be paid or performed by it in favour of the holder of any Structured Product and (2) as a primary obligation to indemnify each Holder against any loss suffered by it as a result of any sum or obligation expressed to be payable under the Structured Products not being paid or performed by the time, on the date and otherwise in the manner specified in the Structured Products or any obligation of the Issuer under the Structured Products being or becoming void, voidable or unenforceable for any reason (whether or not now existing and whether or not known or becoming known to the Issuer, the Guarantor or any Holder), in the case of a payment obligation the amount of that loss being the amount expressed to be payable by the Issuer in respect of the relevant sum, PROVIDED THAT the proviso to Clause 2 of this Guarantee shall apply mutatis mutandis to this Clause 5.
- 6 **Resolution proceeding against the Guarantor:** Each Holder acknowledges, accepts, consents and agrees by its acquisition of the Structured Products:
 - (a) to be bound by the effect of the exercise of the Bail-In Power by the relevant resolution authority if the latter were to consider that the amounts due under this Guarantee fall within the scope of the Bail-In Power. This Bail-In Power may include and result in any of the following, or some combination thereof:
 - (i) the reduction of all, or a portion, of the amounts due under this Guarantee;
 - (ii) the conversion of all, or a portion, of the amounts due under this Guarantee into shares, other securities or other obligations of the Guarantor or another person, including by means of an amendment, modification or variation of the terms of this Guarantee, in which case the Holder agrees to accept in lieu of its rights under this Guarantee any such shares, other securities or other obligations of the Guarantor or another person;

- (iii) the cancellation of this Guarantee;
 - (iv) the amendment or alteration of the maturity of this Guarantee or amendment of the amount of interest payable on this Guarantee, or the date on which the interest becomes payable, including by suspending payment for a temporary period;
- (b) if applicable, that the terms of this Guarantee are subject to, and may be varied, if necessary, to give effect to the exercise of the Bail-In Power by the relevant resolution authority.

For these purposes, the “**Bail-In Power**” is any resolution power existing from time to time under, and exercised in compliance with, any laws, regulations, rules or requirements in effect in France, whether relating to (i) the transposition of Directive 2014/59/EU establishing a framework for the recovery and resolution of credit institutions and investment firms (as amended from time to time, the **BRRD**), including without limitation by Ordinance no. 2015-1024 dated 20 August 2015 (*Ordonnance no 2015-1024 du 20 août 2015 portant diverses dispositions d’adaptation de la législation au droit de l’Union européenne en matière financière*), as amended from time to time, (ii) the Regulation (EU) No 806/2014 of the European Parliament and of the Council of 15 July 2014 establishing uniform rules and a uniform procedure for the resolution of credit institutions and certain investment firms in the framework of a Single Resolution Mechanism and a Single Resolution Fund and amending Regulation (EU) No 1093/2010 (as amended from time to time, including by Regulation (EU) 2019/877 dated 20 May 2019, the “**SRM**”), or (iii) otherwise arising under French law, and the instructions, rules and standards created thereunder, pursuant to which, in particular, the obligations of the Guarantor can be reduced (in part or in whole), cancelled, suspended, transferred, varied, modified in any way or converted into shares, other securities, or other obligations of such regulated entity or any other person.

A reference to the “**relevant resolution authority**” is to the Autorité de contrôle prudentiel et de résolution (**ACPR**), the Single Resolution Board established pursuant to the SRM and/or any other authority entitled to exercise or participate in the exercise of any Bail-In Power against the Guarantor from time to time (including the Council of the European Union and the European Commission when acting pursuant to Article 18 of the SRM).

The matters set forth in this Clause 6 shall be exhaustive on the foregoing matters to the exclusion of any other agreements, arrangements or understandings between the Guarantor and any holder of a Structured Product.

- 7 **Incorporation of Terms:** The Guarantor agrees that it shall comply with and be bound by those provisions contained in the Conditions which relate to it.
- 8 **Deposit of Guarantee:** This Guarantee shall be deposited with and held by the Sponsor for the benefit of the Holders. If BNP Paribas Securities (Asia) Limited ceases to be the Sponsor its successor shall hold this Guarantee.
- 9 **Representations:** The Guarantor represents and warrants to each Holder that it has the full power and authority, and has taken all necessary steps, to execute and deliver this Guarantee and to perform its obligations hereunder and this Guarantee constitutes the valid and binding obligations of the Guarantor and is enforceable in accordance with its terms.
- 10 **Governing law:** This Guarantee shall be governed by and construed in accordance with the laws of Hong Kong.

- 11 **Jurisdiction:** The courts of Hong Kong are to have jurisdiction to settle any disputes which may arise out of or in connection with this Guarantee and accordingly any legal action or proceedings arising out of or in connection with this Guarantee (“**Proceedings**”) may be brought in such courts. The Guarantor irrevocably submits to the jurisdiction of such courts and waives any objection to Proceedings in such courts whether on the ground of venue or on the ground that the Proceedings have been brought in an inconvenient forum. This submission is for the benefit of each of the Holders and shall not limit the right of any of them to take Proceedings in any other court of competent jurisdiction nor shall the taking of Proceedings in any one or more jurisdictions preclude the taking of Proceedings in any other jurisdiction (whether concurrently or not).
- 12 **Service of Process:** The Guarantor agrees that service of process in Hong Kong may be made on it at its Hong Kong branch. Nothing in this Guarantee shall affect the right to serve process in any other manner permitted by law.

IN WITNESS whereof this Guarantee has been executed by the Guarantor as a deed poll and delivered on the date specified below.

Dated as of 11 April 2023”

APPENDIX 1 — GENERAL CONDITIONS OF STRUCTURED PRODUCTS

These General Conditions relate to each series of Structured Products and must be read in conjunction with, and are subject to, the applicable Product Conditions and the Launch Announcement and Supplemental Listing Document in relation to the particular series of Structured Products. These General Conditions and the applicable Product Conditions (as supplemented, amended, modified and/or replaced by the relevant Launch Announcement and Supplemental Listing Document) together constitute the Conditions of the relevant Structured Products, and will be endorsed on the Global Certificate representing the relevant Structured Products. The Launch Announcement and Supplemental Listing Document in relation to the issue of any series of Structured Products may specify other terms and conditions which shall, to the extent so specified or to the extent they are inconsistent with these General Conditions and the applicable Product Conditions, replace or modify the General Conditions and/or the applicable Product Conditions for the purpose of such series of Structured Products.

1. Definitions

“**Base Listing Document**” means the base listing document relating to Structured Products dated 11 April 2023 and issued by the Issuer, including any addenda to such base listing document issued from time to time;

“**Board Lot**” has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document;

“**CCASS**” means the Central Clearing and Settlement System established and operated by HKSCC;

“**CCASS Rules**” means the General Rules of CCASS and the CCASS Operational Procedures in effect from time to time;

“**Conditions**” means, in respect of a particular series of Structured Products, these General Conditions and the applicable Product Conditions;

“**Expiry Date**” has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document;

“**General Conditions**” means these general terms and conditions;

“**Global Certificate**” means, in respect of the relevant Structured Products, a global certificate registered in the name of the Nominee;

“**Guarantee**” means a deed poll guarantee dated as of 11 April 2023 made by the Guarantor;

“**Guarantor**” means BNP Paribas;

“**HKSCC**” means Hong Kong Securities and Clearing Company Limited;

“**Holder**” means, in respect of each series of Structured Products, each person who is for the time being shown in the Register as the holder of the Structured Products, and who shall be treated by the Issuer, the Guarantor and the Sponsor as the absolute owner and holder of the relevant Structured Products. The expression “**Holders**” shall be construed accordingly;

“**Hong Kong**” means the Hong Kong Special Administrative Region of the People’s Republic of China;

“**Instrument**” means an instrument by way of deed poll dated 3 May 2006 executed by the Issuer which constitutes the Structured Products;

“**Issuer**” means BNP Paribas Issuance B.V.;

“**Launch Announcement and Supplemental Listing Document**” means the launch announcement and supplemental listing document relating to a particular series of Structured Products;

“**Nominee**” means HKSCC Nominees Limited (or such other nominee company as may be used by the HKSCC from time to time) in relation to the provision of nominee services to persons admitted for the time being by the HKSCC as a participant of CCASS;

“**Product Conditions**” means the product conditions relating to a particular series of Structured Products;

“**Register**” means, in respect of each series of Structured Products, the register of holders of such series of Structured Products kept by the Issuer outside of Hong Kong pursuant to General Condition 3.3;

“**Sponsor**” means BNP Paribas Securities (Asia) Limited;

“**Stock Exchange**” means The Stock Exchange of Hong Kong Limited; and

“**Structured Products**” means standard warrants (“**Warrants**”), inline warrants (“**Inline Warrants**”), callable bull/bear contracts (“**CBBCs**”) or such other structured products to be issued by the Issuer from time to time. References to “**Structured Product**” are to be construed as references to a particular series of Structured Products.

Other capitalised terms will, unless otherwise defined, have the meanings given to them in the Base Listing Document, the applicable Product Conditions, the relevant Launch Announcement and Supplemental Listing Document and/or the Global Certificate.

2. Form, Status, Transfer and Trading

2.1 Form

The Structured Products (which expression shall, unless the context otherwise requires, include any further structured products issued pursuant to General Condition 9) are issued in registered form subject to and with the benefit of the Instrument and the Guarantee. Copies of the Instrument and the Guarantee are available for inspection at the specified offices of the Sponsor. The Holders are entitled to the benefit of, are bound by, and are deemed to have notice of all the provisions of the Instrument.

2.2 Status of the Issuer’s obligations

The settlement obligations of the Issuer in respect of the Structured Products represent general unsecured contractual obligations of the Issuer and of no other person and rank, and will rank, *pari passu* among themselves and with all other present and future unsecured and unsubordinated contractual obligations of the Issuer, except for obligations accorded preference by mandatory provisions of applicable law. The obligations of the Guarantor under the Guarantee represent general unsecured contractual obligations of the Guarantor and of no other person and rank, and will rank, *pari passu* with all other present and future unsecured and unsubordinated contractual obligations of the Guarantor, except for obligations accorded preference by mandatory provisions of applicable law.

2.3 *Transfer and Trading of Structured Products*

Transfers of Structured Products may be effected only in Board Lots or integral multiples thereof in CCASS in accordance with the CCASS Rules.

Trading in Structured Products on the Stock Exchange shall cease prior to the Expiry Date in accordance with the requirements of the Stock Exchange.

3. *Sponsor and Register*

3.1 The Sponsor will not assume any obligation or duty to or any relationship or agency or trust for the Holder.

3.2 The Issuer reserves the right, subject to the appointment of a successor, at any time to vary or terminate the appointment of the initial Sponsor and to appoint another sponsor provided that it will at all times maintain a sponsor in Hong Kong for so long as the Structured Products are listed on the Stock Exchange. Notice of any such termination or appointment will be given to the Holders in accordance with General Condition 7.

3.3 The Register will be maintained outside Hong Kong by the Issuer and the Issuer will enter or cause to be entered the name, address and banking details of the Holders, the details of the Structured Products held by each Holder, including the number of Structured Products of each series held and any other particulars which it thinks proper.

4. *Purchases*

The Issuer, the Guarantor and/or any of their respective affiliates may at any time purchase Structured Products at any price in the open market or by tender or by private treaty. Any Structured Products so purchased may be held, resold or surrendered for cancellation.

5. *Global Certificate*

The Structured Products will be represented by a Global Certificate. No definitive certificate will be issued. The Structured Products can only be exercised by the Nominee. The Global Certificate representing the relevant Structured Products will be deposited with CCASS in the name of the Nominee.

6. *Meetings of Holders and Modification*

6.1 *Meetings of Holders*

The Instrument contains provisions for convening meetings of the Holders to consider any matter affecting their interests, including the sanctioning by Extraordinary Resolution (as defined in the Instrument) of a modification of the provisions of the Structured Products or of the Instrument.

Any resolution to be passed in a meeting of the Holders shall be decided by poll. A meeting may be convened by the Issuer or by Holders holding not less than 10 per cent. of the Structured Products for the time being remaining unexercised. The quorum at any such meeting for passing an Extraordinary Resolution will be two or more persons holding or representing not less than 25 per cent. of the Structured Products for the time being remaining unexercised, or at any adjourned meeting two or more persons being or representing Holders whatever the number of Structured Products so held or represented.

A resolution will be an Extraordinary Resolution when it has been passed at a duly convened meeting by not less than three-quarters of the votes cast by such Holders who, being entitled to do so, vote in person or by proxy.

An Extraordinary Resolution passed at any meeting of the Holders shall be binding on all the Holders, whether or not they are present at the meeting.

Resolutions can be passed in writing without a meeting of the Holders being held if passed unanimously.

6.2 Modification

The Issuer may, without the consent of the Holders, effect any modification of the terms and conditions of the Structured Products or the Instrument which, in the opinion of the Issuer, is:

- (a) not materially prejudicial to the interests of the Holders generally (without considering the circumstances of any individual Holder or the tax or other consequences of such modification in any particular jurisdiction);
- (b) of a formal, minor or technical nature;
- (c) made to correct a manifest error; or
- (d) necessary in order to comply with mandatory provisions of the laws or regulations of Hong Kong.

Any such modification shall be binding on the Holders and shall be notified to them by the Issuer or the Sponsor (as the case may be) as soon as practicable thereafter in accordance with General Condition 7.

7. Notices

All notices to the Holders will be validly given if published in English and in Chinese on the website of Hong Kong Exchanges and Clearing Limited. Such notices shall be deemed to have been given on the date of the first such publication. If such publication is not practicable, notice will be given in such other manner as the Issuer may determine appropriate.

8. Adjustment to the Conditions

8.1 Other Adjustments

Without prejudice to and notwithstanding any prior adjustment(s) made pursuant to the applicable Conditions, the Issuer may (but shall not be obliged to) make such other adjustments to the terms and conditions of the Structured Products as appropriate where any event (including the events as contemplated in the applicable Conditions) occurs and irrespective of, in substitution for, or in addition to the provisions contemplated in the applicable Conditions, provided that such adjustment is:

- (a) not materially prejudicial to the interests of the Holders generally (without considering the circumstances of any individual Holder or the tax or other consequences of such adjustment in any particular jurisdiction); or
- (b) determined by the Issuer in good faith to be appropriate and commercially reasonable.

8.2 Notice of Adjustments

All determinations made by the Issuer in respect of any adjustment to the Conditions will be conclusive and binding on the Holders. The Issuer will give, or procure that there is given, notice as soon as practicable of any adjustment and of the date from which such adjustment is effective by publication in accordance with General Condition 7.

9. Further Issues

The Issuer shall be at liberty from time to time, without the consent of the Holders, to create and issue further structured products so as to form a single series with the Structured Products.

10. Taxation

The Issuer is not liable for or otherwise obliged to pay any tax, duty, withholding or other payment which may arise as a result of the ownership, transfer or exercise of any Structured Products.

11. Good Faith and Commercially Reasonable Manner

Any exercise of discretion by the Issuer under the Conditions will be made in good faith and in a commercially reasonable manner.

12. Contracts (Rights of Third Parties) Ordinance

A person who is not a party to the Conditions has no right under the Contracts (Rights of Third Parties) Ordinance (Cap. 623 of the Laws of Hong Kong) to enforce or to enjoy the benefit of any term of the Structured Products.

13. Governing Law

The Structured Products, the Global Certificate, the Guarantee and the Instrument will be governed by and construed in accordance with the laws of Hong Kong. The Issuer, the Guarantor and each Holder (by its purchase of the Structured Products) shall be deemed to have submitted for all purposes in connection with the Structured Products, the Global Certificates, the Guarantee and the Instrument to the non-exclusive jurisdiction of the courts of Hong Kong.

14. Language

In the event of any inconsistency between (a) the Chinese translation of these General Conditions and/or the applicable Product Conditions and (b) the English version of these General Conditions and/or the applicable Product Conditions, the English version of these General Conditions and/or the applicable Product Conditions shall prevail.

15. Prescription

Claims against the Issuer for payment of any amount in respect of a series of Structured Product will become void unless made within ten years of the MCE Valuation Date or the Expiry Date (as the case may be) applicable to that series and thereafter, any sums payable in respect of such Structured Product shall be forfeited and shall revert to the Issuer.

Sponsor

BNP Paribas Securities (Asia) Limited

60th-63rd Floors
Two International Finance Centre
8 Finance Street
Central, Hong Kong
China

APPENDIX 2 — PRODUCT CONDITIONS OF WARRANTS

The following pages set out the Product Conditions in respect of different types of Warrants.

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PART A — PRODUCT CONDITIONS OF CASH SETTLED WARRANTS OVER SINGLE EQUITIES

The relevant Product Conditions will, together with the General Conditions and the supplemental provisions contained in the relevant Launch Announcement and Supplemental Listing Document and subject to completion and amendment, be endorsed on the Global Certificate. The relevant Launch Announcement and Supplemental Listing Document in relation to the issue of any series of Warrants may specify additional terms and conditions which shall, to the extent so specified or to the extent inconsistent with the applicable Product Conditions, replace or modify the applicable Product Conditions for the purpose of such series of Warrants. Capitalised terms used in the applicable Product Conditions and not otherwise defined therein shall have the meaning given to them in the relevant Launch Announcement and Supplemental Listing Document.

1. Definitions

For the purposes of these Product Conditions:

“**Average Price**” means the arithmetic mean of the closing price of one Share, as derived from the Daily Quotation Sheet of the Stock Exchange, subject to any adjustment to such closing prices as may be necessary to reflect any event as contemplated in Product Condition 4 such as capitalisation, rights issue, distribution or the like in respect of each Valuation Date;

“**Business Day**” means a day (excluding Saturdays) on which the Stock Exchange is scheduled to open for dealings in Hong Kong and banks are open for business in Hong Kong;

“**Cash Settlement Amount**” means, in respect of every Board Lot, an amount in the Settlement Currency calculated by the Issuer as follows:

(a) in the case of a series of call Warrants:

$$\frac{\text{Entitlement} \times (\text{Average Price} - \text{Exercise Price}) \times \text{one Board Lot}}{\text{Number of Warrant(s) per Entitlement}}$$

(b) in the case of a series of put Warrants:

$$\frac{\text{Entitlement} \times (\text{Exercise Price} - \text{Average Price}) \times \text{one Board Lot}}{\text{Number of Warrant(s) per Entitlement}}$$

“**CCASS Settlement Day**” has the meaning ascribed to the term “Settlement Day” in the CCASS Rules, subject to such modification and amendment prescribed by HKSCC from time to time;

“**Company**” means the company specified as such in the relevant Launch Announcement and Supplemental Listing Document;

“**Designated Bank Account**” means the relevant bank account designated by each Holder;

“**Entitlement**” means the number specified as such in the relevant Launch Announcement and Supplemental Listing Document, subject to any adjustment in accordance with Product Condition 4;

“**Exercise Expenses**” means any charges or expenses including any taxes or duties which are incurred in respect of the exercise of the Warrants;

“**Exercise Price**” means the price specified as such in the relevant Launch Announcement and Supplemental Listing Document, subject to any adjustment in accordance with Product Condition 4;

“**General Conditions**” means the general terms and conditions set out in Appendix 1 of the Base Listing Document;

“**Listing Date**” means the date specified as such in the relevant Launch Announcement and Supplemental Listing Document;

“**Market Disruption Event**” means:

- (a) the occurrence or existence on any Valuation Date during the one-half hour period that ends at the close of trading of any suspension of or limitation imposed on trading (by reason of movements in price exceeding limits permitted by the Stock Exchange or otherwise) on the Stock Exchange in (i) the Shares; or (ii) any options or futures contracts relating to the Shares if, in any such case, such suspension or limitation is, in the determination of the Issuer, material;
- (b) the issuance of the tropical cyclone warning signal number 8 or above or the issuance of a “BLACK” rainstorm signal on any day which either (i) results in the Stock Exchange being closed for trading for the entire day; or (ii) results in the Stock Exchange being closed prior to its regular time for close of trading for the relevant day (for the avoidance of doubt, in the case when the Stock Exchange is scheduled to open for the morning trading session only, closed prior to its regular time for close of trading for the morning session), PROVIDED THAT there shall be no Market Disruption Event solely by reason of the Stock Exchange opening for trading later than its regular time for opening of trading on any day as a result of the tropical cyclone warning signal number 8 or above or the “BLACK” rainstorm signal having been issued; or
- (c) a limitation or closure of the Stock Exchange due to any unforeseen circumstances;

“**Number of Warrant(s) per Entitlement**” has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document;

“**Product Conditions**” means these product terms and conditions;

“**Settlement Currency**” means the currency specified as such in the relevant Launch Announcement and Supplemental Listing Document;

“**Settlement Date**” means the third CCASS Settlement Day after the later of: (i) the Expiry Date; and (ii) the day on which the Average Price is determined in accordance with the Conditions;

“**Settlement Disruption Event**” means an event beyond the control of the Issuer as a result of which the Issuer is unable to procure payment of the Cash Settlement Amount electronically through CCASS to the Designated Bank Account;

“**Share**” means the share of the Company specified as such in the relevant Launch Announcement and Supplemental Listing Document and “**Shares**” shall be construed accordingly; and

“**Valuation Date**” means each of the five Business Days immediately preceding the Expiry Date, provided that if the Issuer determines, in its sole discretion, that a Market Disruption Event has occurred on any Valuation Date, then that Valuation Date shall be postponed until the first succeeding Business Day on which there is no Market Disruption Event irrespective of whether that postponed Valuation Date would fall on a Business Day that is already or is deemed to be a Valuation Date. For the avoidance of doubt, in the event that a Market Disruption Event has occurred and a Valuation Date

is postponed as aforesaid, the closing price of the Shares on the first succeeding Business Day will be used more than once in determining the Average Price, so that in no event shall there be less than five closing prices used to determine the Average Price.

If the postponement of the Valuation Date as aforesaid would result in the Valuation Date falling on or after the Expiry Date, then:

- (a) the Business Day immediately preceding the Expiry Date (the “**Last Valuation Date**”) shall be deemed to be the Valuation Date notwithstanding the Market Disruption Event; and
- (b) the Issuer shall determine the closing price of the Shares on the basis of its good faith estimate of the price that would have prevailed on the Last Valuation Date but for the Market Disruption Event.

Other capitalised terms shall, unless otherwise defined herein, have the meaning ascribed to them in the Base Listing Document, the General Conditions, the relevant Launch Announcement and Supplemental Listing Document or the Global Certificate.

2. Warrant Rights and Exercise Expenses

2.1 Warrant Rights

Every Board Lot gives each Holder, upon due exercise and compliance with Product Condition 3, the right to receive payment of the Cash Settlement Amount, if any.

2.2 Exercise Expenses

On exercise of the Warrants, Holders will be obliged to give an irrevocable authorisation to the Issuer to deduct all Exercise Expenses in accordance with Product Condition 3.

3. Exercise of Warrants

(a) Exercise of Warrants in Board Lots

Warrants may only be exercised in Board Lots or integral multiples thereof.

(b) Automatic Exercise

The Warrants are exercisable only on the Expiry Date. Any Warrant will automatically be exercised if the Cash Settlement Amount on the Expiry Date is greater than zero (without notice being given to the Holders). The Holders will not be required to deliver any exercise notice and the Issuer or its agent will pay to the Holders the Cash Settlement Amount (net of any Exercise Expenses)(if any) in accordance with Product Condition 3(d).

Any Warrant which has not been automatically exercised in accordance with this Product Condition 3(b) shall expire immediately without value thereafter and all rights of the Holder and obligations of the Issuer with respect to such Warrant shall cease.

(c) *Cancellation*

The Issuer will, with effect from the first Business Day following the Expiry Date, remove from the Register the name of the person in respect of the Warrants which:

- (i) are the subject of an exercise pursuant to automatic exercise in accordance with these Product Conditions; or
- (ii) have expired worthless,

and thereby cancel the relevant Warrants.

(d) *Cash Settlement*

Subject to automatic exercise of Warrants in accordance with these Product Conditions, the Issuer will make a payment, in respect of every Board Lot, to the relevant Holder equal to the Cash Settlement Amount (net of any Exercise Expenses). If the Cash Settlement Amount is equal to or less than the Exercise Expenses, no amount is payable by the Issuer.

The Cash Settlement Amount (net of any Exercise Expenses) will be despatched no later than the Settlement Date by crediting that amount, in accordance with the CCASS Rules, to the Designated Bank Account.

If, as a result of a Settlement Disruption Event, it is not possible for the Issuer to procure payment electronically through CCASS by crediting the relevant Designated Bank Account of the Holder on the original Settlement Date, the Issuer shall use its reasonable endeavours to procure payment electronically through CCASS by crediting the relevant Designated Bank Account of the Holder as soon as reasonably practicable after the original Settlement Date. The Issuer will not be liable to the Holder for any interest in respect of the amount due or any loss or damage that such Holder may suffer as a result of the existence of a Settlement Disruption Event.

4. Adjustments

4.1 *Rights Issues*

If and whenever the Company shall, by way of Rights (as defined below), offer new Shares for subscription at a fixed subscription price to the holders of existing Shares pro rata to existing holdings (a “**Rights Offer**”), the Entitlement will be adjusted to take effect on the Business Day (“**Rights Issue Adjustment Date**”) on which trading in the Shares becomes ex-entitlement in accordance with the following formula:

$$\text{Adjusted Entitlement} = \text{Adjustment Factor} \times E$$

Where:

$$\text{Adjustment Factor} = \frac{1 + M}{1 + (R/S) \times M}$$

E: Existing Entitlement immediately prior to the Rights Offer

S: Cum-Rights Share price determined by the closing price on the Stock Exchange on the last Business Day on which Shares are traded on a cum-Rights basis

- R: Subscription price per Share as specified in the Rights Offer plus an amount equal to any dividends or other benefits foregone to exercise the Rights
- M: Number of new Share(s) (whether a whole or a fraction) per existing Share each holder thereof is entitled to subscribe

Provided that if the adjustment to be made would result in the Entitlement being changed by one per cent. or less, then no adjustment will be made. In addition, the Issuer shall adjust the Exercise Price (which shall be rounded to the nearest 0.001) by the reciprocal of the Adjustment Factor, where the reciprocal of the Adjustment Factor means one divided by the relevant Adjustment Factor. The adjustment to the Exercise Price shall take effect on the Rights Issue Adjustment Date.

For the purposes of these Product Conditions:

“**Rights**” means the right(s) attached to each existing Share or needed to acquire one new Share (as the case may be) which are given to the holders of existing Shares to subscribe at a fixed subscription price for new Shares pursuant to the Rights Offer (whether by the exercise of one Right, a part of a Right or an aggregate number of Rights).

4.2 Bonus Issues

If and whenever the Company shall make an issue of Shares credited as fully paid to the holders of Shares generally by way of capitalisation of profits or reserves (other than pursuant to a scrip dividend or similar scheme for the time being operated by the Company or otherwise in lieu of a cash dividend and without any payment or other consideration being made or given by such holders) (a “**Bonus Issue**”) the Entitlement will be increased on the Business Day (“**Bonus Issue Adjustment Date**”) on which trading in the Shares becomes ex-entitlement in accordance with the following formula:

$$\text{Adjusted Entitlement} = \text{Adjustment Factor} \times E$$

Where:

$$\text{Adjustment Factor} = 1 + N$$

E: Existing Entitlement immediately prior to the Bonus Issue

N: Number of additional Shares (whether a whole or a fraction) received by a holder of existing Shares for each Share held prior to the Bonus Issue

Provided that if the adjustment to be made would result in the Entitlement being changed by one per cent. or less, then no adjustment will be made. In addition, the Issuer shall adjust the Exercise Price (which shall be rounded to the nearest 0.001) by the reciprocal of the Adjustment Factor, where the reciprocal of the Adjustment Factor means one divided by the relevant Adjustment Factor. The adjustment to the Exercise Price shall take effect on the Bonus Issue Adjustment Date.

4.3 Share Splits or Consolidations

If and whenever the Company shall subdivide its Shares or any class of its outstanding share capital comprised of the Shares into a greater number of shares (a “**Subdivision**”) or consolidate the Shares or any class of its outstanding share capital comprised of the Shares into a smaller number of shares (a “**Consolidation**”), then:

- (i) in the case of a Subdivision, the Entitlement in effect immediately prior thereto will be increased whereas the Exercise Price (which shall be rounded to the nearest 0.001) will be decreased in the same ratio as the Subdivision; and
- (ii) in the case of a Consolidation, the Entitlement in effect immediately prior thereto will be decreased whereas the Exercise Price (which shall be rounded to the nearest 0.001) will be increased in the same ratio as the Consolidation,

in each case on the day on which the Subdivision or Consolidation (as the case may be) shall have taken effect.

4.4 Merger or Consolidation

If it is announced that the Company is to or may merge or consolidate with or into any other corporation (including becoming, by agreement or otherwise, a subsidiary of any corporation or controlled by any person or corporation) (except where the Company is the surviving corporation in a merger) or that it is to or may sell or transfer all or substantially all of its assets, the rights attaching to the Warrants may in the absolute discretion of the Issuer be amended no later than the Business Day preceding the consummation of such merger, consolidation, sale or transfer (each a “**Restructuring Event**”) (as determined by the Issuer in its absolute discretion).

The rights attaching to the Warrants after the adjustment shall, after such Restructuring Event, relate to the number of shares of the corporation(s) resulting from or surviving such Restructuring Event or other securities (“**Substituted Securities**”) and/or cash offered in substitution for the affected Shares, as the case may be, to which the holder of such number of Shares to which the Warrants related immediately before such Restructuring Event would have been entitled upon such Restructuring Event. Thereafter the provisions hereof shall apply to such Substituted Securities, provided that any Substituted Securities may, in the absolute discretion of the Issuer, be deemed to be replaced by an amount in the relevant currency equal to the market value or, if no market value is available, fair value, of such Substituted Securities in each case as determined by the Issuer as soon as practicable after such Restructuring Event is effected.

For the avoidance of doubt, any remaining Shares shall not be affected by this Product Condition 4.4 and, where cash is offered in substitution for Shares or is deemed to replace Substituted Securities as described above, references in these Product Conditions to the Shares shall include any such cash.

4.5 Cash Distribution

No adjustment will be made for an ordinary cash dividend (whether or not it is offered with a scrip alternative) (“**Ordinary Dividend**”). For any other forms of cash distribution (“**Cash Distribution**”) announced by the Company, such as a cash bonus, special dividend or extraordinary dividend, no adjustment will be made unless the value of the Cash Distribution accounts for 2 per cent. or more of the Share’s closing price on the day of announcement by the Company.

If and whenever the Company shall make a Cash Distribution credited as fully paid to the holders of Shares generally, the Entitlement shall be adjusted to take effect on the Business Day on which trading in the Shares becomes ex-entitlement in respect of the relevant Cash Distribution (“**Cash Distribution Adjustment Date**”) in accordance with the following formula:

$$\text{Adjusted Entitlement} = \text{Adjustment Factor} \times E$$

Where

$$\text{Adjustment Factor} = \frac{S - OD}{S - OD - CD}$$

E: Existing Entitlement immediately prior to the Cash Distribution

S: The closing price of the Share on the Stock Exchange on the Business Day immediately preceding the Cash Distribution Adjustment Date

CD: The Cash Distribution per Share

OD: The Ordinary Dividend per Share, provided that the date on which the Shares are traded on an ex-Ordinary Dividend basis is the Cash Distribution Adjustment Date. For the avoidance of doubt, the OD shall be zero if the date on which the Shares are traded on an ex-Ordinary Dividend basis is not the Cash Distribution Adjustment Date

In addition, the Issuer shall adjust the Exercise Price (which shall be rounded to the nearest 0.001) by the reciprocal of the Adjustment Factor, where the reciprocal of the Adjustment Factor means one divided by the relevant Adjustment Factor. The adjustment to the Exercise Price shall take effect on the Cash Distribution Adjustment Date.

5. Liquidation

In the event of a liquidation or dissolution of the Company or the appointment of a liquidator, receiver or administrator or analogous person under Hong Kong law in respect of the whole or substantially the whole of its undertaking, property or assets, all unexercised Warrants will lapse and shall cease to be valid for any purpose, in the case of voluntary liquidation, on the effective date of the relevant resolution and, in the case of an involuntary liquidation or dissolution, on the date of the relevant court order or, in the case of the appointment of a liquidator or receiver or administrator or analogous person under any applicable law in respect of the whole or substantially the whole of its undertaking, property or assets, on the date when such appointment is effective but subject (in any such case) to any contrary mandatory requirement of law.

6. Delisting

6.1 Adjustments following delisting

If at any time the Shares cease to be listed on the Stock Exchange, the Issuer shall give effect to these Product Conditions in such manner and make such adjustments to the rights attaching to the Warrants as it shall, in its absolute discretion, consider appropriate to ensure, so far as it is reasonably able to do so, that the interests of the Holders generally are not materially prejudiced as a consequence of such delisting (without considering the individual circumstances of any Holder or the tax or other consequences that may result in any particular jurisdiction).

6.2 Listing on another exchange

Without prejudice to the generality of Product Condition 6.1, where the Shares are, or, upon the delisting, become, listed on any other stock exchange, these Product Conditions may, in the absolute discretion of the Issuer, be amended to the extent necessary to allow for the substitution of that other stock exchange in place of the Stock Exchange and the Issuer may, without the consent of the Holders, make such adjustments to the entitlements of Holders on exercise (including, if appropriate, by converting foreign currency amounts at prevailing market rates into the relevant currency) as may be appropriate in the circumstances.

7. Illegality or Impracticability

The Issuer is entitled to terminate the Warrants if it determines in good faith and in a commercially reasonable manner that, for reasons beyond its control, it has become or it will become illegal or impracticable:

- (a) for it to perform its obligations under the Warrants, or for the Guarantor to perform its obligations under the Guarantee, in whole or in part as a result of:
 - (i) the adoption of, or any change in, any relevant law or regulation (including any tax law); or
 - (ii) the promulgation of, or any change in, the interpretation by any court, tribunal, governmental, administrative, legislative, regulatory or judicial authority or power with competent jurisdiction of any relevant law or regulation (including any tax law),(each of (i) and (ii), a “**Change in Law Event**”); or
- (b) for it or any of its affiliates to maintain the Issuer’s hedging arrangements with respect to the Warrants due to a Change in Law Event.

Upon the occurrence of a Change in Law Event, the Issuer will, if and to the extent permitted by the applicable law or regulation, pay to each Holder a cash amount that the Issuer determines in good faith and in a commercially reasonable manner to be the fair market value in respect of each Warrant held by such Holder immediately prior to such termination (ignoring such illegality or impracticability) less the cost to the Issuer of unwinding any related hedging arrangement as determined by the Issuer in its sole and absolute discretion. Payment will be made to each Holder in such manner as shall be notified to the Holder in accordance with General Condition 7.

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PART B — PRODUCT CONDITIONS OF CASH SETTLED WARRANTS OVER EXCHANGE TRADED FUND

The relevant Product Conditions will, together with the General Conditions and the supplemental provisions contained in the relevant Launch Announcement and Supplemental Listing Document and subject to completion and amendment, be endorsed on the Global Certificate. The relevant Launch Announcement and Supplemental Listing Document in relation to the issue of any series of Warrants may specify additional terms and conditions which shall, to the extent so specified or to the extent inconsistent with the applicable Product Conditions, replace or modify the applicable Product Conditions for the purpose of such series of Warrants. Capitalised terms used in the applicable Product Conditions and not otherwise defined therein shall have the meaning given to them in the relevant Launch Announcement and Supplemental Listing Document.

1. Definitions

For the purposes of these Product Conditions:

“**Average Price**” means the arithmetic mean of the closing price of one Unit, as derived from the Daily Quotation Sheet of the Stock Exchange, subject to any adjustment to such closing prices as may be necessary to reflect any event as contemplated in Product Condition 4 such as capitalisation, rights issue, distribution or the like in respect of each Valuation Date;

“**Business Day**” means a day (excluding Saturdays) on which the Stock Exchange is scheduled to open for dealings in Hong Kong and banks are open for business in Hong Kong;

“**Cash Settlement Amount**” means, in respect of every Board Lot, an amount in the Settlement Currency calculated by the Issuer as follows:

(a) in the case of a series of call Warrants:

$$\frac{\text{Entitlement} \times (\text{Average Price} - \text{Exercise Price}) \times \text{one Board Lot}}{\text{Number of Warrant(s) per Entitlement}}$$

(b) in the case of a series of put Warrants:

$$\frac{\text{Entitlement} \times (\text{Exercise Price} - \text{Average Price}) \times \text{one Board Lot}}{\text{Number of Warrant(s) per Entitlement}}$$

“**CCASS Settlement Day**” has the meaning ascribed to the term “Settlement Day” in the CCASS Rules, subject to such modification and amendment prescribed by HKSCC from time to time;

“**Designated Bank Account**” means the relevant bank account designated by each Holder;

“**Entitlement**” means the number specified as such in the relevant Launch Announcement and Supplemental Listing Document, subject to any adjustment in accordance with Product Condition 4;

“**Exercise Expenses**” means any charges or expenses including any taxes or duties which are incurred in respect of the exercise of the Warrants;

“**Exercise Price**” means the price specified as such in the relevant Launch Announcement and Supplemental Listing Document, subject to any adjustment in accordance with Product Condition 4;

“**Fund**” means the exchange traded fund specified as such in the relevant Launch Announcement and Supplemental Listing Document;

“**General Conditions**” means the general terms and conditions set out in Appendix 1 of the Base Listing Document;

“**Listing Date**” means the date specified as such in the relevant Launch Announcement and Supplemental Listing Document;

“**Market Disruption Event**” means:

- (a) the occurrence or existence on any Valuation Date during the one-half hour period that ends at the close of trading of any suspension of or limitation imposed on trading (by reason of movements in price exceeding limits permitted by the Stock Exchange or otherwise) on the Stock Exchange in (i) the Units; or (ii) any options or futures contracts relating to the Units if, in any such case, such suspension or limitation is, in the determination of the Issuer, material;
- (b) the issuance of the tropical cyclone warning signal number 8 or above or the issuance of a “BLACK” rainstorm signal on any day which either (i) results in the Stock Exchange being closed for trading for the entire day; or (ii) results in the Stock Exchange being closed prior to its regular time for close of trading for the relevant day (for the avoidance of doubt, in the case when the Stock Exchange is scheduled to open for the morning trading session only, closed prior to its regular time for close of trading for the morning session), PROVIDED THAT there shall be no Market Disruption Event solely by reason of the Stock Exchange opening for trading later than its regular time for opening of trading on any day as a result of the tropical cyclone warning signal number 8 or above or the “BLACK” rainstorm signal having been issued; or
- (c) a limitation or closure of the Stock Exchange due to any unforeseen circumstances;

“**Number of Warrant(s) per Entitlement**” has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document;

“**Product Conditions**” means these product terms and conditions;

“**Settlement Currency**” means the currency specified as such in the relevant Launch Announcement and Supplemental Listing Document;

“**Settlement Date**” means the third CCASS Settlement Day after the later of (i) the Expiry Date and (ii) the day on which the Average Price is determined in accordance with the Conditions;

“**Settlement Disruption Event**” means an event beyond the control of the Issuer as a result of which the Issuer is unable to procure payment of the Cash Settlement Amount electronically through CCASS to the Designated Bank Account;

“**Unit**” means the share or unit of the Fund specified as such in the relevant Launch Announcement and Supplemental Listing Document and “**Units**” shall be construed accordingly; and

“**Valuation Date**” means each of the five Business Days immediately preceding the Expiry Date, provided that if the Issuer determines, in its sole discretion, that a Market Disruption Event has occurred on any Valuation Date, then that Valuation Date shall be postponed until the first succeeding Business Day on which there is no Market Disruption Event irrespective of whether that postponed Valuation Date would fall on a Business Day that is already or is deemed to be a Valuation Date. For the avoidance of doubt, in the event that a Market Disruption Event has occurred and a Valuation Date

is postponed as aforesaid, the closing price of the Units on the first succeeding Business Day will be used more than once in determining the Average Price, so that in no event shall there be less than five closing prices used to determine the Average Price.

If the postponement of the Valuation Date as aforesaid would result in the Valuation Date falling on or after the Expiry Date, then:

- (a) the Business Day immediately preceding the Expiry Date (the “**Last Valuation Date**”) shall be deemed to be the Valuation Date notwithstanding the Market Disruption Event; and
- (b) the Issuer shall determine the closing price of the Units on the basis of its good faith estimate of the price that would have prevailed on the Last Valuation Date but for the Market Disruption Event.

Other capitalised terms shall, unless otherwise defined herein, have the meaning ascribed to them in the Base Listing Document, the General Conditions, the relevant Launch Announcement and Supplemental Listing Document or the Global Certificate.

2. Warrant Rights and Exercise Expenses

2.1 Warrant Rights

Every Board Lot gives each Holder, upon due exercise and compliance with Product Condition 3, the right to receive payment of the Cash Settlement Amount, if any.

2.2 Exercise Expenses

On exercise of the Warrants, Holders will be obliged to give an irrevocable authorisation to the Issuer to deduct all Exercise Expenses in accordance with Product Condition 3.

3. Exercise of Warrants

(a) Exercise of Warrants in Board Lots

Warrants may only be exercised in Board Lots or integral multiples thereof.

(b) Automatic Exercise

The Warrants are exercisable only on the Expiry Date. Any Warrant will automatically be exercised if the Cash Settlement Amount on the Expiry Date is greater than zero (without notice being given to the Holders). The Holders will not be required to deliver any exercise notice and the Issuer or its agent will pay to the Holders the Cash Settlement Amount (net of any Exercise Expenses)(if any) in accordance with Product Condition 3(d).

Any Warrant which has not been automatically exercised in accordance with this Product Condition 3(b) shall expire immediately without value thereafter and all rights of the Holder and obligations of the Issuer with respect to such Warrant shall cease.

(c) *Cancellation*

The Issuer will, with effect from the first Business Day following the Expiry Date, remove from the Register the name of the person in respect of the Warrants which:

- (i) are the subject of an exercise pursuant to automatic exercise in accordance with these Product Conditions; or
- (ii) have expired worthless,

and thereby cancel the relevant Warrants.

(d) *Cash Settlement*

Subject to automatic exercise of Warrants in accordance with these Product Conditions, the Issuer will make a payment, in respect of every Board Lot, to the relevant Holder equal to the Cash Settlement Amount (net of any Exercise Expenses). If the Cash Settlement Amount is equal to or less than the Exercise Expenses, no amount is payable by the Issuer.

The Cash Settlement Amount (net of any Exercise Expenses) will be despatched no later than the Settlement Date by crediting that amount, in accordance with the CCASS Rules, to the Designated Bank Account.

If, as a result of a Settlement Disruption Event, it is not possible for the Issuer to procure payment electronically through CCASS by crediting the relevant Designated Bank Account of the Holder on the original Settlement Date, the Issuer shall use its reasonable endeavours to procure payment electronically through CCASS by crediting the relevant Designated Bank Account of the Holder as soon as reasonably practicable after the original Settlement Date. The Issuer will not be liable to the Holder for any interest in respect of the amount due or any loss or damage that such Holder may suffer as a result of the existence of a Settlement Disruption Event.

4. Adjustments

4.1 *Rights Issues*

If and whenever the Fund shall, by way of Rights (as defined below), offer new Units for subscription at a fixed subscription price to the holders of existing Units pro rata to existing holdings (a “**Rights Offer**”), the Entitlement will be adjusted to take effect on the Business Day (“**Rights Issue Adjustment Date**”) on which trading in the Units becomes ex-entitlement in accordance with the following formula:

$$\text{Adjusted Entitlement} = \text{Adjustment Factor} \times E$$

Where:

$$\text{Adjustment Factor} = \frac{1 + M}{1 + (R/S) \times M}$$

E: Existing Entitlement immediately prior to the Rights Offer

S: Cum-Rights Unit price determined by the closing price on the Stock Exchange on the last Business Day on which Units are traded on a cum-Rights basis

- R: Subscription price per Unit as specified in the Rights Offer plus an amount equal to any distribution or other benefits foregone to exercise the Rights
- M: Number of new Unit(s) (whether a whole or a fraction) per existing Unit each holder thereof is entitled to subscribe

Provided that if the adjustment to be made would result in the Entitlement being changed by one per cent. or less, then no adjustment will be made. In addition, the Issuer shall adjust the Exercise Price (which shall be rounded to the nearest 0.001) by the reciprocal of the Adjustment Factor, where the reciprocal of the Adjustment Factor means one divided by the relevant Adjustment Factor. The adjustment to the Exercise Price shall take effect on the Rights Issue Adjustment Date.

For the purposes of these Product Conditions:

“**Rights**” means the right(s) attached to each existing Unit or needed to acquire one new Unit (as the case may be) which are given to the holders of existing Units to subscribe at a fixed subscription price for new Units pursuant to the Rights Offer (whether by the exercise of one Right, a part of a Right or an aggregate number of Rights).

4.2 Bonus Issues

If and whenever the Fund shall make an issue of Units credited as fully paid to the holders of Units generally (other than pursuant to a scrip distribution or similar scheme for the time being operated by the Fund or otherwise in lieu of a cash distribution and without any payment or other consideration being made or given by such holders) (a “**Bonus Issue**”) the Entitlement will be increased on the Business Day (“**Bonus Issue Adjustment Date**”) on which trading in the Units becomes ex-entitlement in accordance with the following formula:

$$\text{Adjusted Entitlement} = \text{Adjustment Factor} \times E$$

Where:

$$\text{Adjustment Factor} = 1 + N$$

E: Existing Entitlement immediately prior to the Bonus Issue

N: Number of additional Units (whether a whole or a fraction) received by a holder of existing Units for each Unit held prior to the Bonus Issue

Provided that if the adjustment to be made would result in the Entitlement being changed by one per cent. or less, then no adjustment will be made. In addition, the Issuer shall adjust the Exercise Price (which shall be rounded to the nearest 0.001) by the reciprocal of the Adjustment Factor, where the reciprocal of the Adjustment Factor means one divided by the relevant Adjustment Factor. The adjustment to the Exercise Price shall take effect on the Bonus Issue Adjustment Date.

4.3 Subdivisions or Consolidations

If and whenever the Fund shall subdivide its Units or any class of its outstanding Unit into a greater number of units or shares (a “**Subdivision**”) or consolidate the Units or any class of its outstanding unit or share capital comprised of the Units into a smaller number of units or shares (a “**Consolidation**”), then:

- (i) in the case of a Subdivision, the Entitlement in effect immediately prior thereto will be increased whereas the Exercise Price (which shall be rounded to the nearest 0.001) will be decreased in the same ratio as the Subdivision; and
- (ii) in the case of a Consolidation, the Entitlement in effect immediately prior thereto will be decreased whereas the Exercise Price (which shall be rounded to the nearest 0.001) will be increased in the same ratio as the Consolidation,

in each case on the day on which the Subdivision or Consolidation (as the case may be) shall have taken effect.

4.4 Merger or Consolidation

If it is announced that the Fund is to or may merge or consolidate with or into any other trust or corporation (including becoming, by agreement or otherwise, controlled by any person or corporation) (except where the Fund is the surviving entity in a merger) or that it is to or may sell or transfer all or substantially all of its assets, the rights attaching to the Warrants may in the absolute discretion of the Issuer be amended no later than the Business Day preceding the consummation of such merger, consolidation, sale or transfer (each a “**Restructuring Event**”) (as determined by the Issuer in its absolute discretion).

The rights attaching to the Warrants after the adjustment shall, after such Restructuring Event, relate to the number of units or shares of the trust(s) or corporation(s) resulting from or surviving such Restructuring Event or other securities (“**Substituted Securities**”) and/or cash offered in substitution for the affected Units, as the case may be, to which the holder of such number of Units to which the Warrants related immediately before such Restructuring Event would have been entitled upon such Restructuring Event. Thereafter the provisions hereof shall apply to such Substituted Securities, provided that any Substituted Securities may, in the absolute discretion of the Issuer, be deemed to be replaced by an amount in the relevant currency equal to the market value or, if no market value is available, fair value, of such Substituted Securities in each case as determined by the Issuer as soon as practicable after such Restructuring Event is effected.

For the avoidance of doubt, any remaining Units shall not be affected by this Product Condition 4.4 and, where cash is offered in substitution for Units or is deemed to replace Substituted Securities as described above, references in these Product Conditions to the Units shall include any such cash.

4.5 Cash Distribution

No adjustment will be made for an ordinary cash distribution (whether or not it is offered with a scrip alternative) (“**Ordinary Distribution**”). For any other forms of cash distribution (“**Cash Distribution**”) announced by the Fund, such as a cash bonus, special distribution or extraordinary distribution, no adjustment will be made unless the value of the Cash Distribution accounts for 2 per cent. or more of the Unit’s closing price on the day of announcement by the Fund.

If and whenever the Fund shall make a Cash Distribution credited as fully paid to the holders of Units generally, the Entitlement shall be adjusted to take effect on the Business Day on which trading in the Units becomes ex-entitlement in respect of the relevant Cash Distribution (“**Cash Distribution Adjustment Date**”) in accordance with the following formula:

$$\text{Adjusted Entitlement} = \text{Adjustment Factor} \times E$$

Where:

$$\text{Adjustment Factor} = \frac{S - OD}{S - OD - CD}$$

E: Existing Entitlement immediately prior to the Cash Distribution

S: The closing price of the Unit on the Stock Exchange on the Business Day immediately preceding the Cash Distribution Adjustment Date

CD: The Cash Distribution per Unit

OD: The Ordinary Distribution per Unit, provided that the date on which the Units are traded on an ex-Ordinary Distribution basis is the Cash Distribution Adjustment Date. For the avoidance of doubt, the OD shall be zero if the date on which the Units are traded on an ex-Ordinary Distribution basis is not the Cash Distribution Adjustment Date

In addition, the Issuer shall adjust the Exercise Price (which shall be rounded to the nearest 0.001) by the reciprocal of the Adjustment Factor, where the reciprocal of the Adjustment Factor means one divided by the relevant Adjustment Factor. The adjustment to the Exercise Price shall take effect on the Cash Distribution Adjustment Date.

5. Termination or Liquidation

In the event of a Termination or the liquidation or dissolution of the Fund or, if applicable, the trustee of the Fund (including any successor trustee appointed from time to time) (“**Trustee**”) (in its capacity as trustee of the Fund) or the appointment of a liquidator, receiver or administrator or analogous person under Hong Kong law in respect of the whole or substantially the whole of the Fund’s or the Trustee’s (as the case may be) undertaking, property or assets, all unexercised Warrants will lapse and shall cease to be valid for any purpose. In the case of a Termination, the unexercised Warrants will lapse and shall cease to be valid on the effective date of the Termination, in the case of a voluntary liquidation, on the effective date of the relevant resolution and, in the case of an involuntary liquidation or dissolution, on the date of the relevant court order or, in the case of the appointment of a liquidator or receiver or administrator or analogous person under any applicable law in respect of the whole or substantially the whole of such Fund’s or Trustee’s (as the case may be) undertaking, property or assets, on the date when such appointment is effective but subject (in any such case) to any contrary mandatory requirement of law.

For the purpose of this Product Condition 5, “**Termination**” means (i) the Fund is terminated or required to be terminated for whatever reason, or the termination of the Fund commences; (ii) where applicable, the Fund is held or is conceded by the Trustee or the manager of the Fund (including any successor manager appointed from time to time) not to have been constituted or to have been imperfectly constituted; (iii) where applicable, the Trustee ceases to be authorised under the Fund to hold the property of the Fund in its name and perform its obligations under the trust deed constituting the Fund; or (iv) the Fund ceases to be authorised as an authorised collective investment scheme under the Securities and Futures Ordinance (Cap. 571 of the Laws of Hong Kong).

6. Delisting

6.1 Adjustments following delisting

If at any time the Units cease to be listed on the Stock Exchange, the Issuer shall give effect to these Product Conditions in such manner and make such adjustments to the rights attaching to the Warrants as it shall, in its absolute discretion, consider appropriate to ensure, so far as it is reasonably able to do so, that the interests of the Holders generally are not materially prejudiced as a consequence of such delisting (without considering the individual circumstances of any Holder or the tax or other consequences that may result in any particular jurisdiction).

6.2 Listing on another exchange

Without prejudice to the generality of Product Condition 6.1, where the Units are, or, upon the delisting, become, listed on any other stock exchange, these Product Conditions may, in the absolute discretion of the Issuer, be amended to the extent necessary to allow for the substitution of that other stock exchange in place of the Stock Exchange and the Issuer may, without the consent of the Holders, make such adjustments to the entitlements of Holders on exercise (including, if appropriate, by converting foreign currency amounts at prevailing market rates into the relevant currency) as may be appropriate in the circumstances.

7. Illegality or Impracticability

The Issuer is entitled to terminate the Warrants if it determines in good faith and in a commercially reasonable manner that, for reasons beyond its control, it has become or it will become illegal or impracticable:

- (a) for it to perform its obligations under the Warrants, or for the Guarantor to perform its obligations under the Guarantee, in whole or in part as a result of:
 - (i) the adoption of, or any change in, any relevant law or regulation (including any tax law); or
 - (ii) the promulgation of, or any change in, the interpretation by any court, tribunal, governmental, administrative, legislative, regulatory or judicial authority or power with competent jurisdiction of any relevant law or regulation (including any tax law),(each of (i) and (ii), a “**Change in Law Event**”); or
- (b) for it or any of its affiliates to maintain the Issuer’s hedging arrangements with respect to the Warrants due to a Change in Law Event.

Upon the occurrence of a Change in Law Event, the Issuer will, if and to the extent permitted by the applicable law or regulation, pay to each Holder a cash amount that the Issuer determines in good faith and in a commercially reasonable manner to be the fair market value in respect of each Warrant held by such Holder immediately prior to such termination (ignoring such illegality or impracticability) less the cost to the Issuer of unwinding any related hedging arrangement as determined by the Issuer in its sole and absolute discretion. Payment will be made to each Holder in such manner as shall be notified to the Holder in accordance with General Condition 7.

Sponsor

BNP Paribas Securities (Asia) Limited
60th-63rd Floors
Two International Finance Centre
8 Finance Street
Central, Hong Kong
China

PART C — PRODUCT CONDITIONS OF CASH SETTLED INDEX WARRANTS

The relevant Product Conditions will, together with the General Conditions and the supplemental provisions contained in the relevant Launch Announcement and Supplemental Listing Document and subject to completion and amendment, be endorsed on the Global Certificate. The relevant Launch Announcement and Supplemental Listing Document in relation to the issue of any series of Warrants may specify additional terms and conditions which shall, to the extent so specified or to the extent inconsistent with the applicable Product Conditions, replace or modify the applicable Product Conditions for the purpose of such series of Warrants. Capitalised terms used in the applicable Product Conditions and not otherwise defined therein shall have the meaning given to them in the relevant Launch Announcement and Supplemental Listing Document.

1. Definitions

For the purposes of these Product Conditions:

“**Business Day**” means a day (excluding Saturdays) on which the Stock Exchange is scheduled to open for dealings in Hong Kong and banks are open for business in Hong Kong;

“**Cash Settlement Amount**” means, for every Board Lot, an amount calculated by the Issuer as follows (and, if appropriate, either (i) converted (if applicable) into the Settlement Currency at the Exchange Rate or, as the case may be, (ii) converted into the Interim Currency at the First Exchange Rate and then (if applicable) converted into Settlement Currency at the Second Exchange Rate):

(a) in the case of a series of call Warrants:

$$\frac{(\text{Closing Level} - \text{Strike Level}) \times \text{one Board Lot} \times \text{Index Currency Amount}}{\text{Divisor}}$$

(b) in the case of a series of put Warrants:

$$\frac{(\text{Strike Level} - \text{Closing Level}) \times \text{one Board Lot} \times \text{Index Currency Amount}}{\text{Divisor}}$$

“**CCASS Settlement Day**” has the meaning ascribed to the term “Settlement Day” in the CCASS Rules, subject to such modification and amendment prescribed by HKSCC from time to time;

“**Closing Level**” has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document, subject to any adjustment in accordance with Product Condition 4;

“**Designated Bank Account**” means the relevant bank account designated by each Holder;

“**Divisor**” means the number specified as such in the relevant Launch Announcement and Supplemental Listing Document;

“**Exchange Rate**” means the rate specified as such in the relevant Launch Announcement and Supplemental Listing Document, subject to any adjustment in accordance with Product Condition 4;

“**Exercise Expenses**” means any charges or expenses including any taxes or duties which are incurred in respect of the exercise of the Warrants;

“**First Exchange Rate**” means the rate specified as such in the relevant Launch Announcement and Supplemental Listing Document;

“**General Conditions**” means the general terms and conditions set out in Appendix 1 of the Base Listing Document;

“**Index**” means the index specified in the relevant Launch Announcement and Supplemental Listing Document;

“**Index Compiler**” has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document;

“**Index Currency Amount**” means the number specified as such in the relevant Launch Announcement and Supplemental Listing Document;

“**Index Exchange**” means the Stock Exchange or any other exchange as specified in the relevant Launch Announcement and Supplemental Listing Document;

“**Interim Currency**” has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document;

“**Listing Date**” means the date specified as such in the relevant Launch Announcement and Supplemental Listing Document;

“**Market Disruption Event**” means:

- (a) the occurrence or existence, on the Valuation Date during the one-half hour period that ends at the close of trading on the Index Exchange, of any of:
 - (i) the suspension or material limitation of the trading of a material number of constituent securities that comprise the Index; or
 - (ii) the suspension or material limitation of the trading of options or futures contracts relating to the Index on any exchanges on which such contracts are traded; or
 - (iii) the imposition of any exchange controls in respect of any currencies involved in determining the Cash Settlement Amount.

For the purposes of this paragraph (a), (X) the limitation of the number of hours or days of trading will not constitute a Market Disruption Event if it results from an announced change in the regular business hours of any relevant exchange, and (Y) a limitation on trading imposed by reason of the movements in price exceeding the levels permitted by any relevant exchange will constitute a Market Disruption Event;

- (b) where the Index Exchange is the Stock Exchange, the issuance of the tropical cyclone warning signal number 8 or above or the issuance of a “BLACK” rainstorm signal on any day which either (i) results in the Stock Exchange being closed for trading for the entire day; or (ii) results in the Stock Exchange being closed prior to its regular time for close of trading for the relevant day (for the avoidance of doubt, in the case when the Stock Exchange is scheduled to open for the morning trading session only, closed prior to its regular time for close of trading for the morning session), PROVIDED THAT there shall be no Market Disruption Event solely by reason

of the Stock Exchange opening for trading later than its regular time for opening of trading on any day as a result of the tropical cyclone warning signal number 8 or above or the “BLACK” rainstorm signal having been issued;

- (c) a limitation or closure of the Index Exchange due to any unforeseen circumstances; or
- (d) any circumstances beyond the control of the Issuer in which the Closing Level or, if applicable, the Exchange Rate, the First Exchange Rate or the Second Exchange Rate (as the case may be) cannot be determined by the Issuer in the manner set out in these Product Conditions or in such other manner as the Issuer considers appropriate at such time after taking into account all the relevant circumstances;

“**Product Conditions**” means these product terms and conditions;

“**Second Exchange Rate**” means the rate specified as such in the relevant Launch Announcement and Supplemental Listing Document;

“**Settlement Currency**” means the currency specified as such in the relevant Launch Announcement and Supplemental Listing Document;

“**Settlement Date**” means the third CCASS Settlement Day after the later of: (i) the Expiry Date; and (ii) the day on which the Closing Level is determined in accordance with the Conditions;

“**Settlement Disruption Event**” means an event beyond the control of the Issuer as a result of which the Issuer is unable to procure payment of the Cash Settlement Amount electronically through CCASS to the Designated Bank Account;

“**Strike Level**” means the level specified as such in the relevant Launch Announcement and Supplemental Listing Document; and

“**Valuation Date**” means the date specified in the Launch Announcement and Supplemental Listing Document, provided that if the Issuer determines, in its sole discretion, that a Market Disruption Event has occurred on the Valuation Date, then the Issuer shall determine the Closing Level on the basis of its good faith estimate of the Closing Level that would have prevailed on that day but for the occurrence of the Market Disruption Event, provided that the Issuer, if applicable, may, but shall not be obliged to, determine such Closing Level by having regard to the manner in which futures contracts relating to the Index are calculated.

Other capitalised terms shall, unless otherwise defined herein, have the meaning ascribed to them in the Base Listing Document, the General Conditions, the relevant Launch Announcement and Supplemental Listing Document or the Global Certificate.

2. Warrant Rights and Exercise Expenses

2.1 Warrant Rights

Every Board Lot gives each Holder, upon due exercise and compliance with Product Condition 3, the right to receive payment of the Cash Settlement Amount, if any.

2.2 Exercise Expenses

On exercise of the Warrants, Holders will be obliged to give an irrevocable authorisation to the Issuer to deduct all Exercise Expenses in accordance with Product Condition 3.

3. Exercise of Warrants

(a) Exercise of Warrants in Board Lots

Warrants may only be exercised in Board Lots or integral multiples thereof.

(b) Automatic Exercise

The Warrants are exercisable only on the Expiry Date. Any Warrant will automatically be exercised if the Cash Settlement Amount on the Expiry Date is greater than zero (without notice being given to the Holders). The Holders will not be required to deliver any exercise notice and the Issuer or its agent will pay to the Holders the Cash Settlement Amount (net of any Exercise Expenses)(if any) in accordance with Product Condition 3(d).

Any Warrant which has not been automatically exercised in accordance with this Product Condition 3(b) shall expire immediately without value thereafter and all rights of the Holder and obligations of the Issuer with respect to such Warrant shall cease.

(c) Cancellation

The Issuer will, with effect from the first Business Day following the Expiry Date, remove from the Register the name of the person in respect of the Warrants which:

- (i) are the subject of an exercise pursuant to automatic exercise in accordance with these Product Conditions; or
- (ii) have expired worthless,

and thereby cancel the relevant Warrants.

(d) Cash Settlement

Subject to automatic exercise of Warrants in accordance with these Product Conditions, the Issuer will make a payment, in respect of every Board Lot, to the relevant Holder equal to the Cash Settlement Amount (net of any Exercise Expenses). If the Cash Settlement Amount is equal to or less than the Exercise Expenses, no amount is payable by the Issuer.

The Cash Settlement Amount (net of any Exercise Expenses) will be despatched no later than the Settlement Date by crediting that amount, in accordance with the CCASS Rules, to the Designated Bank Account.

If as a result of a Settlement Disruption Event, it is not possible for the Issuer to procure payment electronically through CCASS by crediting the relevant Designated Bank Account of the Holder on the original Settlement Date, the Issuer shall use its reasonable endeavours to procure payment electronically through CCASS by crediting the relevant Designated Bank Account of the Holder as soon as reasonably practicable after the original Settlement Date. The Issuer will not be liable to the Holder for any interest in respect of the amount due or any loss or damage that such Holder may suffer as a result of the existence of a Settlement Disruption Event.

4. Adjustments to the Index

4.1 Successor Index Compiler Calculates and Reports Index

If the Index is:

- (a) not calculated and announced by the Index Compiler but is calculated and published by a successor to the Index Compiler (the “**Successor Index Compiler**”) acceptable to the Issuer; or
- (b) replaced by a successor index using, in the determination of the Issuer, the same or a substantially similar formula for and method of calculation as used in the calculation of the Index,

then the Index will be deemed to be the index so calculated and announced by the Successor Index Compiler or that successor index, as the case may be.

4.2 Modification and Cessation of Calculation of Index

If:

- (a) on or prior to the Valuation Date the Index Compiler or (if applicable) the Successor Index Compiler makes a material change in the formula for or the method of calculating the Index or in any other way materially modifies the Index (other than a modification prescribed in that formula or method to maintain the Index in the event of changes in constituent securities, contracts, commodities or currencies and other routine events); or
- (b) on the Valuation Date the Index Compiler or (if applicable) the Successor Index Compiler fails to calculate and publish the Index (other than as a result of a Market Disruption Event),

then the Issuer shall determine the Closing Level using, in lieu of a published level for the Index, the level for the Index as at the Valuation Date as determined by the Issuer in accordance with the formula for and method of calculating the Index last in effect prior to that change or failure, but using only those securities, contracts, commodities or currencies that comprised the Index immediately prior to that change or failure (other than those securities, contracts, commodities or currencies that have since ceased to be listed on the relevant exchange).

5. Illegality and Impracticability

The Issuer is entitled to terminate the Warrants if it determines in good faith and in a commercially reasonable manner that, for reasons beyond its control, it has become or it will become illegal or impracticable:

- (a) for it to perform its obligations under the Warrants, or for the Guarantor to perform its obligations under the Guarantee, in whole or in part as a result of:
 - (i) the adoption of, or any change in, any relevant law or regulation (including any tax law); or
 - (ii) the promulgation of, or any change in, the interpretation by any court, tribunal, governmental, administrative, legislative, regulatory or judicial authority or power with competent jurisdiction of any relevant law or regulation (including any tax law),

(each of (i) and (ii), a “**Change in Law Event**”); or

- (b) for it or any of its affiliates to maintain the Issuer's hedging arrangements with respect to the Warrants due to a Change in Law Event.

Upon the occurrence of a Change in Law Event, the Issuer will, if and to the extent permitted by the applicable law or regulation, pay to each Holder a cash amount that the Issuer determines in good faith and in a commercially reasonable manner to be the fair market value in respect of each Warrant held by such Holder immediately prior to such termination (ignoring such illegality or impracticability) less the cost to the Issuer of unwinding any related hedging arrangement as determined by the Issuer in its sole and absolute discretion. Payment will be made to each Holder in such manner as shall be notified to the Holder in accordance with General Condition 7.

Sponsor

BNP Paribas Securities (Asia) Limited

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China

PART D — PRODUCT CONDITIONS OF CASH SETTLED COMMODITY WARRANTS

The relevant Product Conditions will, together with the General Conditions and the supplemental provisions contained in the relevant Launch Announcement and Supplemental Listing Document and subject to completion and amendment, be endorsed on the Global Certificate. The relevant Launch Announcement and Supplemental Listing Document in relation to the issue of any series of Warrants may specify additional terms and conditions which shall, to the extent so specified or to the extent inconsistent with the applicable Product Conditions, replace or modify the applicable Product Conditions for the purpose of such series of Warrants. Capitalised terms used in the applicable Product Conditions and not otherwise defined therein shall have the meaning given to them in the relevant Launch Announcement and Supplemental Listing Document.

1. Definitions

For the purposes of these Product Conditions:

“**Business Day**” means a day (excluding Saturdays) on which the Stock Exchange is scheduled to open for dealings in Hong Kong and banks are open for business in Hong Kong;

“**Cash Settlement Amount**” means, for every Board Lot, an amount calculated by the Issuer as follows (and, if appropriate, converted into the Settlement Currency at the Exchange Rate):

(a) in the case of a series of call Warrants:

$$\frac{\text{Entitlement} \times (\text{Closing Price} - \text{Strike Price}) \times \text{one Board Lot}}{\text{Number of Warrant(s) per Entitlement}}$$

(b) in the case of a series of put Warrants:

$$\frac{\text{Entitlement} \times (\text{Strike Price} - \text{Closing Price}) \times \text{one Board Lot}}{\text{Number of Warrant(s) per Entitlement}}$$

“**CCASS Settlement Day**” has the meaning ascribed to the term “Settlement Day” in the CCASS Rules, subject to such modification and amendment prescribed by HKSCC from time to time;

“**Closing Price**” has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document, subject to any adjustment in accordance with Product Condition 4;

“**Commodity**” means the commodity specified as such in the relevant Launch Announcement and Supplemental Listing Document;

“**Commodity Business Day**” has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document;

“**Designated Bank Account**” means the relevant bank account designated by each Holder;

“**Exchange Rate**” means the rate specified as such in the relevant Launch Announcement and Supplemental Listing Document, subject to any adjustment in accordance with Product Condition 4;

“**Exercise Expenses**” means any charges or expenses including any taxes or duties which are incurred in respect of the exercise of the Warrants;

“**General Conditions**” means the general terms and conditions set out in Appendix 1 of the Base Listing Document;

“**Listing Date**” means the date specified as such in the relevant Launch Announcement and Supplemental Listing Document;

“**Market Disruption Event**” means:

- (a) the occurrence or existence, on a Valuation Day of any suspension of or material limitation imposed on, trading in the Commodity or any warrants, options contracts or futures contracts relating to the Commodity on any Related Exchange;
- (b) a limitation or closure of any Related Exchange or the Stock Exchange due to any unforeseen circumstances;
- (c) the disappearance of, or disappearance of trading in, the Commodity;
- (d) a Price Source Disruption Event; or
- (e) any circumstances beyond the control of the Issuer in which the Closing Price or the Exchange Rate cannot be determined by the Issuer in the manner set out in these Product Conditions or in such other manner as the Issuer considers appropriate at such time after taking into account all the relevant circumstances;

“**Price Source**” means the publication (or such other origin of price source reference) (if any) specified as such in the relevant Launch Announcement and Supplemental Listing Document;

“**Price Source Disruption Event**” means:

- (a) the failure of the Price Source to announce or publish any relevant level, value or price in relation to the Commodity (or the information necessary for determining the Closing Price); or
- (b) the temporary or permanent discontinuance or unavailability of the Price Source;

“**Product Conditions**” means these product terms and conditions;

“**Relevant Currency**” means the currency specified as such in the relevant Launch Announcement and Supplemental Listing Document;

“**Related Exchange**” means any exchange or quotation system in a major international market (including but not limited to New York, Chicago, London, Australia and Frankfurt) on which options contracts or futures contracts or other derivatives contracts relating to the Commodity is traded, as determined by the Issuer;

“**Settlement Currency**” means the currency specified as such in the relevant Launch Announcement and Supplemental Listing Document;

“**Settlement Date**” means the third CCASS Settlement Day after the Valuation Date;

“**Settlement Disruption Event**” means an event beyond the control of the Issuer as a result of which the Issuer is unable to procure payment of the Cash Settlement Amount electronically through CCASS to the Designated Bank Account;

“**Strike Price**” means the price specified as such in the relevant Launch Announcement and Supplemental Listing Document;

“**Unit**” means the unit specified as such in the relevant Launch Announcement and Supplemental Listing Document; and

“**Valuation Date**” means the date specified as such in the relevant Launch Announcement and Supplemental Listing Document, provided that if the Issuer determines, in its sole discretion, that on the Valuation Date a Market Disruption Event has occurred, then the Issuer will determine the Closing Price on the basis of its good faith estimate of the Closing Price that would have prevailed on that day but for the occurrence of the Market Disruption Event.

Other capitalised terms shall, unless otherwise defined herein, have the meaning ascribed to them in the Base Listing Document, the General Conditions, the relevant Launch Announcement and Supplemental Listing Document or the Global Certificate.

2. Warrant Rights and Exercise Expenses

2.1 Warrant Rights

Every Board Lot gives each Holder, upon due exercise and compliance with Product Condition 3, the right to receive payment of the Cash Settlement Amount, if any.

2.2 Exercise Expenses

On exercise of the Warrants, Holders will be obliged to give an irrevocable authorisation to the Issuer to deduct all Exercise Expenses in accordance with Product Condition 3.

3. Exercise of Warrants

(a) Exercise of Warrants in Board Lots

Warrants may only be exercised in Board Lots or integral multiples thereof.

(b) Automatic Exercise

The Warrants are exercisable only on the Expiry Date. Any Warrant will automatically be exercised if the Cash Settlement Amount on the Expiry Date is greater than zero (without notice being given to the Holders). The Holders will not be required to deliver any exercise notice and the Issuer or its agent will pay to the Holders the Cash Settlement Amount (net of any Exercise Expenses)(if any) in accordance with Product Condition 3(d).

Any Warrant which has not been automatically exercised in accordance with this Product Condition 3(b) shall expire immediately without value thereafter and all rights of the Holder and obligations of the Issuer with respect to such Warrant shall cease.

(c) Cancellation

The Issuer will, with effect from the first Business Day following the Expiry Date, remove from the Register the name of the person in respect of the Warrants which:

(i) are the subject of an exercise pursuant to automatic exercise in accordance with these Product Conditions; or

(ii) have expired worthless,

and thereby cancel the relevant Warrants.

(d) Cash Settlement

Subject to automatic exercise of Warrants in accordance with these Product Conditions, the Issuer will make a payment, in respect of every Board Lot, to the relevant Holder equal to the Cash Settlement Amount (net of any Exercise Expenses). If the Cash Settlement Amount is equal to or less than the Exercise Expenses, no amount is payable by the Issuer.

The Cash Settlement Amount (net of any Exercise Expenses) will be despatched no later than the Settlement Date by crediting that amount, in accordance with the CCASS Rules, to the Designated Bank Account. If as a result of a Settlement Disruption Event, it is not possible for the Issuer to procure payment electronically through CCASS by crediting the relevant Designated Bank Account of the Holder on the original Settlement Date, the Issuer shall use its reasonable endeavours to procure payment electronically through CCASS by crediting the relevant Designated Bank Account of the Holder as soon as reasonably practicable after the original Settlement Date. The Issuer will not be liable to the Holder for any interest in respect of the amount due or any loss or damage that such Holder may suffer as a result of the existence of a Settlement Disruption Event.

4. Adjustments

4.1 Market Disruption Events

Without limiting Product Condition 3(d), if a Market Disruption Event occurs, the Issuer has the right to adjust the Price Source, the Closing Price, the Exchange Rate and/or any other relevant variables accordingly. The Issuer shall as soon as reasonably practicable under such circumstances notify the Holders in accordance with General Condition 7 if it determines that a Market Disruption Event has occurred.

4.2 Foreign Currency Controls

If exchange control or other laws, regulations, directives or guidelines are imposed by any central banking authority or other governmental or regulatory body which:

(a) requires the Issuer to obtain permission from such authority or body to purchase the Settlement Currency;

(b) otherwise restricts the Issuer's ability to obtain the Settlement Currency; or

- (c) otherwise adversely regulates the purchase or holding of the Settlement Currency such that additional costs are imposed in obtaining the Settlement Currency which would not be imposed in the absence of such laws, regulations, directives or guidelines, or if the cost of obtaining the Settlement Currency at the Exchange Rate is determined by the Issuer to be excessive because of a disruption in the foreign exchange market relating to the Settlement Currency,

then, upon notice from the Issuer to Holders in accordance with General Condition 7 to such effect, Holders who have exercised their Warrants in accordance with Product Condition 3 shall receive, at the option of the Issuer, in lieu of the Settlement Currency, an amount equal to the Cash Settlement Amount in any other currency as determined by the Issuer.

5. Illegality or Impracticability

The Issuer is entitled to terminate the Warrants if it determines in good faith and in a commercially reasonable manner that, for reasons beyond its control, it has become or it will become illegal or impracticable:

- (a) for it to perform its obligations under the Warrants, or for the Guarantor to perform its obligations under the Guarantee, in whole or in part as a result of:
 - (i) the adoption of, or any change in, any relevant law or regulation (including any tax law); or
 - (ii) the promulgation of, or any change in, the interpretation by any court, tribunal, governmental, administrative, legislative, regulatory or judicial authority or power with competent jurisdiction of any relevant law or regulation (including any tax law),(each of (i) and (ii), a “**Change in Law Event**”); or
- (b) for it or any of its affiliates to maintain the Issuer’s hedging arrangements with respect to the Warrants due to a Change in Law Event.

Upon the occurrence of a Change in Law Event, the Issuer will, if and to the extent permitted by the applicable law or regulation, pay to each Holder a cash amount that the Issuer determines in good faith and in a commercially reasonable manner to be the fair market value in respect of each Warrant held by such Holder immediately prior to such termination (ignoring such illegality or impracticability) less the cost to the Issuer of unwinding any related hedging arrangement as determined by the Issuer in its sole and absolute discretion. Payment will be made to each Holder in such manner as shall be notified to the Holder in accordance with General Condition 7.

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PART E — PRODUCT CONDITIONS OF CASH SETTLED COMMODITY FUTURES WARRANTS

The relevant Product Conditions will, together with the General Conditions and the supplemental provisions contained in the relevant Launch Announcement and Supplemental Listing Document and subject to completion and amendment, be endorsed on the Global Certificate. The relevant Launch Announcement and Supplemental Listing Document in relation to the issue of any series of Warrants may specify additional terms and conditions which shall, to the extent so specified or to the extent inconsistent with the applicable Product Conditions, replace or modify the applicable Product Conditions for the purpose of such series of Warrants. Capitalised terms used in the applicable Product Conditions and not otherwise defined therein shall have the meaning given to them in the relevant Launch Announcement and Supplemental Listing Document.

1. Definitions

For the purposes of these Product Conditions:

“**Business Day**” means a day (excluding Saturdays) on which the Stock Exchange is scheduled to open for dealings in Hong Kong and banks are open for business in Hong Kong;

“**Cash Settlement Amount**” means, for every Board Lot, an amount calculated by the Issuer as follows (and, if appropriate, converted into the Settlement Currency at the Exchange Rate):

(a) in the case of a series of call Warrants:

$$\frac{\text{Entitlement} \times (\text{Closing Price} - \text{Strike Price}) \times \text{one Board Lot}}{\text{Number of Warrant(s) per Entitlement}}$$

(b) in the case of a series of put Warrants:

$$\frac{\text{Entitlement} \times (\text{Strike Price} - \text{Closing Price}) \times \text{one Board Lot}}{\text{Number of Warrant(s) per Entitlement}}$$

“**CCASS Settlement Day**” has the meaning ascribed to the term “Settlement Day” in the CCASS Rules, subject to such modification and amendment prescribed by HKSCC from time to time;

“**Closing Price**” has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document, subject to any adjustment in accordance with Product Condition 4;

“**Commodity**” means the commodity specified as such in the relevant Launch Announcement and Supplemental Listing Document;

“**Commodity Futures**” means the commodity futures specified as such in the relevant Launch Announcement and Supplemental Listing Document;

“**Commodity Futures Trading Day**” means a day on which the Relevant Exchange is scheduled to open for trading;

“**Designated Bank Account**” means the relevant bank account designated by each Holder;

“**Exchange Rate**” means the rate specified as such in the relevant Launch Announcement and Supplemental Listing Document, subject to any adjustment in accordance with Product Condition 4;

“**Exercise Expenses**” means any charges or expenses including any taxes or duties which are incurred in respect of the exercise of the Warrants;

“**General Conditions**” means the general terms and conditions set out in Appendix 1 of the Base Listing Document;

“**Listing Date**” means the date specified as such in the relevant Launch Announcement and Supplemental Listing Document;

“**Market Disruption Event**” means:

- (a) the occurrence or existence, on the Valuation Date of:
 - (i) any suspension of or limitation imposed on trading:
 - (A) on the Relevant Exchange in the Commodity Futures or securities generally; or
 - (B) on any Related Exchange in any options contracts or futures contracts relating to the Commodity or the Commodity Futures, if, in any such case, such suspension or limitation is, in the determination of the Issuer, material; or
 - (ii) of any event that disrupts or impairs (as determined by the Issuer) the ability of market participants in general to effect transactions in, or obtain market values for, the Commodity Futures, options contracts or futures contracts on or relating to the Commodity or Commodity Futures on any Related Exchange; or
- (b) the failure of the Relevant Exchange to announce or publish any relevant level, value or price in relation to the Commodity Futures (or the information necessary for determining the Closing Price); or
- (c) a limitation or closure of the Relevant Exchange, any Related Exchange or the Stock Exchange due to any other unforeseen circumstances; or
- (d) the permanent discontinuation of trading in the Commodity Futures on the Relevant Exchange or the disappearance of, or disappearance of trading in, the Commodity Futures or the Commodity; or
- (e) any circumstances beyond the control of the Issuer in which the Closing Price or the Exchange Rate cannot be determined by the Issuer in the manner set out in these Product Conditions or in such other manner as the Issuer considers appropriate at such time after taking into account all the relevant circumstances; or
- (f) the occurrence of a material change in the content, composition or constitution of the Commodity Futures or the Commodity; or
- (g) the occurrence of a material change in the formula for or the method of calculating the relevant level, value or price in relation to the Commodity Futures.

“**Product Conditions**” means these product terms and conditions;

“**Relevant Currency**” means the currency specified as such in the relevant Launch Announcement and Supplemental Listing Document;

“**Related Exchange**” means any exchange or quotation system in a major international market on which options contracts or futures contracts or other derivatives contracts relating to the Commodity Futures is traded, as determined by the Issuer;

“**Relevant Exchange**” means the exchange specified as such in the relevant Launch Announcement and Supplemental Listing Document;

“**Settlement Currency**” means the currency specified as such in the relevant Launch Announcement and Supplemental Listing Document;

“**Settlement Date**” means the third CCASS Settlement Day after the Valuation Date;

“**Settlement Disruption Event**” means an event beyond the control of the Issuer as a result of which the Issuer is unable to procure payment of the Cash Settlement Amount electronically through CCASS to the Designated Bank Account;

“**Strike Price**” means the price specified as such in the relevant Launch Announcement and Supplemental Listing Document;

“**Unit**” means the unit specified as such in the relevant Launch Announcement and Supplemental Listing Document; and

“**Valuation Date**” means the date specified as such in the relevant Launch Announcement and Supplemental Listing Document, provided that if the Issuer determines, in its sole discretion, that on the Valuation Date a Market Disruption Event has occurred, then the Issuer will determine the Closing Price on the basis of its good faith estimate of the Closing Price that would have prevailed on that day but for the occurrence of the Market Disruption Event.

Other capitalised terms shall, unless otherwise defined herein, have the meaning ascribed to them in the Base Listing Document, the General Conditions, the relevant Launch Announcement and Supplemental Listing Document or the Global Certificate.

2. Warrant Rights and Exercise Expenses

2.1 Warrant Rights

Every Board Lot gives each Holder, upon due exercise and compliance with Product Condition 3, the right to receive payment of the Cash Settlement Amount, if any.

2.2 Exercise Expenses

On exercise of the Warrants, Holders will be obliged to give an irrevocable authorisation to the Issuer to deduct all Exercise Expenses in accordance with Product Condition 3.

3. Exercise of Warrants

(a) Exercise of Warrants in Board Lots

Warrants may only be exercised in Board Lots or integral multiples thereof.

(b) Automatic Exercise

The Warrants are exercisable only on the Expiry Date. Any Warrant will automatically be exercised if the Cash Settlement Amount on the Expiry Date is greater than zero (without notice being given to the Holders). The Holders will not be required to deliver any exercise notice and the Issuer or its agent will pay to the Holders the Cash Settlement Amount (net of any Exercise Expenses)(if any) in accordance with Product Condition 3(d).

Any Warrant which has not been automatically exercised in accordance with this Product Condition 3(b) shall expire immediately without value thereafter and all rights of the Holder and obligations of the Issuer with respect to such Warrant shall cease.

(c) Cancellation

The Issuer will, with effect from the first Business Day following the Expiry Date, remove from the Register the name of the person in respect of the Warrants which:

- (i) are the subject of an exercise pursuant to automatic exercise in accordance with these Product Conditions; or
- (ii) have expired worthless,

and thereby cancel the relevant Warrants.

(d) Cash Settlement

Subject to automatic exercise of Warrants in accordance with these Product Conditions, the Issuer will make a payment, in respect of every Board Lot, to the relevant Holder equal to the Cash Settlement Amount (net of any Exercise Expenses). If the Cash Settlement Amount is equal to or less than the Exercise Expenses, no amount is payable by the Issuer.

The Cash Settlement Amount (net of any Exercise Expenses) will be despatched no later than the Settlement Date by crediting that amount, in accordance with the CCASS Rules, to the Designated Bank Account. If as a result of a Settlement Disruption Event, it is not possible for the Issuer to procure payment electronically through CCASS by crediting the relevant Designated Bank Account of the Holder on the original Settlement Date, the Issuer shall use its reasonable endeavours to procure payment electronically through CCASS by crediting the relevant Designated Bank Account of the Holder as soon as reasonably practicable after the original Settlement Date. The Issuer will not be liable to the Holder for any interest in respect of the amount due or any loss or damage that such Holder may suffer as a result of the existence of a Settlement Disruption Event.

4. Adjustments

4.1 Market Disruption Events

Without limiting Product Condition 3(d), if a Market Disruption Event occurs, the Issuer has the right to adjust the Closing Price, the Exchange Rate and/or any other relevant variables accordingly. The Issuer shall as soon as reasonably practicable under such circumstances notify the Holders in accordance with General Condition 7 if it determines that a Market Disruption Event has occurred.

4.2 Foreign Currency Controls

If exchange control or other laws, regulations, directives or guidelines are imposed by any central banking authority or other governmental or regulatory body which:

- (a) requires the Issuer to obtain permission from such authority or body to purchase the Settlement Currency;
- (b) otherwise restricts the Issuer's ability to obtain the Settlement Currency; or
- (c) otherwise adversely regulates the purchase or holding of the Settlement Currency such that additional costs are imposed in obtaining the Settlement Currency which would not be imposed in the absence of such laws, regulations, directives or guidelines, or if the cost of obtaining the Settlement Currency at the Exchange Rate is determined by the Issuer to be excessive because of a disruption in the foreign exchange market relating to the Settlement Currency,

then, upon notice from the Issuer to Holders in accordance with General Condition 7 to such effect, Holders who have exercised their Warrants in accordance with Product Condition 3 shall receive, at the option of the Issuer, in lieu of the Settlement Currency, an amount equal to the Cash Settlement Amount in any other currency as determined by the Issuer.

5. Illegality or Impracticability

The Issuer is entitled to terminate the Warrants if it determines in good faith and in a commercially reasonable manner that, for reasons beyond its control, it has become or it will become illegal or impracticable:

- (a) for it to perform its obligations under the Warrants, or for the Guarantor to perform its obligations under the Guarantee, in whole or in part as a result of:
 - (i) the adoption of, or any change in, any relevant law or regulation (including any tax law); or
 - (ii) the promulgation of, or any change in, the interpretation by any court, tribunal, governmental, administrative, legislative, regulatory or judicial authority or power with competent jurisdiction of any relevant law or regulation (including any tax law),(each of (i) and (ii), a “**Change in Law Event**”); or
- (b) for it or any of its affiliates to maintain the Issuer's hedging arrangements with respect to the Warrants due to a Change in Law Event.

Upon the occurrence of a Change in Law Event, the Issuer will, if and to the extent permitted by the applicable law or regulation, pay to each Holder a cash amount that the Issuer determines in good faith and in a commercially reasonable manner to be the fair market value in respect of each Warrant held by such Holder immediately prior to such termination (ignoring such illegality or impracticability) less the cost to the Issuer of unwinding any related hedging arrangement as determined by the Issuer in its sole and absolute discretion. Payment will be made to each Holder in such manner as shall be notified to the Holder in accordance with General Condition 7.

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PART F — PRODUCT CONDITIONS OF CASH SETTLED CURRENCY WARRANTS

The relevant Product Conditions will, together with the General Conditions and the supplemental provisions contained in the relevant Launch Announcement and Supplemental Listing Document and subject to completion and amendment, be endorsed on the Global Certificate. The relevant Launch Announcement and Supplemental Listing Document in relation to the issue of any series of Warrants may specify additional terms and conditions which shall, to the extent so specified or to the extent inconsistent with the applicable Product Conditions, replace or modify the applicable Product Conditions for the purpose of such series of Warrants. Capitalised terms used in the applicable Product Conditions and not otherwise defined therein shall have the meaning given to them in the relevant Launch Announcement and Supplemental Listing Document.

1. Definitions

For the purposes of these Product Conditions:

“**Business Day**” means a day (excluding Saturdays) on which the Stock Exchange is scheduled to open for dealings in Hong Kong and banks are open for business and for carrying on foreign exchange transactions in Hong Kong;

“**Cash Settlement Amount**” means, for every Board Lot, an amount calculated by the Issuer as follows (and if applicable, converted into the Settlement Currency at the Settlement Exchange Rate):

(a) in the case of a series of call Warrants:

$$(\text{Spot Rate} - \text{Strike Rate}) \times \text{Currency Amount}$$

(b) in the case of a series of put Warrants:

$$(\text{Strike Rate} - \text{Spot Rate}) \times \text{Currency Amount}$$

“**CCASS Settlement Day**” has the meaning ascribed to the term “Settlement Day” in the CCASS Rules, subject to such modification and amendment prescribed by HKSCC from time to time;

“**Currency Amount**” has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document;

“**Currency Pair**” has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document;

“**Designated Bank Account**” means the relevant bank account designated by each Holder;

“**Exercise Expenses**” means any charges or expenses including any taxes or duties which are incurred in respect of the exercise of the Warrants;

“**General Conditions**” means the general terms and conditions set out in Appendix 1 of the Base Listing Document;

“**Listing Date**” means the date specified as such in the relevant Launch Announcement and Supplemental Listing Document;

“Market Disruption Event” means:

- (a) the occurrence, or existence, on the Valuation Date, of any circumstances beyond the control of the Issuer in which the Spot Rate or, if applicable, the Settlement Exchange Rate cannot be determined by the Issuer in the manner set out in these Product Conditions or in such other manner as the Issuer considers appropriate at such time after taking into account all the relevant circumstances; and/or
- (b) the imposition of any exchange controls in respect of any currencies involved in determining the Cash Settlement Amount;

“Product Conditions” means these product terms and conditions;

“Settlement Currency” means the currency specified as such in the relevant Launch Announcement and Supplemental Listing Document;

“Settlement Date” means the third CCASS Settlement Day after the Valuation Date;

“Settlement Disruption Event” means an event beyond the control of the Issuer as a result of which the Issuer is unable to procure payment of the Cash Settlement Amount electronically through CCASS to the Designated Bank Account;

“Spot Rate” has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document, subject to any adjustment in accordance with Product Condition 4;

“Settlement Exchange Rate” means the rate specified as such in the relevant Launch Announcement and Supplemental Listing Document, subject to any adjustment in accordance with Product Condition 4;

“Strike Rate” means the rate specified as such in the relevant Launch Announcement and Supplemental Listing Document; and

“Valuation Date” means the date specified as such in the relevant Launch Announcement and Supplemental Listing Document, provided that if the Issuer determines, in its sole discretion, that on the Valuation Date a Market Disruption Event has occurred, then the Issuer will determine the Spot Rate or, if applicable, the Settlement Exchange Rate or any other variables on the basis of its good faith estimate of the Spot Rate or, if applicable, the Settlement Exchange Rate or any other variables that would have prevailed on that day but for the occurrence of the Market Disruption Event.

Other capitalised terms shall, unless otherwise defined herein, have the meaning ascribed to them in the Base Listing Document, the General Conditions, the relevant Launch Announcement and Supplemental Listing Document or the Global Certificate.

2. Warrant Rights and Exercise Expenses

2.1 Warrant Rights

Every Board Lot gives each Holder, upon due exercise and compliance with Product Condition 3, the right to receive payment of the Cash Settlement Amount, if any.

2.2 Exercise Expenses

On exercise of the Warrants, Holders will be obliged to give an irrevocable authorisation to the Issuer to deduct all Exercise Expenses in accordance with Product Condition 3.

3. Exercise of Warrants

(a) Exercise of Warrants in Board Lots

Warrants may only be exercised in Board Lots or integral multiples thereof.

(b) Automatic Exercise

The Warrants are exercisable only on the Expiry Date. Any Warrant will automatically be exercised if the Cash Settlement Amount on the Expiry Date is greater than zero (without notice being given to the Holders). The Holders will not be required to deliver any exercise notice and the Issuer or its agent will pay to the Holders the Cash Settlement Amount (net of any Exercise Expenses)(if any) in accordance with Product Condition 3(d).

Any Warrant which has not been automatically exercised in accordance with this Product Condition 3(b) shall expire immediately without value thereafter and all rights of the Holder and obligations of the Issuer with respect to such Warrant shall cease.

(c) Cancellation

The Issuer will, with effect from the first Business Day following the Expiry Date, remove from the Register the name of the person in respect of the Warrants which:

- (i) are the subject of an exercise pursuant to automatic exercise in accordance with these Product Conditions; or
- (ii) have expired worthless,

and thereby cancel the relevant Warrants.

(d) Cash Settlement

Subject to automatic exercise of Warrants in accordance with these Product Conditions, the Issuer will make a payment, in respect of every Board Lot, to the relevant Holder equal to the Cash Settlement Amount (net of any Exercise Expenses). If the Cash Settlement Amount is equal to or less than the Exercise Expenses, no amount is payable by the Issuer.

The Cash Settlement Amount (net of any Exercise Expenses) will be despatched no later than the Settlement Date by crediting that amount, in accordance with the CCASS Rules, to the Designated Bank Account.

If as a result of a Settlement Disruption Event, it is not possible for the Issuer to procure payment electronically through CCASS by crediting the relevant Designated Bank Account of the Holder on the original Settlement Date, the Issuer shall use its reasonable endeavours to procure payment electronically through CCASS by crediting the relevant Designated Bank Account of

the Holder as soon as reasonably practicable after the original Settlement Date. The Issuer will not be liable to the Holder for any interest in respect of the amount due or any loss or damage that such Holder may suffer as a result of the existence of a Settlement Disruption Event.

4. Adjustments

4.1 Market Disruption Events

Without limiting Product Condition 3(d), if a Market Disruption Event occurs, the Issuer has the right to adjust the Spot Rate or, if applicable, the Settlement Exchange Rate and/or any other relevant variables accordingly. The Issuer shall as soon as reasonably practicable under such circumstances notify the Holders in accordance with General Condition 7 if it determines that a Market Disruption Event has occurred.

4.2 Foreign Currency Controls

If exchange control or other laws, regulations, directives or guidelines are imposed by any central banking authority or other governmental or regulatory body which:

- (a) requires the Issuer to obtain permission from such authority or body to purchase the Settlement Currency;
- (b) otherwise restricts the Issuer's ability to obtain the Settlement Currency; or
- (c) otherwise adversely regulates the purchase or holding of the Settlement Currency such that additional costs are imposed in obtaining the Settlement Currency which would not be imposed in the absence of such laws, regulations, directives or guidelines, or if the cost of obtaining the Settlement Currency at the Settlement Exchange Rate is determined by the Issuer to be excessive because of a disruption in the foreign exchange market relating to the Settlement Currency,

then, upon notice from the Issuer to Holders in accordance with General Condition 7 to such effect, Holders who have exercised their Warrants in accordance with Product Condition 3 shall receive, at the option of the Issuer, in lieu of the Settlement Currency, an amount equal to the Cash Settlement Amount in any other currency as determined by the Issuer.

5. Illegality and Impracticability

The Issuer is entitled to terminate the Warrants if it determines in good faith and in a commercially reasonable manner that, for reasons beyond its control, it has become or it will become illegal or impracticable:

- (a) for it to perform its obligations under the Warrants, or for the Guarantor to perform its obligations under the Guarantee, in whole or in part as a result of:
 - (i) the adoption of, or any change in, any relevant law or regulation (including any tax law);
or
 - (ii) the promulgation of, or any change in, the interpretation by any court, tribunal, governmental, administrative, legislative, regulatory or judicial authority or power with competent jurisdiction of any relevant law or regulation (including any tax law),

(each of (i) and (ii), a “**Change in Law Event**”); or

- (b) for it or any of its affiliates to maintain the Issuer’s hedging arrangements with respect to the Warrants due to a Change in Law Event.

Upon the occurrence of a Change in Law Event, the Issuer will, if and to the extent permitted by the applicable law or regulation, pay to each Holder a cash amount that the Issuer determines in good faith and in a commercially reasonable manner to be the fair market value in respect of each Warrant held by such Holder immediately prior to such termination (ignoring such illegality or impracticability) less the cost to the Issuer of unwinding any related hedging arrangement as determined by the Issuer in its sole and absolute discretion. Payment will be made to each Holder in such manner as shall be notified to the Holder in accordance with General Condition 7.

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APPENDIX 3 — PRODUCT CONDITIONS OF INLINE WARRANTS

The following pages set out the Product Conditions in respect of different types of Inline Warrants.

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PART A — PRODUCT CONDITIONS OF CASH SETTLED INLINE WARRANTS OVER SINGLE EQUITIES

These Product Conditions will, together with the General Conditions and the supplemental provisions contained in the relevant Launch Announcement and Supplemental Listing Document and subject to completion and amendment, be endorsed on the Global Certificate. The relevant Launch Announcement and Supplemental Listing Document in relation to the issue of any series of Inline Warrants may specify additional terms and conditions which shall, to the extent so specified or to the extent inconsistent with these Product Conditions, replace or modify these Product Conditions for the purpose of such series of Inline Warrants. Capitalised terms used in these Product Conditions and not otherwise defined herein shall have the meaning given to them in the relevant Launch Announcement and Supplemental Listing Document.

1. Definitions

For the purposes of these Product Conditions:

“**Average Price**” means the arithmetic mean of the closing price of one Share, as derived from the Daily Quotation Sheet of the Stock Exchange, subject to any adjustment to such closing prices as may be necessary to reflect any event as contemplated in Product Condition 4 such as capitalisation, rights issue, distribution or the like in respect of each Valuation Date;

“**Business Day**” means a day (excluding Saturdays) on which the Stock Exchange is scheduled to open for dealings in Hong Kong and banks are open for business in Hong Kong;

“**Cash Settlement Amount**” means, in respect of every Board Lot, an amount in the Settlement Currency calculated by the Issuer as follows:

(a) if the Average Price is at or below the Upper Strike Price and at or above the Lower Strike Price:

Maximum Payoff Amount per Inline Warrant x one Board Lot

(b) if the Average Price is above the Upper Strike Price or below the Lower Strike Price:

Minimum Payoff Amount per Inline Warrant x one Board Lot

“**CCASS Settlement Day**” has the meaning ascribed to the term “Settlement Day” in the CCASS Rules, subject to such modification and amendment prescribed by HKSCC from time to time;

“**Company**” means the company specified as such in the relevant Launch Announcement and Supplemental Listing Document;

“**Designated Bank Account**” means the relevant bank account designated by each Holder;

“**Exercise Expenses**” means any charges or expenses including any taxes or duties which are incurred in respect of the exercise of the Inline Warrants;

“**General Conditions**” means the general terms and conditions set out in Appendix 1 of the Base Listing Document;

“**Listing Date**” means the date specified as such in the relevant Launch Announcement and Supplemental Listing Document;

“**Lower Strike Price**” has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document, subject to any adjustment in accordance with Product Condition 4;

“**Market Disruption Event**” means:

- (a) the occurrence or existence on any Valuation Date during the one-half hour period that ends at the close of trading of any suspension of or limitation imposed on trading (by reason of movements in price exceeding limits permitted by the Stock Exchange or otherwise) on the Stock Exchange in (i) the Shares; or (ii) any options or futures contracts relating to the Shares if, in any such case, such suspension or limitation is, in the determination of the Issuer, material;
- (b) the issuance of the tropical cyclone warning signal number 8 or above or the issuance of a “BLACK” rainstorm signal on any day which either (i) results in the Stock Exchange being closed for trading for the entire day; or (ii) results in the Stock Exchange being closed prior to its regular time for close of trading for the relevant day (for the avoidance of doubt, in the case when the Stock Exchange is scheduled to open for the morning trading session only, closed prior to its regular time for close of trading for the morning session), PROVIDED THAT there shall be no Market Disruption Event solely by reason of the Stock Exchange opening for trading later than its regular time for opening of trading on any day as a result of the tropical cyclone warning signal number 8 or above or the “BLACK” rainstorm signal having been issued; or
- (c) a limitation or closure of the Stock Exchange due to any unforeseen circumstances;

“**Maximum Payoff Amount per Inline Warrant**” has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document;

“**Minimum Payoff Amount per Inline Warrant**” has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document;

“**Product Conditions**” means these product terms and conditions;

“**Settlement Currency**” means the currency specified as such in the relevant Launch Announcement and Supplemental Listing Document;

“**Settlement Date**” means the third CCASS Settlement Day after the later of: (i) the Expiry Date; and (ii) the day on which the Average Price is determined in accordance with the Conditions;

“**Settlement Disruption Event**” means an event beyond the control of the Issuer as a result of which the Issuer is unable to procure payment of the Cash Settlement Amount electronically through CCASS to the Designated Bank Account;

“**Share**” means the share of the Company specified as such in the relevant Launch Announcement and Supplemental Listing Document and “**Shares**” shall be construed accordingly;

“**Upper Strike Price**” has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document, subject to any adjustment in accordance with Product Condition 4; and

“**Valuation Date**” means each of the five Business Days immediately preceding the Expiry Date, provided that if the Issuer determines, in its sole discretion, that a Market Disruption Event has occurred on any Valuation Date, then that Valuation Date shall be postponed until the first succeeding Business Day on which there is no Market Disruption Event irrespective of whether that postponed Valuation Date would fall on a Business Day that is already or is deemed to be a Valuation Date. For

the avoidance of doubt, in the event that a Market Disruption Event has occurred and a Valuation Date is postponed as aforesaid, the closing price of the Shares on the first succeeding Business Day will be used more than once in determining the Average Price, so that in no event shall there be less than five closing prices used to determine the Average Price.

If the postponement of the Valuation Date as aforesaid would result in the Valuation Date falling on or after the Expiry Date, then:

- (a) the Business Day immediately preceding the Expiry Date (the “**Last Valuation Date**”) shall be deemed to be the Valuation Date notwithstanding the Market Disruption Event; and
- (b) the Issuer shall determine the closing price of the Shares on the basis of its good faith estimate of the price that would have prevailed on the Last Valuation Date but for the Market Disruption Event.

Other capitalised terms shall, unless otherwise defined herein, have the meaning ascribed to them in the Base Listing Document, the General Conditions, the relevant Launch Announcement and Supplemental Listing Document or the Global Certificate.

2. Inline Warrant Rights and Exercise Expenses

2.1 Inline Warrant Rights

Every Board Lot gives each Holder, upon due exercise and compliance with Product Condition 3, the right to receive payment of the Cash Settlement Amount.

2.2 Exercise Expenses

On exercise of the Inline Warrants, Holders will be obliged to give an irrevocable authorisation to the Issuer to deduct all Exercise Expenses in accordance with Product Condition 3.

3. Exercise of Inline Warrants

(a) Exercise of Inline Warrants in Board Lots

Inline Warrants may only be exercised in Board Lots or integral multiples thereof.

(b) Automatic Exercise

The Inline Warrants are exercisable only on the Expiry Date. Any Inline Warrant will automatically be exercised on the Expiry Date (without notice being given to the Holders). The Holders will not be required to deliver any exercise notice and the Issuer or its agent will pay to the Holders the Cash Settlement Amount (net of any Exercise Expenses) in accordance with Product Condition 3(d).

(c) Cancellation

The Issuer will, with effect from the first Business Day following the Expiry Date, remove from the Register the name of the person in respect of the Inline Warrants which are the subject of an exercise pursuant to automatic exercise in accordance with these Product Conditions and thereby cancel the relevant Inline Warrants.

(d) *Cash Settlement*

Subject to automatic exercise of Inline Warrants in accordance with these Product Conditions, the Issuer will make a payment, in respect of every Board Lot, to the relevant Holder equal to the Cash Settlement Amount (net of any Exercise Expenses). If the Cash Settlement Amount is equal to or less than the Exercise Expenses, no amount is payable by the Issuer.

The Cash Settlement Amount (net of any Exercise Expenses) will be despatched no later than the Settlement Date by crediting that amount, in accordance with the CCASS Rules, to the Designated Bank Account.

If, as a result of a Settlement Disruption Event, it is not possible for the Issuer to procure payment electronically through CCASS by crediting the relevant Designated Bank Account of the Holder on the original Settlement Date, the Issuer shall use its reasonable endeavours to procure payment electronically through CCASS by crediting the relevant Designated Bank Account of the Holder as soon as reasonably practicable after the original Settlement Date. The Issuer will not be liable to the Holder for any interest in respect of the amount due or any loss or damage that such Holder may suffer as a result of the existence of a Settlement Disruption Event.

4. Adjustments

4.1 *Rights Issues*

If and whenever the Company shall, by way of Rights (as defined below), offer new Shares for subscription at a fixed subscription price to the holders of existing Shares pro rata to existing holdings (a “**Rights Offer**”), the Upper Strike Price and the Lower Strike Price (which shall be rounded to the nearest 0.001) will be adjusted to take effect on the Business Day on which trading in the Shares becomes ex-entitlement in accordance with the following formula:

$$\text{Adjusted Upper Strike Price} = \text{Upper Strike Price} \div \text{Adjustment Factor}$$

$$\text{Adjusted Lower Strike Price} = \text{Lower Strike Price} \div \text{Adjustment Factor}$$

Where:

$$\text{Adjustment Factor} = \frac{1 + M}{1 + (R/S) \times M}$$

S: Cum-Rights Share price determined by the closing price on the Stock Exchange on the last Business Day on which Shares are traded on a cum-Rights basis

R: Subscription price per Share as specified in the Rights Offer plus an amount equal to any dividends or other benefits foregone to exercise the Rights

M: Number of new Share(s) (whether a whole or a fraction) per existing Share each holder thereof is entitled to subscribe

Provided that no adjustment will be made if the Adjustment Factor is equal to or less than 1.

For the purposes of these Product Conditions:

“**Rights**” means the right(s) attached to each existing Share or needed to acquire one new Share (as the case may be) which are given to the holders of existing Shares to subscribe at a fixed subscription price for new Shares pursuant to the Rights Offer (whether by the exercise of one Right, a part of a Right or an aggregate number of Rights).

For the avoidance of doubt, the entitlement of the Inline Warrants is always 1 Share and no adjustment will be made to the entitlement.

4.2 Bonus Issues

If and whenever the Company shall make an issue of Shares credited as fully paid to the holders of Shares generally by way of capitalisation of profits or reserves (other than pursuant to a scrip dividend or similar scheme for the time being operated by the Company or otherwise in lieu of a cash dividend and without any payment or other consideration being made or given by such holders) (a “**Bonus Issue**”) the Upper Strike Price and the Lower Strike Price (which shall be rounded to the nearest 0.001) will be adjusted on the Business Day on which trading in the Shares becomes ex-entitlement in accordance with the following formula:

$$\text{Adjusted Upper Strike Price} = \text{Upper Strike Price} \div \text{Adjustment Factor}$$

$$\text{Adjusted Lower Strike Price} = \text{Lower Strike Price} \div \text{Adjustment Factor}$$

Where:

$$\text{Adjustment Factor} = 1 + N$$

N: Number of additional Shares (whether a whole or a fraction) received by a holder of existing Shares for each Share held prior to the Bonus Issue

For the avoidance of doubt, the entitlement of the Inline Warrants is always 1 Share and no adjustment will be made to the entitlement.

4.3 Share Splits or Consolidations

If and whenever the Company shall subdivide its Shares or any class of its outstanding share capital comprised of the Shares into a greater number of shares (a “**Subdivision**”) or consolidate the Shares or any class of its outstanding share capital comprised of the Shares into a smaller number of shares (a “**Consolidation**”), then:

- (i) in the case of a Subdivision, the Upper Strike Price and the Lower Strike Price (which shall be rounded to the nearest 0.001) will be decreased in the same ratio as the Subdivision; and
- (ii) in the case of a Consolidation, the Upper Strike Price and the Lower Strike Price (which shall be rounded to the nearest 0.001) will be increased in the same ratio as the Consolidation,

in each case on the day on which the Subdivision or Consolidation (as the case may be) shall have taken effect.

For the avoidance of doubt, the entitlement of the Inline Warrants is always 1 Share and no adjustment will be made to the entitlement.

4.4 Merger or Consolidation

If it is announced that the Company is to or may merge or consolidate with or into any other corporation (including becoming, by agreement or otherwise, a subsidiary of any corporation or controlled by any person or corporation) (except where the Company is the surviving corporation in a merger) or that it is to or may sell or transfer all or substantially all of its assets, the rights attaching to the Inline Warrants may in the absolute discretion of the Issuer be amended no later than the Business Day preceding the consummation of such merger, consolidation, sale or transfer (each a “**Restructuring Event**”) (as determined by the Issuer in its absolute discretion) so that the interests of the Holders generally are not materially prejudiced as a consequence of such Restructuring Event (without considering the individual circumstances of any Holder or the tax or other consequences that may result in any particular jurisdiction).

For the avoidance of doubt, the entitlement of the Inline Warrants is always 1 Share and no adjustment will be made to the entitlement.

4.5 Cash Distribution

No adjustment will be made for an ordinary cash dividend (whether or not it is offered with a scrip alternative) (“**Ordinary Dividend**”). For any other forms of cash distribution (“**Cash Distribution**”) announced by the Company, such as a cash bonus, special dividend or extraordinary dividend, no adjustment will be made unless the value of the Cash Distribution accounts for 2 per cent. or more of the Share’s closing price on the day of announcement by the Company.

If and whenever the Company shall make a Cash Distribution credited as fully paid to the holders of Shares generally, the Upper Strike Price and the Lower Strike Price (which shall be rounded to the nearest 0.001) shall be adjusted to take effect on the Business Day on which trading in the Shares becomes ex-entitlement in respect of the relevant Cash Distribution (“**Cash Distribution Adjustment Date**”) in accordance with the following formula:

$$\text{Adjusted Upper Strike Price} = \text{Upper Strike Price} \div \text{Adjustment Factor}$$

$$\text{Adjusted Lower Strike Price} = \text{Lower Strike Price} \div \text{Adjustment Factor}$$

Where

$$\text{Adjustment Factor} = \frac{S - OD}{S - OD - CD}$$

S: The closing price of the Share on the Stock Exchange on the Business Day immediately preceding the Cash Distribution Adjustment Date

CD: The Cash Distribution per Share

OD: The Ordinary Dividend per Share, provided that the date on which the Shares are traded on an ex-Ordinary Dividend basis is the Cash Distribution Adjustment Date. For the avoidance of doubt, the OD shall be zero if the date on which the Shares are traded on an ex-Ordinary Dividend basis is not the Cash Distribution Adjustment Date

For the avoidance of doubt, the entitlement of the Inline Warrants is always 1 Share and no adjustment will be made to the entitlement.

5. Liquidation

In the event of a liquidation or dissolution of the Company or the appointment of a liquidator, receiver or administrator or analogous person under Hong Kong law in respect of the whole or substantially the whole of its undertaking, property or assets, all unexercised Inline Warrants will lapse and shall cease to be valid for any purpose, in the case of voluntary liquidation, on the effective date of the relevant resolution and, in the case of an involuntary liquidation or dissolution, on the date of the relevant court order or, in the case of the appointment of a liquidator or receiver or administrator or analogous person under any applicable law in respect of the whole or substantially the whole of its undertaking, property or assets, on the date when such appointment is effective but subject (in any such case) to any contrary mandatory requirement of law.

6. Delisting

6.1 Adjustments following delisting

If at any time the Shares cease to be listed on the Stock Exchange, the Issuer shall give effect to these Product Conditions in such manner and make such adjustments to the rights attaching to the Inline Warrants as it shall, in its absolute discretion, consider appropriate to ensure, so far as it is reasonably able to do so, that the interests of the Holders generally are not materially prejudiced as a consequence of such delisting (without considering the individual circumstances of any Holder or the tax or other consequences that may result in any particular jurisdiction).

6.2 Listing on another exchange

Without prejudice to the generality of Product Condition 6.1, where the Shares are, or, upon the delisting, become, listed on any other stock exchange, these Product Conditions may, in the absolute discretion of the Issuer, be amended to the extent necessary to allow for the substitution of that other stock exchange in place of the Stock Exchange and the Issuer may, without the consent of the Holders, make such adjustments to the entitlements of Holders on exercise (including, if appropriate, by converting foreign currency amounts at prevailing market rates into the relevant currency) as may be appropriate in the circumstances.

7. Illegality or Impracticability

The Issuer is entitled to terminate the Inline Warrants if it determines in good faith and in a commercially reasonable manner that, for reasons beyond its control, it has become or it will become illegal or impracticable:

- (a) for it to perform its obligations under the Inline Warrants, or for the Guarantor to perform its obligations under the Guarantee, in whole or in part as a result of:
 - (i) the adoption of, or any change in, any relevant law or regulation (including any tax law); or
 - (ii) the promulgation of, or any change in, the interpretation by any court, tribunal, governmental, administrative, legislative, regulatory or judicial authority or power with competent jurisdiction of any relevant law or regulation (including any tax law),

(each of (i) and (ii), a “**Change in Law Event**”); or

- (b) for it or any of its affiliates to maintain the Issuer's hedging arrangements with respect to the Inline Warrants due to a Change in Law Event.

Upon the occurrence of a Change in Law Event, the Issuer will, if and to the extent permitted by the applicable law or regulation, pay to each Holder a cash amount that the Issuer determines in good faith and in a commercially reasonable manner to be the fair market value in respect of each Inline Warrant held by such Holder immediately prior to such termination (ignoring such illegality or impracticability) less the cost to the Issuer of unwinding any related hedging arrangement as determined by the Issuer in its sole and absolute discretion. Payment will be made to each Holder in such manner as shall be notified to the Holder in accordance with General Condition 7.

Sponsor

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PART B — PRODUCT CONDITIONS OF CASH SETTLED INDEX INLINE WARRANTS

These Product Conditions will, together with the General Conditions and the supplemental provisions contained in the relevant Launch Announcement and Supplemental Listing Document and subject to completion and amendment, be endorsed on the Global Certificate. The relevant Launch Announcement and Supplemental Listing Document in relation to the issue of any series of Inline Warrants may specify additional terms and conditions which shall, to the extent so specified or to the extent inconsistent with these Product Conditions, replace or modify these Product Conditions for the purpose of such series of Inline Warrants. Capitalised terms used in these Product Conditions and not otherwise defined herein shall have the meaning given to them in the relevant Launch Announcement and Supplemental Listing Document.

1. Definitions

For the purposes of these Product Conditions:

“**Business Day**” means a day (excluding Saturdays) on which the Stock Exchange is scheduled to open for dealings in Hong Kong and banks are open for business in Hong Kong;

“**Cash Settlement Amount**” means, for every Board Lot, an amount calculated by the Issuer as follows (and, if appropriate, either (i) converted (if applicable) into the Settlement Currency at the Exchange Rate or, as the case may be, (ii) converted into the Interim Currency at the First Exchange Rate and then (if applicable) converted into Settlement Currency at the Second Exchange Rate):

(a) if the Closing Level is at or below the Upper Strike Level and at or above the Lower Strike Level:

Maximum Payoff Amount per Inline Warrant x one Board Lot

(b) if the Closing Level is above the Upper Strike Level or below the Lower Strike Level:

Minimum Payoff Amount per Inline Warrant x one Board Lot

“**CCASS Settlement Day**” has the meaning ascribed to the term “Settlement Day” in the CCASS Rules, subject to such modification and amendment prescribed by HKSCC from time to time;

“**Closing Level**” has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document, subject to any adjustment in accordance with Product Condition 4;

“**Designated Bank Account**” means the relevant bank account designated by each Holder;

“**Exchange Rate**” means the rate specified as such in the relevant Launch Announcement and Supplemental Listing Document, subject to any adjustment in accordance with Product Condition 4;

“**Exercise Expenses**” means any charges or expenses including any taxes or duties which are incurred in respect of the exercise of the Inline Warrants;

“**First Exchange Rate**” means the rate specified as such in the relevant Launch Announcement and Supplemental Listing Document;

“**General Conditions**” means the general terms and conditions set out in Appendix 1 of the Base Listing Document;

“**Index**” means the index specified in the relevant Launch Announcement and Supplemental Listing Document;

“**Index Compiler**” has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document;

“**Index Exchange**” means the Stock Exchange or any other exchange as specified in the relevant Launch Announcement and Supplemental Listing Document;

“**Interim Currency**” has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document;

“**Listing Date**” means the date specified as such in the relevant Launch Announcement and Supplemental Listing Document;

“**Lower Strike Level**” has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document;

“**Market Disruption Event**” means:

- (a) the occurrence or existence, on the Valuation Date during the one-half hour period that ends at the close of trading on the Index Exchange, of any of:
 - (i) the suspension or material limitation of the trading of a material number of constituent securities that comprise the Index; or
 - (ii) the suspension or material limitation of the trading of options or futures contracts relating to the Index on any exchanges on which such contracts are traded; or
 - (iii) the imposition of any exchange controls in respect of any currencies involved in determining the Cash Settlement Amount.

For the purposes of this paragraph (a), (X) the limitation of the number of hours or days of trading will not constitute a Market Disruption Event if it results from an announced change in the regular business hours of any relevant exchange, and (Y) a limitation on trading imposed by reason of the movements in price exceeding the levels permitted by any relevant exchange will constitute a Market Disruption Event;

- (b) where the Index Exchange is the Stock Exchange, the issuance of the tropical cyclone warning signal number 8 or above or the issuance of a “BLACK” rainstorm signal on any day which either (i) results in the Stock Exchange being closed for trading for the entire day; or (ii) results in the Stock Exchange being closed prior to its regular time for close of trading for the relevant day (for the avoidance of doubt, in the case when the Stock Exchange is scheduled to open for the morning trading session only, closed prior to its regular time for close of trading for the morning session), PROVIDED THAT there shall be no Market Disruption Event solely by reason of the Stock Exchange opening for trading later than its regular time for opening of trading on any day as a result of the tropical cyclone warning signal number 8 or above or the “BLACK” rainstorm signal having been issued;
- (c) a limitation or closure of the Index Exchange due to any unforeseen circumstances; or

- (d) any circumstances beyond the control of the Issuer in which the Closing Level or, if applicable, the Exchange Rate, the First Exchange Rate or the Second Exchange Rate (as the case may be) cannot be determined by the Issuer in the manner set out in these Product Conditions or in such other manner as the Issuer considers appropriate at such time after taking into account all the relevant circumstances;

“**Maximum Payoff Amount per Inline Warrant**” has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document;

“**Minimum Payoff Amount per Inline Warrant**” has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document;

“**Product Conditions**” means these product terms and conditions;

“**Second Exchange Rate**” means the rate specified as such in the relevant Launch Announcement and Supplemental Listing Document;

“**Settlement Currency**” means the currency specified as such in the relevant Launch Announcement and Supplemental Listing Document;

“**Settlement Date**” means the third CCASS Settlement Day after the later of: (i) the Expiry Date; and (ii) the day on which the Closing Level is determined in accordance with the Conditions;

“**Settlement Disruption Event**” means an event beyond the control of the Issuer as a result of which the Issuer is unable to procure payment of the Cash Settlement Amount electronically through CCASS to the Designated Bank Account;

“**Upper Strike Level**” has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document; and

“**Valuation Date**” means the date specified in the Launch Announcement and Supplemental Listing Document, provided that if the Issuer determines, in its sole discretion, that a Market Disruption Event has occurred on the Valuation Date, then the Issuer shall determine the Closing Level on the basis of its good faith estimate of the Closing Level that would have prevailed on that day but for the occurrence of the Market Disruption Event, provided that the Issuer, if applicable, may, but shall not be obliged to, determine such Closing Level by having regard to the manner in which futures contracts relating to the Index are calculated.

Other capitalised terms shall, unless otherwise defined herein, have the meaning ascribed to them in the Base Listing Document, the General Conditions, the relevant Launch Announcement and Supplemental Listing Document or the Global Certificate.

2. Inline Warrant Rights and Exercise Expenses

2.1 Inline Warrant Rights

Every Board Lot gives each Holder, upon due exercise and compliance with Product Condition 3, the right to receive payment of the Cash Settlement Amount.

2.2 Exercise Expenses

On exercise of the Inline Warrants, Holders will be obliged to give an irrevocable authorisation to the Issuer to deduct all Exercise Expenses in accordance with Product Condition 3.

3. Exercise of Inline Warrants

(a) *Exercise of Inline Warrants in Board Lots*

Inline Warrants may only be exercised in Board Lots or integral multiples thereof.

(b) *Automatic Exercise*

The Inline Warrants are exercisable only on the Expiry Date. Any Inline Warrant will automatically be exercised on the Expiry Date (without notice being given to the Holders). The Holders will not be required to deliver any exercise notice and the Issuer or its agent will pay to the Holders the Cash Settlement Amount (net of any Exercise Expenses) in accordance with Product Condition 3(d).

(c) *Cancellation*

The Issuer will, with effect from the first Business Day following the Expiry Date, remove from the Register the name of the person in respect of the Inline Warrants which are the subject of an exercise pursuant to automatic exercise in accordance with these Product Conditions and thereby cancel the relevant Inline Warrants.

(d) *Cash Settlement*

Subject to automatic exercise of Inline Warrants in accordance with these Product Conditions, the Issuer will make a payment, in respect of every Board Lot, to the relevant Holder equal to the Cash Settlement Amount (net of any Exercise Expenses). If the Cash Settlement Amount is equal to or less than the Exercise Expenses, no amount is payable by the Issuer.

The Cash Settlement Amount (net of any Exercise Expenses) will be despatched no later than the Settlement Date by crediting that amount, in accordance with the CCASS Rules, to the Designated Bank Account.

If as a result of a Settlement Disruption Event, it is not possible for the Issuer to procure payment electronically through CCASS by crediting the relevant Designated Bank Account of the Holder on the original Settlement Date, the Issuer shall use its reasonable endeavours to procure payment electronically through CCASS by crediting the relevant Designated Bank Account of the Holder as soon as reasonably practicable after the original Settlement Date. The Issuer will not be liable to the Holder for any interest in respect of the amount due or any loss or damage that such Holder may suffer as a result of the existence of a Settlement Disruption Event.

4. Adjustments to the Index

4.1 *Successor Index Compiler Calculates and Reports Index*

If the Index is:

- (a) not calculated and announced by the Index Compiler but is calculated and published by a successor to the Index Compiler (the “**Successor Index Compiler**”) acceptable to the Issuer; or
- (b) replaced by a successor index using, in the determination of the Issuer, the same or a substantially similar formula for and method of calculation as used in the calculation of the Index,

then the Index will be deemed to be the index so calculated and announced by the Successor Index Compiler or that successor index, as the case may be.

4.2 Modification and Cessation of Calculation of Index

If:

- (a) on or prior to the Valuation Date the Index Compiler or (if applicable) the Successor Index Compiler makes a material change in the formula for or the method of calculating the Index or in any other way materially modifies the Index (other than a modification prescribed in that formula or method to maintain the Index in the event of changes in constituent securities, contracts, commodities or currencies and other routine events); or
- (b) on the Valuation Date the Index Compiler or (if applicable) the Successor Index Compiler fails to calculate and publish the Index (other than as a result of a Market Disruption Event),

then the Issuer shall determine the Closing Level using, in lieu of a published level for the Index, the level for the Index as at the Valuation Date as determined by the Issuer in accordance with the formula for and method of calculating the Index last in effect prior to that change or failure, but using only those securities, contracts, commodities or currencies that comprised the Index immediately prior to that change or failure (other than those securities, contracts, commodities or currencies that have since ceased to be listed on the relevant exchange).

5. Illegality and Impracticability

The Issuer is entitled to terminate the Inline Warrants if it determines in good faith and in a commercially reasonable manner that, for reasons beyond its control, it has become or it will become illegal or impracticable:

- (a) for it to perform its obligations under the Inline Warrants, or for the Guarantor to perform its obligations under the Guarantee, in whole or in part as a result of:
 - (i) the adoption of, or any change in, any relevant law or regulation (including any tax law); or
 - (ii) the promulgation of, or any change in, the interpretation by any court, tribunal, governmental, administrative, legislative, regulatory or judicial authority or power with competent jurisdiction of any relevant law or regulation (including any tax law),(each of (i) and (ii), a “**Change in Law Event**”); or
- (b) for it or any of its affiliates to maintain the Issuer’s hedging arrangements with respect to the Inline Warrants due to a Change in Law Event.

Upon the occurrence of a Change in Law Event, the Issuer will, if and to the extent permitted by the applicable law or regulation, pay to each Holder a cash amount that the Issuer determines in good faith and in a commercially reasonable manner to be the fair market value in respect of each Inline Warrant held by such Holder immediately prior to such termination (ignoring such illegality or

impracticability) less the cost to the Issuer of unwinding any related hedging arrangement as determined by the Issuer in its sole and absolute discretion. Payment will be made to each Holder in such manner as shall be notified to the Holder in accordance with General Condition 7.

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APPENDIX 4 — PRODUCT CONDITIONS OF CBBCS

The following pages set out the Product Conditions in respect of different types of CBBCs.

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PART A — PRODUCT CONDITIONS OF CASH SETTLED CALLABLE BULL/BEAR CONTRACTS OVER SINGLE EQUITIES

These Product Conditions will, together with the General Conditions and the supplemental provisions contained in the relevant Launch Announcement and Supplemental Listing Document and subject to completion and amendment, be endorsed on the Global Certificate. The relevant Launch Announcement and Supplemental Listing Document in relation to the issue of any series of CBBCs may specify other terms and conditions which shall, to the extent so specified or to the extent inconsistent with these Product Conditions, replace or modify these Product Conditions for the purpose of such series of CBBCs. Capitalised terms used in these Product Conditions and not otherwise defined herein shall have the meaning given to them in the relevant Launch Announcement and Supplemental Listing Document.

1. Definitions

For the purposes of these Product Conditions:

“**Business Day**” means a day (excluding Saturdays) on which the Stock Exchange is scheduled to open for dealings in Hong Kong and banks are open for business in Hong Kong;

“**Call Price**” means the price specified as such in the relevant Launch Announcement and Supplemental Listing Document, subject to any adjustment in accordance with Product Condition 4;

“**Cash Settlement Amount**” means:

(a) following a Mandatory Call Event:

(i) in the case of a series of Category R CBBCs, the Residual Value; or

(ii) in the case of a series of Category N CBBCs, zero; and

(b) at expiry:

(i) In the case of a series of bull CBBCs:

$$\text{Cash Settlement Amount per Board Lot} = \frac{\text{Entitlement} \times (\text{Closing Price} - \text{Strike Price}) \times \text{one Board Lot}}{\text{Number of CBBC(s) per Entitlement}}$$

(ii) In the case of a series of bear CBBCs:

$$\text{Cash Settlement Amount per Board Lot} = \frac{\text{Entitlement} \times (\text{Strike Price} - \text{Closing Price}) \times \text{one Board Lot}}{\text{Number of CBBC(s) per Entitlement}}$$

For the avoidance of doubt, if the Cash Settlement Amount is a negative figure, it shall be deemed to be zero;

“**Category N CBBCs**” means a series of CBBCs where the Call Price is equal to the Strike Price;

“**Category R CBBCs**” means a series of CBBCs where the Call Price is different from the Strike Price;

“**CCASS Settlement Day**” has the meaning ascribed to the term “Settlement Day” in the CCASS Rules, subject to such modification and amendment prescribed by HKSCC from time to time;

“**Closing Price**” means the closing price of one Share, as derived from the Daily Quotation Sheet of the Stock Exchange, subject to any adjustment to such closing price as may be necessary to reflect any event as contemplated in Product Condition 4 such as capitalisation, rights issue, distribution or the like on the Valuation Date;

“**Company**” means the company specified as such in the relevant Launch Announcement and Supplemental Listing Document;

“**Day of Notification**” means the Trading Day immediately following the day on which a Mandatory Call Event occurs;

“**Designated Bank Account**” means the relevant bank account designated by each Holder;

“**Entitlement**” means the number specified as such in the relevant Launch Announcement and Supplemental Listing Document, subject to any adjustment in accordance with Product Condition 4;

“**Exercise Expenses**” means any charges or expenses including any taxes or duties which are incurred in respect of the early expiration of CBBCs upon the occurrence of a Mandatory Call Event or exercise of CBBCs upon expiry;

“**General Conditions**” means the general terms and conditions set out in Appendix 1 of the Base Listing Document;

“**Last Trading Day**” means the trading day on the Stock Exchange immediately preceding the Expiry Date;

“**Mandatory Call Event**” means that the Spot Price of the Shares on any Trading Day during the Observation Period is:

- (a) in the case of a series of bull CBBCs, at or below the Call Price; or
- (b) in the case of a series of bear CBBCs, at or above the Call Price;

“**Market Disruption Event**” means:

- (a) the occurrence or existence on any Trading Day during the one-half hour period that ends at the close of trading of any suspension of or limitation imposed on trading (by reason of movements in price exceeding limits permitted by the Stock Exchange or otherwise) on the Stock Exchange in (i) the Shares; or (ii) any options or futures contracts relating to the Shares if, in any such case, such suspension or limitation is, in the determination of the Issuer, material;
- (b) the issuance of the tropical cyclone warning signal number 8 or above or the issuance of a “BLACK” rainstorm signal on any day which either (i) results in the Stock Exchange being closed for trading for the entire day; or (ii) results in the Stock Exchange being closed prior to its regular time for close of trading for the relevant day (for the avoidance of doubt, in the case when the Stock Exchange is scheduled to open for the morning trading session only, closed prior to its regular time for close of trading for the morning session), PROVIDED THAT there shall be no Market Disruption Event solely by reason of the Stock Exchange opening for trading later than its regular time for opening of trading on any day as a result of the tropical cyclone warning signal number 8 or above or the “BLACK” rainstorm signal having been issued; or

(c) a limitation or closure of the Stock Exchange due to any unforeseen circumstances;

“Maximum Trade Price” means the highest Spot Price of the Shares (subject to any adjustment to such Spot Price as may be necessary to reflect any event as contemplated in Product Condition 4 such as capitalisation, rights issue, distribution or the like) during the MCE Valuation Period;

“MCE Valuation Date” means the last Trading Day during the MCE Valuation Period;

“MCE Valuation Period” means the period commencing from and including the moment upon which the Mandatory Call Event occurs (the trading session during which the Mandatory Call Event occurs is the **“1st Session”**) and up to the end of the trading session on the Stock Exchange immediately following the 1st Session (**“2nd Session”**) unless, in the determination of the Issuer in its good faith, the 2nd Session for any reason (including, without limitation, a Market Disruption Event occurring and subsisting in the 2nd Session) does not contain any continuous period of 1 hour or more than 1 hour during which trading in the Shares is permitted on the Stock Exchange with no limitation imposed, the MCE Valuation Period shall be extended to the end of the subsequent trading session following the 2nd Session during which trading in the Shares is permitted on the Stock Exchange with no limitation imposed for a continuous period of at least 1 hour notwithstanding the existence or continuance of a Market Disruption Event in such postponed trading session, unless the Issuer determines in its good faith that each trading session on each of the four Trading Days immediately following the date on which the Mandatory Call Event occurs does not contain any continuous period of 1 hour or more than 1 hour during which trading in the Shares is permitted on the Stock Exchange with no limitation imposed. In that case:

- (a) the period commencing from the 1st Session up to, and including, the last trading session on the Stock Exchange of the fourth Trading Day immediately following the date on which the Mandatory Call Event occurs shall be deemed to be the MCE Valuation Period; and
- (b) the Issuer shall determine the Maximum Trade Price or the Minimum Trade Price (as the case may be) having regard to the then prevailing market conditions, the last reported Spot Price and such other factors as the Issuer may determine to be relevant in its good faith.

For the avoidance of doubt, all Spot Prices available throughout the extended MCE Valuation Period shall be taken into account to determine the Maximum Trade Price or the Minimum Trade Price (as the case may be) for the calculation of the Residual Value.

For the purposes of this definition,

- (A) the pre-opening session, the morning session and, in the case of half day trading, the closing auction session (if any) of the same day; and
- (B) the afternoon session and the closing auction session (if any) of the same day,

shall each be considered as one trading session only;

“Minimum Trade Price” means the lowest Spot Price of the Shares (subject to any adjustment to such Spot Price as may be necessary to reflect any event as contemplated in Product Condition 4 such as capitalisation, rights issue, distribution or the like) during the MCE Valuation Period;

“Number of CBBC(s) per Entitlement” has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document;

“**Observation Commencement Date**” means the date specified as such in the relevant Launch Announcement and Supplemental Listing Document;

“**Observation Period**” means the period commencing from and including the Observation Commencement Date up to and including the close of trading on the Stock Exchange on the Last Trading Day. For the avoidance of doubt, the Observation Period shall not be extended notwithstanding the Valuation Date shall not fall on the Last Trading Day;

“**Post MCE Trades**” has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document, subject to such modification and amendment prescribed by the Stock Exchange from time to time;

“**Product Conditions**” means these product terms and conditions;

“**Residual Value**” means:

(a) In the case of a series of bull CBBCs:

$$\text{Residual Value per Board Lot} = \frac{\text{Entitlement} \times (\text{Minimum Trade Price} - \text{Strike Price}) \times \text{one Board Lot}}{\text{Number of CBBC(s) per Entitlement}}$$

(b) In the case of a series of bear CBBCs:

$$\text{Residual Value per Board Lot} = \frac{\text{Entitlement} \times (\text{Strike Price} - \text{Maximum Trade Price}) \times \text{one Board Lot}}{\text{Number of CBBC(s) per Entitlement}}$$

“**Settlement Currency**” means the currency specified as such in the relevant Launch Announcement and Supplemental Listing Document;

“**Settlement Date**” means the third CCASS Settlement Day after (i) the end of the MCE Valuation Period or (ii) the later of: (a) the Expiry Date; and (b) the day on which the Closing Price is determined in accordance with the Conditions (as the case may be);

“**Settlement Disruption Event**” means an event beyond the control of the Issuer as a result of which the Issuer is unable to procure payment of the Cash Settlement Amount (if any) electronically through CCASS to the Designated Bank Account;

“**Share**” means the share of the Company specified as such in the relevant Launch Announcement and Supplemental Listing Document and “**Shares**” shall be construed accordingly;

“**Spot Price**” means:

- (a) in respect of a continuous trading session of the Stock Exchange, the price per Share concluded by means of automatic order matching on the Stock Exchange as reported in the official real-time dissemination mechanism for the Stock Exchange during such continuous trading session in accordance with the Trading Rules, excluding direct business (as defined in the Trading Rules); and
- (b) in respect of a pre-opening session or a closing auction session (if applicable) of the Stock Exchange, as the case may be, the final Indicative Equilibrium Price (as defined in the Trading Rules) of the Share (if any) calculated at the end of the pre-order matching period of such pre-opening session or closing auction session (if applicable), as the case may be, in accordance with the Trading Rules, excluding direct business (as defined in the Trading Rules),

subject to such modification and amendment prescribed by the Stock Exchange from time to time;

“**Strike Price**” means the price specified as such in the relevant Launch Announcement and Supplemental Listing Document, subject to any adjustment in accordance with Product Condition 4;

“**Trading Day**” means any day on which the Stock Exchange is scheduled to be open for trading for its regular trading sessions;

“**Trading Rules**” means the Rules and Regulations of the Exchange prescribed by the Stock Exchange from time to time; and

“**Valuation Date**” means the Trading Day immediately preceding the Expiry Date unless, in the determination of the Issuer, a Market Disruption Event has occurred on that day in which case, the Valuation Date shall be the first succeeding Trading Day on which the Issuer determines that there is no Market Disruption Event, unless the Issuer determines that there is a Market Disruption Event occurring on each of the four Trading Days immediately following the original date which (but for the Market Disruption Event) would have been the Valuation Date. In that case:

- (a) the fourth Trading Day immediately following the original date shall be deemed to be the Valuation Date (regardless of the Market Disruption Event); and
- (b) the Issuer shall determine the Closing Price of the Shares having regard to the then prevailing market conditions, the last reported trading price of the Shares on the Stock Exchange and such other factors as the Issuer determines to be relevant.

Other capitalised terms shall, unless otherwise defined herein, have the meaning ascribed to them in the Base Listing Document, the General Conditions, the relevant Launch Announcement and Supplemental Listing Document or the Global Certificate.

2. Illegality or Impracticability

The Issuer is entitled to terminate the CBBCs if it determines in good faith and in a commercially reasonable manner that, for reasons beyond its control, it has become or it will become illegal or impracticable:

- (a) for it to perform its obligations under the CBBCs, or for the Guarantor to perform its obligations under the Guarantee, in whole or in part as a result of:
 - (i) the adoption of, or any change in, any relevant law or regulation (including any tax law); or
 - (ii) the promulgation of, or any change in, the interpretation by any court, tribunal, governmental, administrative, legislative, regulatory or judicial authority or power with competent jurisdiction of any relevant law or regulation (including any tax law),(each of (i) and (ii), a “**Change in Law Event**”); or
- (b) for it or any of its affiliates to maintain the Issuer’s hedging arrangements with respect to the CBBCs due to a Change in Law Event.

Upon the occurrence of a Change in Law Event, the Issuer will, if and to the extent permitted by the applicable law or regulation, pay to each Holder a cash amount that the Issuer determines in good faith and in a commercially reasonable manner to be the fair market value in respect of each CBBC held by such Holder immediately prior to such termination (ignoring such illegality or impracticability)

less the cost to the Issuer of unwinding any related hedging arrangement as determined by the Issuer in its sole and absolute discretion. Payment will be made to each Holder in such manner as shall be notified to the Holder in accordance with General Condition 7.

3. Exercise of CBBCs

3.1 Exercise of CBBCs in Board Lots

CBBCs may only be exercised in Board Lots or integral multiples thereof.

3.2 Automatic Exercise

If no Mandatory Call Event has occurred during the Observation Period, the CBBCs will be deemed to be automatically exercised on the Expiry Date.

3.3 Mandatory Call Event

- (a) Subject to Product Condition 3.3(b), following a Mandatory Call Event, the CBBCs will be terminated automatically and the Issuer will give a notice of the Mandatory Call Event and early expiry of the CBBCs (the “**Announcement on MCE and Early Expiration**”) to the Holders in accordance with General Condition 7. Trading in the CBBCs will be suspended immediately upon a Mandatory Call Event and all Post MCE Trades will be cancelled and will not be recognised by the Stock Exchange or the Issuer.

In the case of Category R CBBCs, the Issuer will give a notice of the valuation of the Residual Value (the “**Announcement on Valuation of Residual Value**”) to the Holders before the end of the trading session immediately after the MCE Valuation Period in accordance with General Condition 7.

- (b) A Mandatory Call Event is irrevocable unless it is triggered as a result of any of the following events:
- (i) system malfunction or other technical errors of Hong Kong Exchanges and Clearing Limited; or
 - (ii) manifest errors caused by the relevant third party price source where applicable;
- and
- (A) in the case of a system malfunction or other technical errors prescribed in paragraph (i) above, such event is reported by the Stock Exchange to the Issuer, and the Issuer and the Stock Exchange mutually agree that such Mandatory Call Event is to be revoked, and
 - (B) in the case of an error by the relevant price source prescribed in paragraph (ii) above, such event is reported by the Issuer to the Stock Exchange, and the Issuer and the Stock Exchange mutually agree that such Mandatory Call Event is to be revoked,

in each case, such mutual agreement must be reached no later than 30 minutes before the commencement of trading (including the pre-opening session) (Hong Kong time) on the Day of Notification or such other time frame as prescribed by the Stock Exchange from time to time, in which case, (A) the Mandatory Call Event so triggered will be reversed; and (B) all cancelled

trades (if any) will be reinstated and trading of the CBBCs will resume no later than the Trading Day immediately following the Day of Notification in accordance with the rules and/or requirements prescribed by the Stock Exchange from time to time.

3.4 Entitlement

Every Board Lot of CBBCs entitles the Holder to receive from the Issuer on the Settlement Date the Cash Settlement Amount (if any).

3.5 Cancellation

Upon early expiration of the CBBCs at the occurrence of a Mandatory Call Event or an automatic exercise of the CBBCs on the Expiry Date, the Issuer will, with effect from the first Business Day following the MCE Valuation Date or the Expiry Date (as the case may be) remove the name of the Holder from the Register in respect of the number of CBBCs which have expired or exercised (as the case may be) and thereby cancel the relevant CBBCs and if applicable, the Global Certificate.

3.6 Exercise Expenses

- (a) Any Exercise Expenses which were not determined by the Issuer:
 - (i) during the MCE Valuation Period following the Mandatory Call Event; or
 - (ii) otherwise, on the Expiry Date (as the case may be), and were not deducted from the Cash Settlement Amount prior to delivery to the Holder in accordance with Product Condition 3.7, shall be notified to the Holder as soon as practicable after determination thereof by the Issuer and shall be paid by the Holder to the Issuer immediately upon demand.
- (b) Holders shall note that they shall be responsible for additional costs and expenses in connection with any early expiration or exercise of the CBBCs including the Exercise Expenses which amount shall, to the extent necessary, be payable to the Issuer and collected from the Holders.

3.7 Cash Settlement

Upon early expiration of the CBBCs following the occurrence of a Mandatory Call Event or an automatic exercise of the CBBCs on the Expiry Date (as the case may be), the Issuer will, in respect of every Board Lot, pay the Cash Settlement Amount (net of any Exercise Expenses) (if any) to the relevant Holder. If the Cash Settlement Amount is equal to or less than the Exercise Expenses, no amount is payable by the Issuer.

The Cash Settlement Amount (net of any Exercise Expenses) (if any) will be despatched no later than the Settlement Date by crediting that amount, in accordance with the CCASS Rules, to the Designated Bank Account.

If as a result of a Settlement Disruption Event, it is not possible for the Issuer to procure payment electronically through CCASS by crediting the relevant Designated Bank Account of the Holder on the original Settlement Date, the Issuer shall use its reasonable endeavours to procure payment electronically through CCASS by crediting the relevant Designated Bank Account of the Holder as soon as reasonably practicable after the original Settlement Date. The Issuer will not be liable to the Holder for any interest in respect of the amount due or any loss or damage that such Holder may suffer as a result of the existence of a Settlement Disruption Event.

3.8 Responsibility of Issuer, Guarantor and Sponsor

None of the Issuer, the Guarantor, the Sponsor or their respective agents shall have any responsibility for any errors or omissions in the calculation and dissemination of any variables published by a third party and used in any calculation made pursuant to these Product Conditions or in the calculation of the Cash Settlement Amount arising from such errors or omissions.

The purchase of CBBCs does not confer on any Holder of such CBBCs any rights (whether in respect of voting, distributions or otherwise) in relation to the Shares.

3.9 Liability of Issuer, Guarantor and Sponsor

Exercise and settlement of the CBBCs is subject to all applicable laws, rules, regulations and guidelines in force at the relevant time and neither the Issuer, the Guarantor, nor the Sponsor shall incur any liability whatsoever if it is unable to effect the transactions contemplated, after using all reasonable efforts, as a result of any such laws, rules, regulations or guidelines. Neither the Issuer, the Guarantor, nor the Sponsor shall under any circumstances be liable for any acts or defaults of the CCASS in relation to the performance of its duties in relation to the CBBCs.

3.10 Trading

Subject to Product Condition 3.3(b), trading in CBBCs on the Stock Exchange shall cease:

- (a) immediately upon the occurrence of a Mandatory Call Event; or
- (b) at the close of trading for the Trading Day immediately preceding the Expiry Date, whichever is the earlier.

4. Adjustments

4.1 Rights Issues

If and whenever the Company shall, by way of Rights (as defined below), offer new Shares for subscription at a fixed subscription price to the holders of existing Shares pro rata to existing holdings (a “**Rights Offer**”), the Entitlement will be adjusted to take effect on the Business Day (“**Rights Issue Adjustment Date**”) on which trading in the Shares becomes ex-entitlement in accordance with the following formula:

$$\text{Adjusted Entitlement} = \text{Adjustment Factor} \times E$$

Where:

$$\text{Adjustment Factor} = \frac{1 + M}{1 + (R/S) \times M}$$

E: Existing Entitlement immediately prior to the Rights Offer

S: Cum-Rights Share price determined by the closing price on the Stock Exchange on the last Business Day on which Shares are traded on a cum-Rights basis

R: Subscription price per Share as specified in the Rights Offer plus an amount equal to any dividends or other benefits foregone to exercise the Rights

M: Number of new Share(s) (whether a whole or a fraction) per existing Share each holder thereof is entitled to subscribe

Provided that if the adjustment to be made would result in the Entitlement being changed by one per cent. or less, then no adjustment will be made. In addition, the Issuer shall adjust the Strike Price and the Call Price (which shall be rounded to the nearest 0.001) by the reciprocal of the Adjustment Factor, where the reciprocal of the Adjustment Factor means one divided by the relevant Adjustment Factor. The adjustment to the Strike Price and the Call Price shall take effect on the Rights Issue Adjustment Date.

For the purposes of these Product Conditions:

“**Rights**” means the right(s) attached to each existing Share or needed to acquire one new Share (as the case may be) which are given to the holders of existing Shares to subscribe at a fixed subscription price for new Shares pursuant to the Rights Offer (whether by the exercise of one Right, a part of a Right or an aggregate number of Rights).

4.2 Bonus Issues

If and whenever the Company shall make an issue of Shares credited as fully paid to the holders of Shares generally by way of capitalisation of profits or reserves (other than pursuant to a scrip dividend or similar scheme for the time being operated by the Company or otherwise in lieu of a cash dividend and without any payment or other consideration being made or given by such holders) (a “**Bonus Issue**”) the Entitlement will be increased on the Business Day (“**Bonus Issue Adjustment Date**”) on which trading in the Shares becomes ex-entitlement in accordance with the following formula:

$$\text{Adjusted Entitlement} = \text{Adjustment Factor} \times E$$

Where:

$$\text{Adjustment Factor} = 1 + N$$

E: Existing Entitlement immediately prior to the Bonus Issue

N: Number of additional Shares (whether a whole or a fraction) received by a holder of existing Shares for each Share held prior to the Bonus Issue

Provided that if the adjustment to be made would result in the Entitlement being changed by one per cent. or less, then no adjustment will be made. In addition, the Issuer shall adjust the Strike Price and the Call Price (which shall be rounded to the nearest 0.001) by the reciprocal of the Adjustment Factor, where the reciprocal of the Adjustment Factor means one divided by the relevant Adjustment Factor. The adjustment to the Strike Price and the Call Price shall take effect on the Bonus Issue Adjustment Date.

4.3 Share Splits or Consolidations

If and whenever the Company shall subdivide its Shares or any class of its outstanding share capital comprised of the Shares into a greater number of shares (a “**Subdivision**”) or consolidate the Shares or any class of its outstanding share capital comprised of the Shares into a smaller number of shares (a “**Consolidation**”), then:

- (i) in the case of a Subdivision, the Entitlement in effect immediately prior thereto will be increased whereas the Strike Price and the Call Price (which shall be rounded to the nearest 0.001) will be decreased in the same ratio as the Subdivision; and
- (ii) in the case of a Consolidation, the Entitlement in effect immediately prior thereto will be decreased whereas the Strike Price and the Call Price (which shall be rounded to the nearest 0.001) will be increased in the same ratio as the Consolidation,

in each case on the day on which the Subdivision or Consolidation (as the case may be) shall have taken effect.

4.4 Merger or Consolidation

If it is announced that the Company is to or may merge or consolidate with or into any other corporation (including becoming, by agreement or otherwise, a subsidiary of any corporation or controlled by any person or corporation) (except where the Company is the surviving corporation in a merger) or that it is to or may sell or transfer all or substantially all of its assets, the rights attaching to the CBBCs may in the absolute discretion of the Issuer be amended no later than the Business Day preceding the consummation of such merger, consolidation, sale or transfer (each a “**Restructuring Event**”) (as determined by the Issuer in its absolute discretion).

The rights attaching to the CBBCs after the adjustment shall, after such Restructuring Event, relate to the number of shares of the corporation(s) resulting from or surviving such Restructuring Event or other securities (“**Substituted Securities**”) and/or cash offered in substitution for the affected Shares, as the case may be, to which the holder of such number of Shares to which the CBBCs related immediately before such Restructuring Event would have been entitled upon such Restructuring Event. Thereafter the provisions hereof shall apply to such Substituted Securities, provided that any Substituted Securities may, in the absolute discretion of the Issuer, be deemed to be replaced by an amount in the relevant currency equal to the market value or, if no market value is available, fair value, of such Substituted Securities in each case as determined by the Issuer as soon as practicable after such Restructuring Event is effected.

For the avoidance of doubt, any remaining Shares shall not be affected by this Product Condition 4.4 and, where cash is offered in substitution for Shares or is deemed to replace Substituted Securities as described above, references in these Product Conditions to the Shares shall include any such cash.

4.5 Cash Distribution

No adjustment will be made for an ordinary cash dividend (whether or not it is offered with a scrip alternative) (“**Ordinary Dividend**”). For any other forms of cash distribution (“**Cash Distribution**”) announced by the Company, such as a cash bonus, special dividend or extraordinary dividend, no adjustment will be made unless the value of the Cash Distribution accounts for 2 per cent. or more of the Share’s closing price on the day of announcement by the Company.

If and whenever the Company shall make a Cash Distribution credited as fully paid to the holders of Shares generally, the Entitlement shall be adjusted to take effect on the Business Day on which trading in the Shares becomes ex-entitlement in respect of the relevant Cash Distribution (“**Cash Distribution Adjustment Date**”) in accordance with the following formula:

$$\text{Adjusted Entitlement} = \text{Adjustment Factor} \times E$$

Where:

$$\text{Adjustment Factor} = \frac{S - OD}{S - OD - CD}$$

E: Existing Entitlement immediately prior to the Cash Distribution

S: The closing price of the Share on the Stock Exchange on the Business Day immediately preceding the Cash Distribution Adjustment Date

CD: The Cash Distribution per Share

OD: The Ordinary Dividend per Share, provided that the date on which the Shares are traded on an ex-Ordinary Dividend basis is the Cash Distribution Adjustment Date. For the avoidance of doubt, the OD shall be zero if the date on which the Shares are traded on an ex-Ordinary Dividend basis is not the Cash Distribution Adjustment Date

In addition, the Issuer shall adjust the Strike Price and the Call Price (which shall be rounded to the nearest 0.001) by the reciprocal of the Adjustment Factor, where the reciprocal of the Adjustment Factor means one divided by the relevant Adjustment Factor. The adjustment to the Strike Price and the Call Price shall take effect on the Cash Distribution Adjustment Date.

5. Liquidation

In the event of a liquidation or dissolution of the Company or the appointment of a liquidator, receiver or administrator or analogous person under Hong Kong law in respect of the whole or substantially the whole of its undertaking, property or assets, all unexercised CBBCs will lapse and shall cease to be valid for any purpose, in the case of voluntary liquidation, on the effective date of the relevant resolution and, in the case of an involuntary liquidation or dissolution, on the date of the relevant court order or, in the case of the appointment of a liquidator or receiver or administrator or analogous person under any applicable law in respect of the whole or substantially the whole of its undertaking, property or assets, on the date when such appointment is effective but subject (in any such case) to any contrary mandatory requirement of law.

6. Delisting

6.1 Adjustments following delisting

If at any time the Shares cease to be listed on the Stock Exchange, the Issuer shall give effect to these Product Conditions in such manner and make such adjustments to the rights attaching to the CBBCs as it shall, in its absolute discretion, consider appropriate to ensure, so far as it is reasonably able to do so, that the interests of the Holders generally are not materially prejudiced as a consequence of such delisting (without considering the individual circumstances of any Holder or the tax or other consequences that may result in any particular jurisdiction).

6.2 Listing on another exchange

Without prejudice to the generality of Product Condition 6.1, where the Shares are, or, upon the delisting, become, listed on any other stock exchange, these Product Conditions may, in the absolute

discretion of the Issuer, be amended to the extent necessary to allow for the substitution of that other stock exchange in place of the Stock Exchange and the Issuer may, without the consent of the Holders, make such adjustments to the entitlements of Holders on exercise (including, if appropriate, by converting foreign currency amounts at prevailing market rates into the relevant currency) as may be appropriate in the circumstances.

Sponsor

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PART B — PRODUCT CONDITIONS OF CASH SETTLED CALLABLE BULL/BEAR CONTRACTS OVER AN INDEX

These Product Conditions will, together with the General Conditions and the supplemental provisions contained in the relevant Launch Announcement and Supplemental Listing Document, subject to completion and amendment, be endorsed on the Global Certificate. The relevant Launch Announcement and Supplemental Listing Document in relation to the issue of any series of CBBCs may specify other terms and conditions which shall, to the extent so specified or to the extent inconsistent with these Product Conditions, replace or modify these Product Conditions for the purpose of such series of CBBCs. Capitalised terms used in these Product Conditions and not otherwise defined herein shall have the meaning given to them in the relevant Launch Announcement and Supplemental Listing Document.

1. Definitions

For the purposes of these Product Conditions:

“**Business Day**” means a day (excluding Saturdays) on which the Stock Exchange is scheduled to open for dealings in Hong Kong and banks are open for business in Hong Kong;

“**Call Level**” means the level specified as such in the relevant Launch Announcement and Supplemental Listing Document;

“**Cash Settlement Amount**” means, in respect of every Board Lot, an amount calculated by the Issuer in accordance with the following formula (and, if appropriate, either (X) converted (if applicable) into the Settlement Currency at the Exchange Rate or, as the case may be, (Y) converted into the Interim Currency at the First Exchange Rate and then (if applicable) converted into Settlement Currency at the Second Exchange Rate):

(a) following a Mandatory Call Event:

(i) in the case of a series of Category R CBBCs, the Residual Value; or

(ii) in the case of a series of Category N CBBCs, zero; and

(b) at expiry:

(i) in the case of a series of bull CBBCs:

$$\text{Cash Settlement Amount per Board Lot} = \frac{(\text{Closing Level} - \text{Strike Level}) \times \text{one Board Lot} \times \text{Index Currency Amount}}{\text{Divisor}}$$

(ii) in the case of a series of bear CBBCs:

$$\text{Cash Settlement Amount per Board Lot} = \frac{(\text{Strike Level} - \text{Closing Level}) \times \text{one Board Lot} \times \text{Index Currency Amount}}{\text{Divisor}}$$

For the avoidance of doubt, if the Cash Settlement Amount is a negative figure, it shall be deemed to be zero;

“**Category N CBBCs**” means a series of CBBCs where the Call Level is equal to the Strike Level;

“**Category R CBBCs**” means a series of CBBCs where the Call Level is different from the Strike Level;

“**CCASS Settlement Day**” has the meaning ascribed to the term “Settlement Day” in the CCASS Rules, subject to such modification and amendment prescribed by HKSCC from time to time;

“**Closing Level**” has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document, subject to any adjustment in accordance with Product Condition 4;

“**Day of Notification**” means the Trading Day immediately following the day on which a Mandatory Call Event occurs;

“**Designated Bank Account**” means the relevant bank account designated by each Holder;

“**Divisor**” means the number specified as such in the relevant Launch Announcement and Supplemental Listing Document;

“**Exchange Rate**” means the rate specified as such in the relevant Launch Announcement and Supplemental Listing Document, subject to any adjustment in accordance with Product Condition 4;

“**Exercise Expenses**” means any charges or expenses including any taxes or duties which are incurred in respect of the early expiration of CBBCs upon the occurrence of a Mandatory Call Event or exercise of CBBCs upon expiry;

“**First Exchange Rate**” means the rate specified as such in the relevant Launch Announcement and Supplemental Listing Document;

“**General Conditions**” means the general terms and conditions set out in Appendix 1 of the Base Listing Document;

“**Index**” means the index specified in the relevant Launch Announcement and Supplemental Listing Document;

“**Index Business Day**” means any day on which the Index Exchange is scheduled to open for trading for its regular trading sessions;

“**Index Compiler**” has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document;

“**Index Currency Amount**” has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document;

“**Index Exchange**” has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document;

“**Interim Currency**” has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document;

“**Last Trading Day**” means the trading day on the Stock Exchange immediately preceding the Expiry Date;

“Mandatory Call Event” means that the Spot Level of the Index on any Index Business Day during the Observation Period is:

- (a) in the case of a series of bull CBBCs, at or below the Call Level; or
- (b) in the case of a series of bear CBBCs, at or above the Call Level;

“Market Disruption Event” means:

- (a) the occurrence or existence on any Index Business Day during the one-half hour period that ends at the close of trading on the Index Exchange, of any of:
 - (i) the suspension or material limitation of the trading of a material number of constituent securities that comprise the Index; or
 - (ii) the suspension or material limitation of the trading of options or futures contracts relating to the Index on any exchanges on which such contracts are traded; or
 - (iii) the imposition of any exchange controls in respect of any currencies involved in determining the Cash Settlement Amount.

For the purposes of this paragraph (a), (X) the limitation of the number of hours or days of trading will not constitute a Market Disruption Event if it results from an announced change in the regular business hours of any relevant exchange, and (Y) a limitation on trading imposed by reason of the movements in price exceeding the levels permitted by any relevant exchange will constitute a Market Disruption Event;

- (b) where the Index Exchange is the Stock Exchange, the issuance of the tropical cyclone warning signal number 8 or above or the issuance of a “BLACK” rainstorm signal on any day which either (i) results in the Stock Exchange being closed for trading for the entire day; or (ii) results in the Stock Exchange being closed prior to its regular time for close of trading for the relevant day (for the avoidance of doubt, in the case when the Stock Exchange is scheduled to open for the morning trading session only, closed prior to its regular time for close of trading for the morning session), PROVIDED THAT there shall be no Market Disruption Event solely by reason of the Stock Exchange opening for trading later than its regular time for opening of trading on any day as a result of the tropical cyclone warning signal number 8 or above or the “BLACK” rainstorm signal having been issued;
- (c) a limitation or closure of the Index Exchange due to any unforeseen circumstances; or
- (d) any circumstances beyond the control of the Issuer in which the Closing Level or, if applicable, the Exchange Rate, the First Exchange Rate or the Second Exchange Rate (as the case may be) cannot be determined by the Issuer in the manner set out in these Product Conditions or in such other manner as the Issuer considers appropriate at such time after taking into account all the relevant circumstances;

“Maximum Index Level” means the highest Spot Level of the Index during the MCE Valuation Period;

“MCE Valuation Date” means the last Trading Day during the MCE Valuation Period;

“MCE Valuation Period” means:

- (a) in respect of an Index Exchange located in Hong Kong, the period commencing from and including the moment upon which the Mandatory Call Event occurs (the trading session during which the Mandatory Call Event occurs is the **“1st Session”**) and up to the end of the trading session on the Index Exchange immediately following the 1st Session (**“2nd Session”**) unless, in the determination of the Issuer in its good faith, the 2nd Session for any reason (including, without limitation, a Market Disruption Event occurring and subsisting in the 2nd Session) does not contain any continuous period of 1 hour or more than 1 hour during which Spot Level(s) is/are available, the MCE Valuation Period shall be extended to the end of the subsequent trading session on the Index Exchange following the 2nd Session during which Spot Level(s) is/are available for a continuous period of at least 1 hour notwithstanding the existence or continuance of a Market Disruption Event in such postponed trading session unless the Issuer determines in its good faith that each trading session on each of the four Index Business Days immediately following the date on which the Mandatory Call Event occurs does not contain any continuous period of 1 hour or more than 1 hour during which Spot Levels are available.

In that case:

- (i) the period commencing from the 1st Session up to, and including, the last trading session of the fourth Index Business Day on the Index Exchange immediately following the date on which the Mandatory Call Event occurs shall be deemed to be the MCE Valuation Period; and
- (ii) the Issuer shall determine the Maximum Index Level or the Minimum Index Level (as the case may be) having regard to the then prevailing market conditions, the last reported Spot Level of the Index and such other factors as the Issuer may determine to be relevant in its good faith.

For the avoidance of doubt, all Spot Levels available throughout the extended MCE Valuation Period shall be taken into account to determine the Maximum Index Level or the Minimum Index Level (as the case may be) for the calculation of the Residual Value.

For the purposes of this definition,

- (A) the pre-opening session, the morning session and, in the case of half day trading, the closing auction session (if any) of the same day; and
- (B) the afternoon session and the closing auction session (if any) of the same day,

shall each be considered as one trading session only; and

- (b) in respect of an Index Exchange located outside Hong Kong, the period specified in the relevant Launch Announcement and Supplemental Listing Document;

“Minimum Index Level” means the lowest Spot Level of the Index during the MCE Valuation Period;

“Observation Commencement Date” means the date specified as such in the relevant Launch Announcement and Supplemental Listing Document;

“**Observation Period**” means the period commencing from and including the Observation Commencement Date up to and including the close of trading on the Last Trading Day. For the avoidance of doubt, the Observation Period shall not be extended notwithstanding that the Valuation Date shall not fall on the Last Trading Day;

“**Post MCE Trades**” has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document, subject to such modification and amendment prescribed by the Stock Exchange from time to time;

“**Price Source**”, if applicable, has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document;

“**Product Conditions**” means these product terms and conditions;

“**Residual Value**” means, in respect of every Board Lot, an amount calculated by the Issuer in accordance with the following formula (and, if appropriate, either, converted (if applicable) into the Settlement Currency at the Exchange Rate, or converted into the Interim Currency at the First Exchange Rate and then (if applicable) converted into Settlement Currency at the Second Exchange Rate):

(a) In the case of a series of bull CBBCs:

$$\text{Residual Value per Board Lot} = \frac{(\text{Minimum Index Level} - \text{Strike Level}) \times \text{one Board Lot} \times \text{Index Currency Amount}}{\text{Divisor}}$$

(b) In the case of a series of bear CBBCs:

$$\text{Residual Value per Board Lot} = \frac{(\text{Strike Level} - \text{Maximum Index Level}) \times \text{one Board Lot} \times \text{Index Currency Amount}}{\text{Divisor}}$$

“**Settlement Currency**” means the currency specified as such in the relevant Launch Announcement and Supplemental Listing Document;

“**Settlement Date**” means the third CCASS Settlement Day after (i) the end of the MCE Valuation Period or (ii) the later of: (a) the Expiry Date; and (b) the day on which the Closing Level is determined in accordance with the Conditions (as the case may be);

“**Settlement Disruption Event**” means an event beyond the control of the Issuer as a result of which the Issuer is unable to procure payment of the Cash Settlement Amount (if any) electronically through CCASS to the Designated Bank Account;

“**Second Exchange Rate**” means the rate specified as such in the relevant Launch Announcement and Supplemental Listing Document;

“**Spot Level**” means, unless otherwise specified in the relevant Launch Announcement and Supplemental Listing Document, the spot level of the Index as compiled and published by the Index Compiler;

“**Strike Level**” means the level specified as such in the relevant Launch Announcement and Supplemental Listing Document;

“**Successor Index**” means the successor index specified in the relevant Launch Announcement and Supplemental Listing Document;

“**Trading Day**” means any day on which the Stock Exchange is scheduled to be open for trading for its regular trading sessions;

“**Trading Rules**” means the Rules and Regulations of the Exchange prescribed by the Stock Exchange from time to time; and

“**Valuation Date**” means the date specified as such in the relevant Launch Announcement and Supplemental Listing Document, provided that if the Issuer determines, in its sole discretion, that a Market Disruption Event has occurred on the Valuation Date, then the Issuer shall determine the Closing Level of the Index on the basis of its good faith estimate of the Closing Level that would have prevailed on that day but for the occurrence of the Market Disruption Event provided that the Issuer, if applicable, may, but will not be obliged to, determine such Closing Level by having regard to the manner in which futures contracts relating to the Index are calculated.

Other capitalised terms shall, unless otherwise defined herein, have the meaning ascribed to them in the Base Listing Document, the General Conditions, the relevant Launch Announcement and Supplemental Listing Document or the Global Certificate.

2. Illegality or Impracticability

The Issuer is entitled to terminate the CBBCs if it determines in good faith and in a commercially reasonable manner that, for reasons beyond its control, it has become or it will become illegal or impracticable:

- (a) for it to perform its obligations under the CBBCs, or for the Guarantor to perform its obligations under the Guarantee, in whole or in part as a result of:
 - (i) the adoption of, or any change in, any relevant law or regulation (including any tax law); or
 - (ii) the promulgation of, or any change in, the interpretation by any court, tribunal, governmental, administrative, legislative, regulatory or judicial authority or power with competent jurisdiction of any relevant law or regulation (including any tax law),(each of (i) and (ii), a “**Change in Law Event**”); or
- (b) for it or any of its affiliates to maintain the Issuer’s hedging arrangements with respect to the CBBCs due to a Change in Law Event.

Upon the occurrence of a Change in Law Event, the Issuer will, if and to the extent permitted by the applicable law or regulation, pay to each Holder a cash amount that the Issuer determines in good faith and in a commercially reasonable manner to be the fair market value in respect of each CBBC held by such Holder immediately prior to such termination (ignoring such illegality or impracticability) less the cost to the Issuer of unwinding any related hedging arrangement as determined by the Issuer in its sole and absolute discretion. Payment will be made to each Holder in such manner as shall be notified to the Holder in accordance with General Condition 7.

3. Exercise of CBBCs

3.1 Exercise of CBBCs in Board Lots

CBBCs may only be exercised in Board Lots or integral multiples thereof.

3.2 Automatic Exercise

If no Mandatory Call Event has occurred during the Observation Period, the CBBCs will be deemed to be automatically exercised on the Expiry Date.

3.3 Mandatory Call Event

- (a) Subject to Product Condition 3.3(b) below, following a Mandatory Call Event, the CBBCs will be terminated automatically and the Issuer will give a notice of the Mandatory Call Event and early expiry of the CBBCs (the “**Announcement on MCE and Early Expiration**”) to the Holders in accordance with General Condition 7. Trading in the CBBCs will be suspended immediately upon a Mandatory Call Event and all Post MCE Trades will be cancelled and will not be recognised by the Stock Exchange or the Issuer.

In the case of Category R CBBCs, the Issuer will give a notice of the valuation of the Residual Value (the “**Announcement on Valuation of Residual Value**”) to the Holders before the end of the trading session of the Stock Exchange immediately after the corresponding trading session of the Stock Exchange during which the MCE Valuation Period ends in accordance with General Condition 7.

- (b) A Mandatory Call Event is irrevocable unless it is triggered as a result of any of the following events:

- (i) system malfunction or other technical errors of Hong Kong Exchanges and Clearing Limited; or
- (ii) manifest errors caused by the relevant third party price source where applicable;

and

- (A) in the case of a system malfunction or other technical errors prescribed in paragraph (i) above, such event is reported by the Stock Exchange to the Issuer and the Issuer and the Stock Exchange mutually agree that such Mandatory Call Event is to be revoked, and
- (B) in the case of an error by the relevant price source prescribed in paragraph (ii) above, such event is reported by the Issuer to the Stock Exchange, and the Issuer and the Stock Exchange mutually agree that such Mandatory Call Event is to be revoked,

in each case,

- (A) in respect of an Index Exchange located in Hong Kong, such mutual agreement must be reached no later than 30 minutes before the commencement of trading (including the pre-opening session) (Hong Kong time) on the Day of Notification or such other time frame as prescribed by the Stock Exchange from time to time; or

(B) in respect of an Index Exchange located outside Hong Kong:

- (1) the revocation of the Mandatory Call Event is communicated to the other party by 30 minutes before the commencement of trading (including the pre-opening session) (Hong Kong time) on the Day of Notification or such other time frame as prescribed by the Stock Exchange from time to time; and
- (2) the Issuer and the Stock Exchange mutually agree that such Mandatory Call Event is to be revoked on the Day of Notification.

In both cases:

(C) the Mandatory Call Event so triggered will be reversed; and

(D) all cancelled trades (if any) will be reinstated and trading of the CBBCs will resume no later than the Trading Day immediately following the Day of Notification in accordance with the rules and/ or requirements prescribed by the Stock Exchange from time to time.

3.4 Entitlement

Every Board Lot of CBBCs entitles the Holder to receive from the Issuer on the Settlement Date the Cash Settlement Amount (if any).

3.5 Cancellation

Upon early expiration of the CBBCs at the occurrence of a Mandatory Call Event or an automatic exercise of the CBBCs on the Expiry Date, the Issuer will, with effect from the first Business Day following the MCE Valuation Date or the Expiry Date (as the case may be) remove the name of the Holder from the Register in respect of the number of CBBCs which have expired or exercised (as the case may be) and thereby cancel the relevant CBBCs and if applicable, the Global Certificate.

3.6 Exercise Expenses

(a) Any Exercise Expenses which were not determined by the Issuer:

- (i) during the MCE Valuation Period following the Mandatory Call Event; or
- (ii) otherwise, on the Expiry Date (as the case may be), and were not deducted from the Cash Settlement Amount prior to delivery to the Holder in accordance with Product Condition 3.7, shall be notified to the Holder as soon as practicable after determination thereof by the Issuer and shall be paid by the Holder to the Issuer immediately upon demand.

(b) Holders shall note that they shall be responsible for additional costs and expenses in connection with any early expiration or exercise of the CBBCs including the Exercise Expenses which amount shall, to the extent necessary, be payable to the Issuer and collected from the Holders.

3.7 Cash Settlement

Upon early termination of the CBBCs following the occurrence of a Mandatory Call Event or an automatic exercise of the CBBCs on the Expiry Date (as the case may be), the Issuer will, in respect of every Board Lot, pay the Cash Settlement Amount (net of any Exercise Expenses)(if any) to the relevant Holder. If the Cash Settlement Amount is equal to or less than the Exercise Expenses, no amount is payable by the Issuer.

The Cash Settlement Amount (net of any Exercise Expenses)(if any) will be despatched no later than the Settlement Date by crediting that amount, in accordance with the CCASS Rules, to the Designated Bank Account.

If as a result of a Settlement Disruption Event, it is not possible for the Issuer to procure payment electronically through CCASS by crediting the relevant Designated Bank Account of the Holder on the original Settlement Date, the Issuer shall use its reasonable endeavours to procure payment electronically through CCASS by crediting the relevant Designated Bank Account of the Holder as soon as reasonably practicable after the original Settlement Date. The Issuer will not be liable to the Holder for any interest in respect of the amount due or any loss or damage that such Holder may suffer as a result of the existence of a Settlement Disruption Event.

3.8 Responsibility of Issuer, Guarantor and Sponsor

None of the Issuer, the Guarantor, the Sponsor or their respective agents shall have any responsibility for any errors or omissions in the calculation and dissemination of any variables published by a third party and used in any calculation made pursuant to these Product Conditions or in the calculation of the Cash Settlement Amount arising from such errors or omissions.

The purchase of CBBCs does not confer on any Holder of such CBBCs any rights (whether in respect of voting, distributions or otherwise) in relation to the constituent securities, contracts, commodities or currencies comprising the Index.

3.9 Liability of Issuer, Guarantor and Sponsor

Exercise and settlement of the CBBCs is subject to all applicable laws, rules, regulations and guidelines in force at the relevant time and neither the Issuer, the Guarantor nor the Sponsor shall incur any liability whatsoever if it is unable to effect the transactions contemplated, after using all reasonable efforts, as a result of any such laws, rules, regulations or guidelines. Neither the Issuer, the Guarantor nor the Sponsor shall under any circumstances be liable for any acts or defaults of the CCASS in relation to the performance of its duties in relation to the CBBCs.

3.10 Trading

Subject to Product Condition 3.3(b), trading in CBBCs on the Stock Exchange shall cease:

- (a) immediately upon the occurrence of a Mandatory Call Event; or
- (b) at the close of trading for the Trading Day immediately preceding the Expiry Date, whichever is the earlier.

4. Adjustments to the Index

4.1 Successor Index Compiler Calculates and Reports Index

If the Index is:

- (a) not calculated and announced by the Index Compiler but is calculated and published by a successor to the Index Compiler (the “**Successor Index Compiler**”) acceptable to the Issuer; or
- (b) replaced by a successor index using, in the determination of the Issuer, the same or a substantially similar formula for and method of calculation as used in the calculation of the Index,

then the Index will be deemed to be the index so calculated and announced by the Successor Index Compiler or that successor index, as the case may be.

4.2 *Modification and Cessation of Calculation of Index*

If:

- (a) on any Index Business Day before the Expiry Date, the Index Compiler or (if applicable) the Successor Index Compiler makes a material change in the formula for or the method of calculating the Index or in any other way materially modifies the Index (other than a modification prescribed in that formula or method to maintain the Index in the event of changes in constituent securities, contracts, commodities or currencies and other routine events); or
- (b) on any Index Business Day before the Expiry Date, the Index Compiler or (if applicable) the Successor Index Compiler fails to calculate and publish the Index (other than as a result of a Market Disruption Event),

then the Issuer shall determine the Closing Level using, in lieu of a published level for the Index, the level for the Index as at that Index Business Day as determined by the Issuer in accordance with the formula for and method of calculating the Index last in effect prior to that change or failure, but using only those securities, contracts, commodities or currencies that comprised the Index immediately prior to that change or failure (other than those securities, contracts, commodities or currencies that have since ceased to be listed on the relevant exchange).

Sponsor

BNP Paribas Securities (Asia) Limited

60th-63rd Floors

Two International Finance Centre

8 Finance Street

Central, Hong Kong

China

PART C — PRODUCT CONDITIONS OF CASH SETTLED CALLABLE BULL/BEAR CONTRACTS OVER EXCHANGE TRADED FUND

These Product Conditions will, together with the General Conditions and the supplemental provisions contained in the relevant Launch Announcement and Supplemental Listing Document, subject to completion and amendment, be endorsed on the Global Certificate. The relevant Launch Announcement and Supplemental Listing Document in relation to the issue of any series of CBBCs may specify other terms and conditions which shall, to the extent so specified or to the extent inconsistent with these Product Conditions, replace or modify these Product Conditions for the purpose of such series of CBBCs. Capitalised terms used in these Product Conditions and not otherwise defined herein shall have the meaning given to them in the relevant Launch Announcement and Supplemental Listing Document.

1. Definitions

For the purposes of these Product Conditions:

“**Business Day**” means a day (excluding Saturdays) on which the Stock Exchange is scheduled to open for dealings in Hong Kong and banks are open for business in Hong Kong;

“**Call Price**” means the price specified as such in the relevant Launch Announcement and Supplemental Listing Document, subject to any adjustment in accordance with Product Condition 4;

“**Cash Settlement Amount**” means:

(a) following a Mandatory Call Event:

(i) in the case of a series of Category R CBBCs, the Residual Value; or

(ii) in the case of a series of Category N CBBCs, zero; and

(b) at expiry:

(i) in the case of a series of bull CBBCs:

$$\text{Cash Settlement Amount per Board Lot} = \frac{\text{Entitlement} \times (\text{Closing Price} - \text{Strike Price}) \times \text{one Board Lot}}{\text{Number of CBBC(s) per Entitlement}}$$

(ii) In the case of a series of bear CBBCs:

$$\text{Cash Settlement Amount per Board Lot} = \frac{\text{Entitlement} \times (\text{Strike Price} - \text{Closing Price}) \times \text{one Board Lot}}{\text{Number of CBBC(s) per Entitlement}}$$

For the avoidance of doubt, if the Cash Settlement Amount is a negative figure, it shall be deemed to be zero;

“**Category N CBBCs**” means a series of CBBCs where the Call Price is equal to the Strike Price;

“**Category R CBBCs**” means a series of CBBCs where the Call Price is different from the Strike Price;

“**CCASS Settlement Day**” has the meaning ascribed to the term “Settlement Day” in the CCASS Rules, subject to such modification and amendment prescribed by HKSCC from time to time;

“**Closing Price**” means the closing price of one Unit, as derived from the Daily Quotation Sheet of the Stock Exchange, subject to any adjustment to such closing price as may be necessary to reflect any event as contemplated in Product Condition 4 such as capitalisation, rights issue, distribution or the like on the Valuation Date;

“**Day of Notification**” means the Trading Day immediately following the day on which a Mandatory Call Event occurs;

“**Designated Bank Account**” means the relevant bank account designated by each Holder;

“**Entitlement**” means the number specified as such in the relevant Launch Announcement and Supplemental Listing Document, subject to any adjustment in accordance with Product Condition 4;

“**Exercise Expenses**” means any charges or expenses including any taxes or duties which are incurred in respect of the early expiration of CBBCs upon the occurrence of a Mandatory Call Event or exercise of CBBCs upon expiry;

“**Fund**” means the exchange traded fund specified as such in the relevant Launch Announcement and Supplemental Listing Document;

“**General Conditions**” means the general terms and conditions set out in Appendix 1 of the Base Listing Document;

“**Last Trading Day**” means the trading day on the Stock Exchange immediately preceding the Expiry Date;

“**Mandatory Call Event**” means that the Spot Price of the Units on any Trading Day during the Observation Period is:

- (a) in the case of a series of bull CBBCs, at or below the Call Price; or
- (b) in the case of a series of bear CBBCs, at or above the Call Price;

“**Market Disruption Event**” means:

- (a) the occurrence or existence on any Trading Day during the one-half hour period that ends at the close of trading of any suspension of or limitation imposed on trading (by reason of movements in price exceeding limits permitted by the Stock Exchange or otherwise) on the Stock Exchange in (i) the Units; or (ii) any options or futures contracts relating to the Units if, in any such case, such suspension or limitation is, in the determination of the Issuer, material;
- (b) the issuance of the tropical cyclone warning signal number 8 or above or the issuance of a “BLACK” rainstorm signal on any day which either (i) results in the Stock Exchange being closed for trading for the entire day; or (ii) results in the Stock Exchange being closed prior to its regular time for close of trading for the relevant day (for the avoidance of doubt, in the case when the Stock Exchange is scheduled to open for the morning trading session only, closed prior to its regular time for close of trading for the morning session), PROVIDED THAT there shall be no Market Disruption Event solely by reason of the Stock Exchange opening for trading later than its regular time for the opening of trading on any day as a result of the tropical cyclone warning signal number 8 or above or the “BLACK” rainstorm signal having been issued; or
- (c) a limitation or closure of the Stock Exchange due to any unforeseen circumstances;

“**Maximum Trade Price**” means the highest Spot Price of the Units (subject to any adjustment to such Spot Price as may be necessary to reflect any event as contemplated in Product Condition 4 such as capitalisation, rights issue, distribution or the like) during the MCE Valuation Period;

“**MCE Valuation Date**” means the last Trading Day during the MCE Valuation Period;

“**MCE Valuation Period**” means the period commencing from and including the moment upon which the Mandatory Call Event occurs (the trading session during which the Mandatory Call Event occurs is the “**1st Session**”) and up to the end of the trading session on the Stock Exchange immediately following the 1st Session (“**2nd Session**”) unless, in the determination of the Issuer in its good faith, the 2nd Session for any reason (including, without limitation, a Market Disruption Event occurring and subsisting in the 2nd Session) does not contain any continuous period of 1 hour or more than 1 hour during which trading in the Units is permitted on the Stock Exchange with no limitation imposed, the MCE Valuation Period shall be extended to the end of the subsequent trading session following the 2nd Session during which trading in the Units is permitted on the Stock Exchange with no limitation imposed for a continuous period of at least 1 hour notwithstanding the existence or continuance of a Market Disruption Event in such postponed trading session, unless the Issuer determines in its good faith that each trading session on each of the four Trading Days immediately following the date on which the Mandatory Call Event occurs does not contain any continuous period of 1 hour or more than 1 hour during which trading in the Units is permitted on the Stock Exchange with no limitation imposed.

In that case:

- (a) the period commencing from the 1st Session up to, and including, the last trading session on the Stock Exchange of the fourth Trading Day immediately following the date on which the Mandatory Call Event occurs shall be deemed to be the MCE Valuation Period; and
- (b) the Issuer shall determine the Maximum Trade Price or the Minimum Trade Price (as the case may be) having regard to the then prevailing market conditions, the last reported Spot Price and such other factors as the Issuer may determine to be relevant in its good faith.

For the avoidance of doubt, all Spot Prices available throughout the extended MCE Valuation Period shall be taken into account to determine the Maximum Trade Price or the Minimum Trade Price (as the case may be) for the calculation of the Residual Value.

For the purposes of this definition,

- (A) the pre-opening session, the morning session and, in the case of half day trading, the closing auction session (if any) of the same day; and
- (B) the afternoon session and the closing auction session (if any) of the same day,

shall each be considered as one trading session only;

“**Minimum Trade Price**” means the lowest Spot Price of the Units (subject to any adjustment to such Spot Price as may be necessary to reflect any event as contemplated in Product Condition 4 such as capitalisation, rights issue, distribution or the like) during the MCE Valuation Period;

“**Number of CBBC(s) per Entitlement**” has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document;

“**Observation Commencement Date**” means the date specified as such in the relevant Launch Announcement and Supplemental Listing Document;

“**Observation Period**” means the period commencing from and including the Observation Commencement Date up to and including the close of trading on the Stock Exchange on the Last Trading Day. For the avoidance of doubt, the Observation Period shall not be extended notwithstanding the Valuation Date shall not fall on the Last Trading Day;

“**Post MCE Trades**” has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document, subject to such modification and amendment prescribed by the Stock Exchange from time to time;

“**Product Conditions**” means these product terms and conditions;

“**Residual Value**” means:

- (a) In the case of a series of bull CBBCs:

$$\text{Residual Value per Board Lot} = \frac{\text{Entitlement} \times (\text{Minimum Trade Price} - \text{Strike Price}) \times \text{one Board Lot}}{\text{Number of CBBC(s) per Entitlement}}$$

- (b) In the case of a series of bear CBBCs:

$$\text{Residual Value per Board Lot} = \frac{\text{Entitlement} \times (\text{Strike Price} - \text{Maximum Trade Price}) \times \text{one Board Lot}}{\text{Number of CBBC(s) per Entitlement}}$$

“**Settlement Currency**” means the currency specified as such in the relevant Launch Announcement and Supplemental Listing Document;

“**Settlement Date**” means the third CCASS Settlement Day after (i) the end of the MCE Valuation Period or (ii) the later of: (a) the Expiry Date; and (b) the day on which the Closing Price is determined in accordance with the Conditions (as the case may be);

“**Settlement Disruption Event**” means an event beyond the control of the Issuer as a result of which the Issuer is unable to procure payment of the Cash Settlement Amount (if any) electronically through CCASS to the Designated Bank Account;

“**Spot Price**” means:

- (a) in respect of a continuous trading session of the Stock Exchange, the price per Unit concluded by means of automatic order matching on the Stock Exchange as reported in the official real-time dissemination mechanism for the Stock Exchange during such continuous trading session in accordance with the Trading Rules, excluding direct business (as defined in the Trading Rules); and
- (b) in respect of a pre-opening session or a closing auction session (if applicable) of the Stock Exchange, as the case may be, the final Indicative Equilibrium Price (as defined in the Trading Rules) of the Unit (if any) calculated at the end of the pre-order matching period of such pre-opening session or closing auction session (if applicable), as the case may be, in accordance with the Trading Rules, excluding direct business (as defined in the Trading Rules),

subject to such modification and amendment prescribed by the Stock Exchange from time to time;

“**Strike Price**” means the price specified as such in the relevant Launch Announcement and Supplemental Listing Document, subject to any adjustment in accordance with Product Condition 4;

“**Trading Day**” means any day on which the Stock Exchange is scheduled to be open for trading for its regular trading sessions;

“**Trading Rules**” means the Rules and Regulations of the Exchange prescribed by the Stock Exchange from time to time;

“**Unit**” means the share or unit of the Fund specified as such in the relevant Launch Announcement and Supplemental Listing Document and “**Units**” shall be construed accordingly; and

“**Valuation Date**” means the Trading Day immediately preceding the Expiry Date unless, in the determination of the Issuer, a Market Disruption Event has occurred on that day in which case, the Valuation Date shall be the first succeeding Trading Day on which the Issuer determines that there is no Market Disruption Event, unless the Issuer determines that there is a Market Disruption Event occurring on each of the four Trading Days immediately following the original date which (but for the Market Disruption Event) would have been the Valuation Date. In that case:

- (a) the fourth Trading Day immediately following the original date shall be deemed to be the Valuation Date (regardless of the Market Disruption Event); and
- (b) the Issuer shall determine the Closing Price of the Units having regard to the then prevailing market conditions, the last reported trading price of the Units on the Stock Exchange and such other factors as the Issuer determines to be relevant.

Other capitalised terms shall, unless otherwise defined herein, have the meaning ascribed to them in the Base Listing Document, the General Conditions, the relevant Launch Announcement and Supplemental Listing Document or the Global Certificate.

2. Illegality or Impracticability

The Issuer is entitled to terminate the CBBCs if it determines in good faith and in a commercially reasonable manner that, for reasons beyond its control, it has become or it will become illegal or impracticable:

- (a) for it to perform its obligations under the CBBCs, or for the Guarantor to perform its obligations under the Guarantee, in whole or in part as a result of:
 - (i) the adoption of, or any change in, any relevant law or regulation (including any tax law); or
 - (ii) the promulgation of, or any change in, the interpretation by any court, tribunal, governmental, administrative, legislative, regulatory or judicial authority or power with competent jurisdiction of any relevant law or regulation (including any tax law),(each of (i) and (ii), a “**Change in Law Event**”); or
- (b) for it or any of its affiliates to maintain the Issuer’s hedging arrangements with respect to the CBBCs due to a Change in Law Event.

Upon the occurrence of a Change in Law Event, the Issuer will, if and to the extent permitted by the applicable law or regulation, pay to each Holder a cash amount that the Issuer determines in good faith and in a commercially reasonable manner to be the fair market value in respect of each CBBC held by such Holder immediately prior to such termination (ignoring such illegality or impracticability) less the cost to the Issuer of unwinding any related hedging arrangement as determined by the Issuer in its sole and absolute discretion. Payment will be made to each Holder in such manner as shall be notified to the Holder in accordance with General Condition 7.

3. Exercise of CBBCs

3.1 Exercise of CBBCs in Board Lots

CBBCs may only be exercised in Board Lots or integral multiples thereof.

3.2 Automatic Exercise

If no Mandatory Call Event has occurred during the Observation Period, the CBBCs will be deemed to be automatically exercised on the Expiry Date.

3.3 Mandatory Call Event

- (a) Subject to Product Condition 3.3(b), following a Mandatory Call Event, the CBBCs will be terminated automatically and the Issuer will give a notice of the Mandatory Call Event and early expiry of the CBBCs (the “**Announcement on MCE and Early Expiration**”) to the Holders in accordance with General Condition 7. Trading in the CBBCs will be suspended immediately upon a Mandatory Call Event and all Post MCE Trades will be cancelled and will not be recognised by the Stock Exchange or the Issuer.

In the case of Category R CBBCs, the Issuer will give a notice of the valuation of the Residual Value (the “**Announcement on Valuation of Residual Value**”) to the Holders before the end of the trading session immediately after the MCE Valuation Period in accordance with General Condition 7.

- (b) A Mandatory Call Event is irrevocable unless it is triggered as a result of any of the following events:
- (i) system malfunction or other technical errors of Hong Kong Exchanges and Clearing Limited; or
 - (ii) manifest errors caused by the relevant third party price source where applicable;
- and
- (A) in the case of a system malfunction or other technical errors prescribed in paragraph (i) above, such event is reported by the Stock Exchange to the Issuer, and the Issuer and the Stock Exchange mutually agree that such Mandatory Call Event is to be revoked, and
 - (B) in the case of an error by the relevant price source prescribed in paragraph (ii) above, such event is reported by the Issuer to the Stock Exchange, and the Issuer and the Stock Exchange mutually agree that such Mandatory Call Event is to be revoked,

in each case, such mutual agreement must be reached no later than 30 minutes before the commencement of trading (including the pre-opening session) (Hong Kong time) on the Day of Notification or such other time frame as prescribed by the Stock Exchange from time to time,

in which case, (A) the Mandatory Call Event so triggered will be reversed; and (B) all cancelled trades (if any) will be reinstated and trading of the CBBCs will resume no later than the Trading Day immediately following the Day of Notification in accordance with the rules and/or requirements prescribed by the Stock Exchange from time to time.

3.4 Entitlement

Every Board Lot of CBBCs entitles the Holder to receive from the Issuer on the Settlement Date the Cash Settlement Amount (if any).

3.5 Cancellation

Upon early expiration of the CBBCs at the occurrence of a Mandatory Call Event or an automatic exercise of the CBBCs on the Expiry Date, the Issuer will, with effect from the first Business Day following the MCE Valuation Date or the Expiry Date (as the case may be) remove the name of the Holder from the Register in respect of the number of CBBCs which have expired or exercised (as the case may be) and thereby cancel the relevant CBBCs and if applicable, the Global Certificate.

3.6 Exercise Expenses

- (a) Any Exercise Expenses which were not determined by the Issuer:
 - (i) during the MCE Valuation Period following the Mandatory Call Event; or
 - (ii) otherwise, on the Expiry Date (as the case may be), and were not deducted from the Cash Settlement Amount prior to delivery to the Holder in accordance with Product Condition 3.7, shall be notified to the Holder as soon as practicable after determination thereof by the Issuer and shall be paid by the Holder to the Issuer immediately upon demand.
- (b) Holders shall note that they shall be responsible for additional costs and expenses in connection with any early expiration or exercise of the CBBCs including the Exercise Expenses which amount shall, to the extent necessary, be payable to the Issuer and collected from the Holders.

3.7 Cash Settlement

Upon early expiration of the CBBCs following the occurrence of a Mandatory Call Event or an automatic exercise of the CBBCs on the Expiry Date (as the case may be), the Issuer will, in respect of every Board Lot, pay the Cash Settlement Amount (net of any Exercise Expenses) (if any) to the relevant Holder. If the Cash Settlement Amount is equal to or less than the Exercise Expenses, no amount is payable by the Issuer.

The Cash Settlement Amount (net of any Exercise Expenses) (if any) will be despatched no later than the Settlement Date by crediting that amount, in accordance with the CCASS Rules, to the Designated Bank Account.

If as a result of a Settlement Disruption Event, it is not possible for the Issuer to procure payment electronically through CCASS by crediting the relevant Designated Bank Account of the Holder on the original Settlement Date, the Issuer shall use its reasonable endeavours to procure payment electronically through CCASS by crediting the relevant Designated Bank Account of the Holder as

soon as reasonably practicable after the original Settlement Date. The Issuer will not be liable to the Holder for any interest in respect of the amount due or any loss or damage that such Holder may suffer as a result of the existence of a Settlement Disruption Event.

3.8 Responsibility of Issuer, Guarantor and Sponsor

None of the Issuer, the Guarantor, the Sponsor or their respective agents shall have any responsibility for any errors or omissions in the calculation and dissemination of any variables published by a third party and used in any calculation made pursuant to these Product Conditions or in the calculation of the Cash Settlement Amount arising from such errors or omissions.

The purchase of CBBCs does not confer on any Holder of such CBBCs any rights (whether in respect of voting, distributions or otherwise) in relation to the Units.

3.9 Liability of Issuer, Guarantor and Sponsor

Exercise and settlement of the CBBCs is subject to all applicable laws, rules, regulations and guidelines in force at the relevant time and neither the Issuer, the Guarantor, nor the Sponsor shall incur any liability whatsoever if it is unable to effect the transactions contemplated, after using all reasonable efforts, as a result of any such laws, rules, regulations or guidelines. Neither the Issuer, the Guarantor, nor the Sponsor shall under any circumstances be liable for any acts or defaults of the CCASS in relation to the performance of its duties in relation to the CBBCs.

3.10 Trading

Subject to Product Condition 3.3(b), trading in CBBCs on the Stock Exchange shall cease:

- (a) immediately upon the occurrence of a Mandatory Call Event; or
- (b) at the close of trading for the Trading Day immediately preceding the Expiry Date, whichever is the earlier.

4. Adjustments

4.1 Rights Issues

If and whenever the Fund shall, by way of Rights (as defined below), offer new Units for subscription at a fixed subscription price to the holders of existing Units pro rata to existing holdings (a “**Rights Offer**”), the Entitlement will be adjusted to take effect on the Business Day (“**Rights Issue Adjustment Date**”) on which trading in the Units becomes ex-entitlement in accordance with the following formula:

$$\text{Adjusted Entitlement} = \text{Adjustment Factor} \times E$$

Where:

$$\text{Adjustment Factor} = \frac{1 + M}{1 + (R/S) \times M}$$

E: Existing Entitlement immediately prior to the Rights Offer

S: Cum-Rights Unit price determined by the closing price on the Stock Exchange on the last Business Day on which Units are traded on a cum-Rights basis

- R: Subscription price per Unit as specified in the Rights Offer plus an amount equal to any distributions or other benefits foregone to exercise the Rights
- M: Number of new Unit(s) (whether a whole or a fraction) per existing Unit each holder thereof is entitled to subscribe

Provided that if the adjustment to be made would result in the Entitlement being changed by one per cent. or less, then no adjustment will be made. In addition, the Issuer shall adjust the Strike Price and the Call Price (which shall be rounded to the nearest 0.001) by the reciprocal of the Adjustment Factor, where the reciprocal of the Adjustment Factor means one divided by the relevant Adjustment Factor. The adjustment to the Strike Price and the Call Price shall take effect on the Rights Issue Adjustment Date.

For the purposes of these Product Conditions:

“**Rights**” means the right(s) attached to each existing Unit or needed to acquire one new Unit (as the case may be) which are given to the holders of existing Units to subscribe at a fixed subscription price for new Units pursuant to the Rights Offer (whether by the exercise of one Right, a part of a Right or an aggregate number of Rights).

4.2 Bonus Issues

If and whenever the Fund shall make an issue of Units credited as fully paid to the holders of Units generally (other than pursuant to a scrip distribution or similar scheme for the time being operated by the Fund or otherwise in lieu of a cash distribution and without any payment or other consideration being made or given by such holders) (a “**Bonus Issue**”) the Entitlement will be increased on the Business Day (“**Bonus Issue Adjustment Date**”) on which trading in the Units becomes ex-entitlement in accordance with the following formula:

$$\text{Adjusted Entitlement} = \text{Adjustment Factor} \times E$$

Where:

$$\text{Adjustment Factor} = 1 + N$$

E: Existing Entitlement immediately prior to the Bonus Issue

N: Number of additional Units (whether a whole or a fraction) received by a holder of existing Units for each Unit held prior to the Bonus Issue

Provided that if the adjustment to be made would result in the Entitlement being changed by one per cent. or less, then no adjustment will be made. In addition, the Issuer shall adjust the Strike Price and the Call Price (which shall be rounded to the nearest 0.001) by the reciprocal of the Adjustment Factor, where the reciprocal of the Adjustment Factor means one divided by the relevant Adjustment Factor. The adjustment to the Strike Price and the Call Price shall take effect on the Bonus Issue Adjustment Date.

4.3 Subdivisions or Consolidations

If and whenever the Fund shall subdivide its Units or any class of its outstanding Units into a greater number of units or shares (a “**Subdivision**”) or consolidate the Units or any class of its outstanding Units into a smaller number of units or shares (a “**Consolidation**”), then:

- (i) in the case of a Subdivision, the Entitlement in effect immediately prior thereto will be increased whereas the Strike Price and the Call Price (which shall be rounded to the nearest 0.001) will be decreased in the same ratio as the Subdivision; and
- (ii) in the case of a Consolidation, the Entitlement in effect immediately prior thereto will be decreased whereas the Strike Price and the Call Price (which shall be rounded to the nearest 0.001) will be increased in the same ratio as the Consolidation,

in each case on the day on which the Subdivision or Consolidation (as the case may be) shall have taken effect.

4.4 Merger or Consolidation

If it is announced that the Fund is to or may merge or consolidate with or into any other trust or corporation (including becoming, by agreement or otherwise, controlled by any person or corporation) (except where the Fund is the surviving entity in a merger) or that it is to or may sell or transfer all or substantially all of its assets, the rights attaching to the CBBCs may in the absolute discretion of the Issuer be amended no later than the Business Day preceding the consummation of such merger, consolidation, sale or transfer (each a “**Restructuring Event**”) (as determined by the Issuer in its absolute discretion).

The rights attaching to the CBBCs after the adjustment shall, after such Restructuring Event, relate to the number of units or shares of the trust(s) or corporation(s) resulting from or surviving such Restructuring Event or other securities (“**Substituted Securities**”) and/or cash offered in substitution for the affected Units, as the case may be, to which the holder of such number of Units to which the CBBCs related immediately before such Restructuring Event would have been entitled upon such Restructuring Event. Thereafter the provisions hereof shall apply to such Substituted Securities, provided that any Substituted Securities may, in the absolute discretion of the Issuer, be deemed to be replaced by an amount in the relevant currency equal to the market value or, if no market value is available, fair value, of such Substituted Securities in each case as determined by the Issuer as soon as practicable after such Restructuring Event is effected.

For the avoidance of doubt, any remaining Units shall not be affected by this Product Condition 4.4 and, where cash is offered in substitution for Units or is deemed to replace Substituted Securities as described above, references in these Product Conditions to the Units shall include any such cash.

4.5 Cash Distribution

No adjustment will be made for an ordinary cash distribution (whether or not it is offered with a scrip alternative) (“**Ordinary Distribution**”). For any other forms of cash distribution (“**Cash Distribution**”) announced by the Fund, such as a cash bonus, special distribution or extraordinary distribution, no adjustment will be made unless the value of the Cash Distribution accounts for 2 per cent. or more of the Unit’s closing price on the day of announcement by the Fund.

If and whenever the Fund shall make a Cash Distribution credited as fully paid to the holders of Units generally, the Entitlement shall be adjusted to take effect on the Business Day on which trading in the Units becomes ex-entitlement in respect of the relevant Cash Distribution (“**Cash Distribution Adjustment Date**”) in accordance with the following formula:

$$\text{Adjusted Entitlement} = \text{Adjustment Factor} \times E$$

Where:

$$\text{Adjustment Factor} = \frac{S - OD}{S - OD - CD}$$

E: Existing Entitlement immediately prior to the Cash Distribution

S: The closing price of the Unit on the Stock Exchange on the Business Day immediately preceding the Cash Distribution Adjustment Date

CD: The Cash Distribution per Unit

OD: The Ordinary Distribution per Unit, provided that the date on which the Units are traded on an ex-Ordinary Distribution basis is the Cash Distribution Adjustment Date. For the avoidance of doubt, the OD shall be zero if the date on which the Units are traded on an ex-Ordinary Distribution basis is not the Cash Distribution Adjustment Date

In addition, the Issuer shall adjust the Strike Price and the Call Price (which shall be rounded to the nearest 0.001) by the reciprocal of the Adjustment Factor, where the reciprocal of the Adjustment Factor means one divided by the relevant Adjustment Factor. The adjustment to the Strike Price and the Call Price shall take effect on the Cash Distribution Adjustment Date.

5. Termination or Liquidation

In the event of a Termination, liquidation or dissolution of the Fund or, if applicable, the trustee of the Fund (including any successor trustee appointed from time to time) (“**Trustee**”) (in its capacity as trustee of the Fund) or the appointment of a liquidator, receiver or administrator or analogous person under Hong Kong law in respect of the whole or substantially the whole of the Fund’s or the Trustee’s (as the case may be) undertaking, property or assets, all unexercised CBBCs will lapse and shall cease to be valid for any purpose. In the case of a Termination, the unexercised CBBCs will lapse and shall cease to be valid on the effective date of the Termination, in the case of voluntary liquidation, on the effective date of the relevant resolution and, in the case of an involuntary liquidation or dissolution, on the date of the relevant court order or, in the case of the appointment of a liquidator or receiver or administrator or analogous person under any applicable law in respect of the whole or substantially the whole of such Fund’s or Trustee’s (as the case may be) undertaking, property or assets, on the date when such appointment is effective but subject (in any such case) to any contrary mandatory requirement of law.

For the purpose of this Product Condition 5, “**Termination**” means (i) the Fund is terminated or required to be terminated for whatever reason, or the termination of the Fund commences; (ii) where applicable, the Fund is held or is conceded by the Trustee or the manager of the Fund (including any successor manager appointed from time to time) not to have been constituted or to have been imperfectly constituted; (iii) where applicable, the Trustee ceases to be authorised under the Fund to hold the property of the Fund in its name and perform its obligations under the trust deed constituting the Fund; or (iv) the Fund ceases to be authorised as an authorised collective investment scheme under the Securities and Futures Ordinance (Cap. 571 of the Laws of Hong Kong).

6. Delisting

6.1 Adjustments following delisting

If at any time the Units cease to be listed on the Stock Exchange, the Issuer shall give effect to these Product Conditions in such manner and make such adjustments to the rights attaching to the CBBCs as it shall, in its absolute discretion, consider appropriate to ensure, so far as it is reasonably able to do so, that the interests of the Holders generally are not materially prejudiced as a consequence of such delisting (without considering the individual circumstances of any Holder or the tax or other consequences that may result in any particular jurisdiction).

6.2 Listing on another exchange

Without prejudice to the generality of Product Condition 6.1, where the Units are, or, upon the delisting, become, listed on any other stock exchange, these Product Conditions may, in the absolute discretion of the Issuer, be amended to the extent necessary to allow for the substitution of that other stock exchange in place of the Stock Exchange and the Issuer may, without the consent of the Holders, make such adjustments to the entitlements of Holders on exercise (including, if appropriate, by converting foreign currency amounts at prevailing market rates into the relevant currency) as may be appropriate in the circumstances.

Sponsor

BNP Paribas Securities (Asia) Limited

60th-63rd Floors

Two International Finance Centre

8 Finance Street

Central, Hong Kong

China

APPENDIX 5 — A BRIEF GUIDE TO CREDIT RATINGS

Information set out in this Appendix 5 is based on, extracted or reproduced from the website of S&P at <https://www.spglobal.com/ratings/en/> and the website of Moody's at <https://www.moodys.com>, as at the day immediately preceding the date of this document. Information appearing on those websites does not form part of this document, and we accept no responsibility for the accuracy or completeness of the information appearing on those websites, except that we have accurately extracted and reproduced such information in this Appendix 5 and take responsibility for such extraction and reproduction. We have not separately verified such information. There can be no assurance that such information will not be revised by the relevant rating agency in the future and we have no responsibility to notify you of such change. If you are unsure about any information provided in this Appendix 5 and/or what a credit rating means, you should seek independent professional advice.

What is a credit rating?

A credit rating is a forward looking opinion by a credit rating agency of a company's overall ability to meet its financial obligations. The focus is on the company's capacity to pay its debts as they become due. The rating does not necessarily apply to any specific obligation.

What do the credit ratings mean?

Below are guidelines issued by S&P and Moody's on what each of their investment-grade ratings means as at the day immediately preceding the date of this document.

S&P long-term issuer credit ratings

AAA

An obligor rated 'AAA' has extremely strong capacity to meet its financial commitments. 'AAA' is the highest issuer credit rating assigned by S&P.

AA

An obligor rated 'AA' has very strong capacity to meet its financial commitments. It differs from the highest-rated obligors only to a small degree.

A

An obligor rated 'A' has strong capacity to meet its financial commitments but is somewhat more susceptible to the adverse effects of changes in circumstances and economic conditions than obligors in higher-rated categories.

BBB

An obligor rated 'BBB' has adequate capacity to meet its financial commitments. However, adverse economic conditions or changing circumstances are more likely to weaken the obligor's capacity to meet its financial commitments.

Plus (+) or minus (-)

The above ratings (except for 'AAA') may be modified by the addition of a plus or minus sign to show relative standing within the rating categories.

Please refer to <https://disclosure.spglobal.com/ratings/en/regulatory/article/-/view/sourceId/504352> for further details.

Moody's long-term ratings definitions

Aaa

Obligations rated Aaa are judged to be of the highest quality, with minimal risk.

Aa

Obligations rated Aa are judged to be of high quality and are subject to very low credit risk.

A

Obligations rated A are considered upper medium-grade and are subject to low credit risk.

Baa

Obligations rated Baa are subject to moderate credit risk. They are considered medium-grade and as such may possess speculative characteristics.

Modifiers "1", "2" and "3"

Moody's appends numerical modifiers 1, 2 and 3 to each of the above generic rating classifications (except for Aaa). The modifier 1 indicates that the obligation ranks in the higher end of its generic rating category; the modifier 2 indicates a mid-range ranking; and the modifier 3 indicates a ranking in the lower end of that generic rating category.

Please refer to <https://ratings.moody's.io/ratings> for further details.

Rating Outlooks

A rating outlook is an opinion regarding the likely rating direction over the medium term (for example, this is typically six months to two years for S&P). A rating outlook issued by S&P or Moody's will usually indicate whether the rating direction is likely to be "positive", "negative", "stable" or "developing". Please refer to the abovementioned websites of the relevant credit rating agencies for further details regarding rating outlooks published by the relevant credit rating agencies.

**APPENDIX 6 — AUDITORS’ REPORT AND THE GUARANTOR’S
CONSOLIDATED FINANCIAL STATEMENTS FOR
THE YEAR ENDED 31 DECEMBER 2022**

The information in this Appendix 6 is the Guarantor’s Consolidated Financial Statements for the year ended 31 December 2022. Auditors’ report and the Guarantor’s Consolidated Financial Statements for the year ended 31 December 2022 are free English translations of the French original versions. References to page numbers on the following pages are to the page numbers of such Consolidated Financial Statements. We draw your attention to the fact that the information presented in Chapter 5 of the Guarantor’s registration document and identified by the word “Audited”, which is an integral part of the notes to the Guarantor’s consolidated financial statements, is not included in the Base Listing Document (except for Chapter 5.3 of the Guarantor’s registration document, an extract of which is included in the Base Listing Document under the section headed “Description of the Guarantor”). The Auditors’ report only covers the Guarantor’s consolidated financial statements as at 31 December 2022 and for the year then ended, including the information referred to above which is an integral part of those financial statements.

BNP Paribas SA

**Statutory Auditors' report
on the consolidated financial statements**

For the year ended 31 December 2022

Deloitte & Associés
6, place de la Pyramide
92908 Paris La Défense Cedex

PricewaterhouseCoopers Audit
63, rue de Villiers
92208 Neuilly-sur-Seine Cedex

Mazars
61, rue Henri Regnault
92400 Courbevoie

Statutory Auditors' report on the consolidated financial statements

For the year ended 31 December 2022

This is a free translation into English of the Statutory Auditors' report issued in French and is provided solely for the convenience of English speaking readers. This report includes information specifically required by European regulations or French law, such as information about the appointment of Statutory Auditors. This report should be read in conjunction with, and construed in accordance with, French law and professional auditing standards applicable in France.

BNP Paribas SA
16, boulevard des Italiens
75009 Paris

To the Shareholders,

Opinion

In compliance with the engagement entrusted to us by your Annual General Meeting, we have audited the accompanying consolidated financial statements of BNP Paribas SA for the year ended 31 December 2022.

In our opinion, the consolidated financial statements give a true and fair view of the assets and liabilities and of the financial position of the Group at 31 December 2022 and of the results of its operations for the year then ended in accordance with International Financial Reporting Standards as adopted by the European Union.

The audit opinion expressed above is consistent with our report to the Financial Statements Committee.

Basis for opinion

Audit framework

We conducted our audit in accordance with professional standards applicable in France. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Our responsibilities under these standards are further described in the "Responsibilities of the Statutory Auditors relating to the audit of the consolidated financial statements" section of our report.

Independence

We conducted our audit engagement in compliance with the independence rules provided for in the French Commercial Code (*Code de commerce*) and the French Code of Ethics (*Code de déontologie*)

for Statutory Auditors for the period from 1 January 2022 to the date of our report, and, in particular, we did not provide any non-audit services prohibited by article 5(1) of Regulation (EU) No. 537/2014.

Justification of assessments – Key audit matters

In accordance with the requirements of articles L.823-9 and R.823-7 of the French Commercial Code relating to the justification of our assessments, we inform you of the key audit matters relating to the risks of material misstatement that, in our professional judgement, were the most significant in our audit of the consolidated financial statements, as well as how we addressed those risks.

These matters were addressed as part of our audit of the consolidated financial statements as a whole, and therefore contributed to the opinion we formed as expressed above. We do not provide a separate opinion on specific items of the consolidated financial statements.

Assessment of credit risk and measurement of impairment losses (stages 1, 2 and 3) on customer loan portfolios	
<i>(See Notes 1.e.5, 1.e.6, 1.o, 2.h, 4.e, 4.f, 4.p and 7.d to the consolidated financial statements)</i>	
Description of risk	How our audit addressed this risk
<p>BNP Paribas recognises impairment losses to hedge the credit risks inherent to its banking intermediation activities. In a context still marked by considerable uncertainty relating to the macro-economic environment, the measurement of expected credit losses for customer loan portfolios required the BNP Paribas Group to exercise greater judgement and to take into account assumptions, in particular in order to:</p> <ul style="list-style-type: none"> - assess the significant deterioration in credit risk to classify outstandings in stage 1, stage 2, or stage 3 according to geographical region and industry. As specified in Note 2.h to the consolidated financial statements, the bank has updated its criteria for assessing the material increase in credit risk in line with the recommendations issued by the European Banking Authority and the European Central Bank. - prepare macro-economic projections which are integrated into both the criteria for recognising deterioration and in the measurement of expected losses; - estimate the amount of expected losses according to the different stages and taking into account the current macro-economic environment and the absence of any comparable historical situation. In particular, as specified in Note 2.h, certain additional adjustments were made in 2022 to take into account the impacts of inflation and rate hikes where these effects are not directly estimated by the models. <p>At 31 December 2022, total outstanding customer loans exposed to credit risk amounted to EUR 932 billion, while total impairment losses stood at EUR 19 billion (of which EUR 56 billion and EUR 0.3 billion regarding BancWest).</p> <p>We deemed the assessment of credit risk and the measurement of impairment losses to be a key audit matter insofar as management is required to exercise judgement and make estimates as regards credit granted to companies, particularly in the context of persistent uncertainty related to the war in Ukraine, pressures on raw materials and energy prices, the return of inflation and a rapid increase in interest rates.</p>	<p>We assessed the relevance of BNP Paribas' internal control system, particularly its adaptation to the uncertain environment, and tested the manual and computerised controls for assessing credit risk and measuring expected losses.</p> <p>During our work, we focused on:</p> <ul style="list-style-type: none"> - classification of outstandings by stage: we assessed whether the change of risks was taken into account in estimating the indicators applicable to the various business lines to measure the significant deterioration in credit risk, particularly following the implementation of the new criteria for 2022. - measurement of expected losses (stages 1, 2 and 3): <ul style="list-style-type: none"> • assisted by our credit risk experts and relying on the internal system for independent validation of BNP Paribas' models, we assessed the methodologies as well as the assumptions underlying the macro-economic projections used by BNP Paribas across the various business lines, the proper integration of said projections into the information system and the effectiveness of the data quality controls; we paid particular attention to additional impairments recorded to take into account the current context of uncertainty. • with regard to impairment losses on outstanding loans to companies classified in stage 3, we verified that a periodic review of the counterparties under surveillance had been carried out by BNP Paribas and, based on a sample of counterparties, assessed the assumptions and data used by management to estimate impairment. <p>In addition, we examined the disclosures in the notes to the consolidated financial statements with respect to credit risk and particularly the disclosures required by IFRS 9.</p>

Valuation of financial instruments (See Notes 1.e.7, 1.e.10, 1.o, 2.a, 2.c, 4.a and 4.d to the consolidated financial statements)	
Description of risk	How our audit addressed this risk
<p>As part of its trading activities, BNP Paribas holds financial instruments (assets and liabilities) which are recognised in the balance sheet at market value.</p> <p>Market value is determined according to different approaches, depending on the type of instrument and its complexity: (i) using directly observable quoted prices (instruments classified in level 1 of the fair value hierarchy); (ii) using valuation models whose main inputs are observable (instruments classified in level 2); and (iii) using valuation models whose main inputs are unobservable (instruments classified in level 3).</p> <p>The valuations obtained may be subject to additional value adjustments to take into account certain specific trading, liquidity or counterparty risks.</p> <p>The techniques adopted by management to measure these instruments may therefore involve significant judgement as regards the models and data used.</p> <p>At 31 December 2022, financial instruments represented EUR 672 billion (of which EUR 7 billion for level 3 instruments) under assets and EUR 632 billion (of which EUR 10 billion for level 3 instruments) under liabilities.</p> <p>In light of the materiality of the outstandings and the judgement used to determine market value, we deemed the measurement of financial instruments to be a key audit matter, in particular the measurement of level 3 instruments given the use of unobservable inputs.</p>	<p>Assisted by our valuation experts, we verified that the key controls used by BNP Paribas with respect to the valuation of financial instruments function properly, in particular those relating to:</p> <ul style="list-style-type: none"> - the approval and regular review by management of the risks of the valuation models; - the independent verification of the valuation inputs; - the determination of value adjustments. <p>Based on a sample, our valuation experts:</p> <ul style="list-style-type: none"> - analysed the relevance of the assumptions and inputs used; - analysed the results of the independent review of the inputs by BNP Paribas; - performed independent counter valuations using our own models. <p>We also analysed, on a sample basis, any differences between the valuations obtained and collateral calls with counterparties.</p> <p>In addition, we examined the disclosures in the notes to the consolidated financial statements with respect to the valuation of financial instruments.</p>

Goodwill impairment (See Notes 1.b.4, 1.o and 4.o to the consolidated financial statements)	
Description of risk	How our audit addressed this risk
<p>When recognising acquisitions, BNP Paribas records goodwill under assets, corresponding to the excess of the acquisition price of the shares of acquired companies over the value of the Group's interest. At 31 December 2022, goodwill amounted to EUR 5.3 billion.</p> <p>Goodwill is tested for impairment at least once a year or more frequently if there is an indication of impairment. Comparing the carrying amount of the cash-generating units to which goodwill is allocated with their recoverable amount is a key step in the process of determining if an impairment charge should be recorded.</p> <p>We deemed goodwill impairment to be a key audit matter because management is required to exercise judgement in order to determine assumptions of future earnings of acquirees and to measure the recoverable amount of the cash-generating units.</p>	<p>Our audit approach consisted in assessing the procedures implemented within BNP Paribas to test goodwill for impairment as well as the controls designed to identify indications of goodwill impairment.</p> <p>Assisted by our valuation experts, our work on the goodwill balances at 31 December 2022 consisted primarily in:</p> <ul style="list-style-type: none"> - analysing the methods adopted by BNP Paribas; - critically assessing the provisional business plans approved by Executive Management to ensure the reasonableness of the future cash flow estimates set out therein (in particular when projections do not match past performance); - critically analysing the main assumptions and inputs used (growth rate, cost of capital and discount rate) with respect to available external information; - assessing the analyses of the sensitivity of estimates to key inputs (in particular when the recoverable amount approximates the carrying amount). <p>Lastly, we verified the appropriateness of the disclosures in the notes to the consolidated financial statements with respect to the results of impairment and sensitivity tests.</p>

General IT controls	
Description of risk	How our audit addressed this risk
<p>The reliability and security of IT systems plays a key role in the preparation of BNP Paribas SA's consolidated financial statements.</p> <p>We thus deemed the assessment of the general IT controls of the infrastructures and applications that contribute to the preparation of accounting and financial information to be a key audit matter.</p> <p>In particular, a system for controlling access rights to IT systems and authorisation levels based on employee profiles represents a key control for limiting the risk of inappropriate changes to application settings or underlying data.</p>	<p>For the main systems used to prepare accounting and financial information, assisted by our IT specialists, our work consisted primarily in:</p> <ul style="list-style-type: none"> - obtaining an understanding of the systems, processes and controls which underpin accounting and financial data; - assessing the general IT controls (application and data access management, application changes/developments management and IT operations management) on key systems (in particular accounting, consolidation and automatic reconciliation applications); - examining the control for the authorisation of manual accounting entries; - performing additional audit procedures, where appropriate; - taking into account the cybersecurity risk related to the crisis in Ukraine and the widespread use of remote working.

Technical reserves of insurance companies (See Notes 1.f.3, 1.o and 4.j to the consolidated financial statements)	
Description of risk	How our audit addressed this risk
<p>At the year-end, a liability adequacy test is performed by BNP Paribas for its insurance activities. The purpose of this test is to ensure that liabilities in respect of insurance contracts and investment contracts with discretionary profit-sharing are adequate in light of current estimates of the future cash flows to be generated by those contracts.</p> <p>If the test indicates that the carrying amount of insurance liabilities is inadequate in relation to the estimated future cash flows, the total amount of the potential losses is recognised in profit or loss.</p> <p>We deemed the implementation of the liability adequacy test for the Savings business to be a key audit matter because it involves using actuarial models as well as modelling options and guarantees which are specific to BNP Paribas and requires management to exercise judgement to determine certain key assumptions (e.g., discount rate, return on assets, surrender rate and fees). These estimates are particularly sensitive in the current economic climate, which is marked by highly volatile markets.</p> <p>At 31 December 2022, total technical insurance reserves and other liabilities amounted to EUR 227 billion.</p> <p>The test performed at 31 December 2022 confirmed that the carrying amount of the reserves was sufficient.</p>	<p>Based on a sample, we assessed the amount of net future cash flows used in the calculation, in particular by:</p> <ul style="list-style-type: none"> • assessing the validity of the data on asset portfolios and contracts used as a starting point for the modelling exercise; • identifying the main changes made to the actuarial models, assessing the relevance of said changes and obtaining an understanding of their impact on the result of the test; • analysing differences in the models' results between 2021 and 2022 based on analyses prepared by BNP Paribas. We verified that the most material differences were justified by changes in the portfolio, the assumptions or the models; • examining the results of the sensitivity analyses performed by BNP Paribas, notably those concerning rate assumptions and their consistency with market rates. <p>In addition, we examined the disclosures in the notes to the consolidated financial statements with respect to insurance liabilities.</p>

Specific verifications

As required by legal and regulatory provisions and in accordance with professional standards applicable in France, we have also verified the information pertaining to the Group presented in the Board of Directors' management report.

We have no matters to report as to its fair presentation and its consistency with the consolidated financial statements.

We attest that the Group management report includes the consolidated non-financial information statement required under article L.225-102-1 of the French Commercial Code. However, in accordance with article L.823-10 of the French Commercial Code, we have not verified the fair presentation and consistency with the consolidated financial statements of the information given in that statement, which will be the subject of a report by an independent third party.

Other verifications and information pursuant to legal and regulatory requirements

Presentation of the consolidated financial statements included in the annual financial report

In accordance with professional standards applicable to the Statutory Auditors' procedures for annual and consolidated financial statements presented according to the European single electronic reporting format, we have verified that the presentation of the consolidated financial statements included in the annual financial report referred to in paragraph I of article L.451-1-2 of the French Monetary and Financial Code (*Code monétaire et financier*) and prepared under the Chief Executive Officer's responsibility, complies with this format, as defined by European Delegated Regulation No. 2019/815 of 17 December 2018. As it relates to the consolidated financial statements, our work included verifying that the markups in the financial statements comply with the format defined by the aforementioned Regulation.

On the basis of our work, we conclude that the presentation of the consolidated financial statements to be included in the annual financial report complies, in all material respects, with the single European electronic reporting format.

Due to the technical limitations inherent to block tagging the consolidated financial statements in the European single electronic reporting format, the content of some of the tags in the notes may not be rendered identically to the accompanying consolidated financial statements.

Appointment of the Statutory Auditors

We were appointed Statutory Auditors of BNP Paribas SA by the Annual General Meetings held on 23 May 2006 for Deloitte & Associés, 26 May 1994 for PricewaterhouseCoopers Audit and 23 May 2000 for Mazars.

At 31 December 2022, Deloitte & Associés, PricewaterhouseCoopers Audit and Mazars were in the seventeenth, the twenty-ninth and the twenty-third consecutive year of their engagement, respectively.

Responsibilities of management and those charged with governance for the consolidated financial statements

Management is responsible for preparing consolidated financial statements giving a true and fair view in accordance with International Financial Reporting Standards as adopted by the European Union and for implementing the internal control procedures it deems necessary for the preparation of consolidated financial statements that are free of material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, management is responsible for assessing the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern, and using the going concern basis of accounting, unless it expects to liquidate the Company or to cease operations.

The Financial Statements Committee is responsible for monitoring the financial reporting process and the effectiveness of internal control and risk management systems, as well as, where applicable, any internal audit systems relating to accounting and financial reporting procedures.

The consolidated financial statements were approved by the Board of Directors.

Responsibilities of the Statutory Auditors relating to the audit of the consolidated financial statements

Objective and audit approach

Our role is to issue a report on the consolidated financial statements. Our objective is to obtain reasonable assurance about whether the consolidated financial statements as a whole are free of material misstatement. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with professional standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions taken by users on the basis of these consolidated financial statements.

As specified in article L.823-10-1 of the French Commercial Code, our audit does not include assurance on the viability or quality of the Company's management.

As part of an audit conducted in accordance with professional standards applicable in France, the Statutory Auditors exercise professional judgement throughout the audit.

They also:

- identify and assess the risks of material misstatement in the consolidated financial statements, whether due to fraud or error, design and perform audit procedures in response to those risks, and obtain audit evidence considered to be sufficient and appropriate to provide a basis for their opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control;
- obtain an understanding of the internal control procedures relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the internal control;
- evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management and the related disclosures in the notes to the consolidated financial statements;
- assess the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company's ability to continue as a going concern. This assessment is based on the audit evidence obtained up to the date of the audit report. However, future events or conditions may cause the Company to cease to continue as a going concern. If the Statutory Auditors conclude that a material uncertainty exists, they are required to draw attention in the audit report to the related disclosures in the consolidated financial statements or, if such disclosures are not provided or are inadequate, to issue a qualified opinion or a disclaimer of opinion;
- evaluate the overall presentation of the consolidated financial statements and assess whether these statements represent the underlying transactions and events in a manner that achieves fair presentation;

- obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. The Statutory Auditors are responsible for the management, supervision and performance of the audit of the consolidated financial statements and for the opinion expressed thereon.

Report to the Financial Statements Committee

We submit a report to the Financial Statements Committee which includes, in particular, a description of the scope of the audit and the audit programme implemented, as well as the results of our audit. We also report any significant deficiencies in internal control that we have identified regarding the accounting and financial reporting procedures.

Our report to the Financial Statements Committee includes the risks of material misstatement that, in our professional judgement, were the most significant for the audit of the consolidated financial statements and which constitute the key audit matters that we are required to describe in this report.

We also provide the Financial Statements Committee with the declaration provided for in article 6 of Regulation (EU) No. 537/2014, confirming our independence within the meaning of the rules applicable in France, as defined in particular in articles L.822-10 to L.822-14 of the French Commercial Code and in the French Code of Ethics for Statutory Auditors. Where appropriate, we discuss any risks to our independence and the related safeguard measures with the Financial Statements Committee.

Paris La Défense, Neuilly-sur-Seine and Courbevoie, 13 March 2023

The Statutory Auditors

Deloitte & Associés

PricewaterhouseCoopers Audit

Mazars

Laurence Dubois

Patrice Morot

Virginie Chauvin



CONSOLIDATED FINANCIAL STATEMENTS

Year ended 31 December 2022



BNP PARIBAS

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CONSOLIDATED FINANCIAL STATEMENTS

Prepared in accordance with IFRS as adopted by the European Union

The Board of Directors of BNP Paribas approved the Group consolidated financial statements on 6 February 2023.

The consolidated financial statements of the BNP Paribas Group are presented for the years ended 31 December 2022 and 31 December 2021. In accordance with Article 20.1 of Annex I of European Commission Regulation (EC) 809/2004, the consolidated financial statements for the year ended 31 December 2020 are provided in the Universal Registration Document filed with the Autorité des Marchés Financiers on 25 March 2022 under number D.22-0156.

On 18 December 2021, the Group concluded an agreement with BMO Financial Group for the sale of 100% of its retail and commercial banking activities in the United States operated by the BancWest cash-generating unit. The terms of this transaction fall within the scope of application of IFRS 5 relating to groups of assets and liabilities held for sale (see note 7.d *Discontinued activities*) leading to isolate the "Net income from discontinued activities" on a separate line. A similar reclassification is made in the statement of net income and changes in assets and liabilities recognised directly in equity and in the cash flow statement. The effect of this reclassification on the aggregates of the profit and loss statement is presented in note 3 *Segment Information*.

Following the receipt of regulatory approvals, the transaction was finalised on 1 February 2023.

PROFIT AND LOSS ACCOUNT FOR THE YEAR ENDED 31 DECEMBER 2022

In millions of euros	Notes	Year to 31 Dec. 2022	Year to 31 Dec. 2021
Interest income	2.a	41,082	29,518
Interest expense	2.a	(20,251)	(10,280)
Commission income	2.b	14,622	15,037
Commission expense	2.b	(4,444)	(4,675)
Net gain on financial instruments at fair value through profit or loss	2.c	9,358	7,615
Net gain on financial instruments at fair value through equity	2.d	138	164
Net gain on derecognised financial assets at amortised cost		(41)	(2)
Net income from insurance activities	2.e	4,296	4,332
Income from other activities	2.f	15,701	15,482
Expense on other activities	2.f	(12,830)	(13,429)
REVENUES FROM CONTINUING ACTIVITIES		47,631	43,762
Salary and employee benefit expense	6.a	(17,605)	(16,417)
Other operating expenses	2.g	(11,696)	(10,705)
Depreciation, amortisation and impairment of property, plant and equipment and intangible assets	4.n	(2,394)	(2,344)
GROSS OPERATING INCOME FROM CONTINUING ACTIVITIES		15,936	14,296
Cost of risk	2.h	(3,004)	(2,971)
OPERATING INCOME FROM CONTINUING ACTIVITIES		12,932	11,325
Share of earnings of equity-method entities	4.m	699	494
Net gain on non-current assets	2.i	(253)	834
Goodwill	4.o	249	91
PRE-TAX INCOME FROM CONTINUING ACTIVITIES		13,627	12,744
Corporate income tax from continuing activities	2.j	(3,716)	(3,584)
NET INCOME FROM CONTINUING ACTIVITIES		9,911	9,160
Net income from discontinued activities	7.d	686	720
NET INCOME		10,597	9,880
Net income attributable to minority interests		401	392
NET INCOME ATTRIBUTABLE TO EQUITY HOLDERS		10,196	9,488
Basic earnings per share	7.a	7.80	7.26
Diluted earnings per share	7.a	7.80	7.26

STATEMENT OF NET INCOME AND CHANGES IN ASSETS AND LIABILITIES RECOGNISED DIRECTLY IN EQUITY

In millions of euros	Year to 31 Dec. 2022	Year to 31 Dec. 2021
Net income for the period	10,597	9,880
Changes in assets and liabilities recognised directly in equity	(3,593)	712
Items that are or may be reclassified to profit or loss	(3,953)	26
- Changes in exchange differences	1,041	481
- Changes in fair value of financial assets at fair value through equity		
<i>Changes in fair value recognised in equity</i>	(754)	(379)
<i>Changes in fair value reported in net income</i>	(120)	(115)
- Changes in fair value of investments of insurance activities		
<i>Changes in fair value recognised in equity</i>	(2,513)	(387)
<i>Changes in fair value reported in net income</i>	(45)	(191)
- Changes in fair value of hedging instruments		
<i>Changes in fair value recognised in equity</i>	(1,468)	(620)
<i>Changes in fair value reported in net income</i>	14	(31)
- Income tax	1,249	402
- Changes in equity-method investments, after tax	(917)	295
- Changes in discontinued activities, after tax	(440)	571
Items that will not be reclassified to profit or loss	360	686
- Changes in fair value of equity instruments designated as at fair value through equity	(20)	413
- Debt remeasurement effect arising from BNP Paribas Group issuer risk	515	25
- Remeasurement gains (losses) related to post-employment benefit plans	(102)	347
- Income tax	(96)	(125)
- Changes in equity-method investments, after tax	57	17
- Changes in discontinued activities, after tax	6	9
Total	7,004	10,592
- Attributable to equity shareholders	6,519	10,200
- Attributable to minority interests	485	392

BALANCE SHEET AT 31 DECEMBER 2022

In millions of euros	Notes	31 December 2022	31 December 2021
ASSETS			
Cash and balances at central banks		318,560	347,883
Financial instruments at fair value through profit or loss			
Securities	4.a	166,077	191,507
Loans and repurchase agreements	4.a	191,125	249,808
Derivative financial instruments	4.a	327,932	240,423
Derivatives used for hedging purposes	4.b	25,401	8,680
Financial assets at fair value through equity			
Debt securities	4.c	35,878	38,906
Equity securities	4.c	2,188	2,558
Financial assets at amortised cost			
Loans and advances to credit institutions	4.e	32,616	21,751
Loans and advances to customers	4.e	857,020	814,000
Debt securities	4.e	114,014	108,510
Remeasurement adjustment on interest-rate risk hedged portfolios		(7,477)	3,005
Financial investments and other assets related to insurance activities	4.i	247,403	280,766
Current and deferred tax assets	4.k	5,893	5,866
Accrued income and other assets	4.l	209,092	179,123
Equity-method investments	4.m	6,263	6,528
Property, plant and equipment and investment property	4.n	38,468	35,083
Intangible assets	4.n	3,790	3,659
Goodwill	4.o	5,294	5,121
Assets held for sale	7.d	86,839	91,267
TOTAL ASSETS		2,666,376	2,634,444
LIABILITIES			
Deposits from central banks		3,054	1,244
Financial instruments at fair value through profit or loss			
Securities	4.a	99,155	112,338
Deposits and repurchase agreements	4.a	234,076	293,456
Issued debt securities	4.a	70,460	70,383
Derivative financial instruments	4.a	300,121	237,397
Derivatives used for hedging purposes	4.b	40,001	10,076
Financial liabilities at amortised cost			
Deposits from credit institutions	4.g	124,718	165,699
Deposits from customers	4.g	1,008,054	957,684
Debt securities	4.h	154,143	149,723
Subordinated debt	4.h	24,156	24,720
Remeasurement adjustment on interest-rate risk hedged portfolios		(20,201)	1,367
Current and deferred tax liabilities	4.k	3,054	3,103
Accrued expenses and other liabilities	4.l	185,456	145,399
Technical reserves and other insurance liabilities	4.j	226,532	254,795
Provisions for contingencies and charges	4.p	10,040	10,187
Liabilities associated with assets held for sale	7.d	77,002	74,366
TOTAL LIABILITIES		2,539,821	2,511,937
EQUITY			
<i>Share capital, additional paid-in capital and retained earnings</i>		<i>115,149</i>	<i>108,176</i>
<i>Net income for the period attributable to shareholders</i>		<i>10,196</i>	<i>9,488</i>
Total capital, retained earnings and net income for the period attributable to shareholders		125,345	117,664
Changes in assets and liabilities recognised directly in equity		(3,553)	222
Shareholders' equity		121,792	117,886
Minority interests	7.f	4,763	4,621
TOTAL EQUITY		126,555	122,507
TOTAL LIABILITIES AND EQUITY		2,666,376	2,634,444

CASH FLOW STATEMENT FOR THE YEAR ENDED 31 DECEMBER 2022

In millions of euros	Notes	Year to 31 Dec. 2022	Year to 31 Dec. 2021
Pre-tax income from continuing activities		13,627	12,744
Pre-tax income from discontinued activities		823	893
Non-monetary items included in pre-tax net income and other adjustments		21,425	26,336
Net depreciation/amortisation expense on property, plant and equipment and intangible assets		6,516	6,781
Impairment of goodwill and other non-current assets		91	22
Net addition to provisions		2,743	13,150
Share of earnings of equity-method entities		(699)	(494)
Net expense (income) from investing activities		265	(923)
Net (income) from financing activities		(1,192)	(1,105)
Other movements		13,701	8,905
Net decrease (increase) related to assets and liabilities generated by operating activities		(88,712)	2,403
Net decrease (increase) related to transactions with customers and credit institutions		(46,852)	39,029
Net decrease related to transactions involving other financial assets and liabilities		(29,798)	(24,497)
Net decrease related to transactions involving non-financial assets and liabilities		(10,063)	(9,773)
Taxes paid		(1,999)	(2,356)
NET DECREASE (INCREASE) IN CASH AND CASH EQUIVALENTS GENERATED BY OPERATING ACTIVITIES		(52,837)	42,376
Net increase related to acquisitions and disposals of consolidated entities		366	482
Net decrease related to property, plant and equipment and intangible assets		(2,529)	(1,664)
NET DECREASE IN CASH AND CASH EQUIVALENTS RELATED TO INVESTING ACTIVITIES		(2,163)	(1,182)
Decrease in cash and cash equivalents related to transactions with shareholders		(2,578)	(5,699)
Increase in cash and cash equivalents generated by other financing activities		11,828	20,215
NET INCREASE IN CASH AND CASH EQUIVALENTS RELATED TO FINANCING ACTIVITIES		9,250	14,516
EFFECT OF MOVEMENT IN EXCHANGE RATES ON CASH AND CASH EQUIVALENTS		1,030	107
NET DECREASE (INCREASE) IN CASH AND CASH EQUIVALENTS		(44,720)	55,817
of which net decrease (increase) in cash and cash equivalents from discontinued activities	7.d	(11,935)	10,739
Balance of cash and cash equivalent accounts at the start of the period		362,418	306,601
Cash and amounts due from central banks		347,901	308,721
Due to central banks		(1,244)	(1,594)
On demand deposits with credit institutions		10,156	8,380
On demand loans from credit institutions	4.g	(9,105)	(8,995)
Deduction of receivables and accrued interest on cash and cash equivalents		156	89
Cash and cash equivalent accounts classified as "Assets held for sale"		14,554	
Balance of cash and cash equivalent accounts at the end of the period		317,698	362,418
Cash and amounts due from central banks		318,581	347,901
Due to central banks		(3,054)	(1,244)
On demand deposits with credit institutions	4.g	11,927	10,156
On demand loans from credit institutions		(12,538)	(9,105)
Deduction of receivables and accrued interest on cash and cash equivalents		163	156
Cash and cash equivalent accounts classified as "Assets held for sale"		2,619	14,554
NET DECREASE (INCREASE) IN CASH AND CASH EQUIVALENTS		(44,720)	55,817

STATEMENT OF CHANGES IN SHAREHOLDERS' EQUITY

In millions of euros	Capital and retained earnings				Changes in assets and liabilities recognised directly in equity that will not be reclassified to profit or loss				
	Share capital and additional paid-in-capital	Undated Super Subordinated Notes	Non-distributed reserves	Total	Financial assets designated as at fair value through equity	Own-credit valuation adjustment of debt securities designated as at fair value through profit or loss	Remeasurement gains (losses) related to post-employment benefit plans	Discontinued activities	Total
Balance at 1 January 2021	27,053	9,948	76,294	113,295	461	(303)	154		312
Retrospective application of the change in method related to social commitments (note 6.b)			74	74					-
Appropriation of net income for 2020			(3,323)	(3,323)					-
Increases in capital and issues		1,026	(1)	1,025					-
Reduction or redemption of capital	(897)	(1,768)	(26)	(2,691)					-
Movements in own equity instruments	191	1	18	210					-
Remuneration on preferred shares and undated super subordinated notes			(412)	(412)					-
Movements in consolidation scope impacting minority shareholders (note 7.f)				-					-
Acquisitions of additional interests or partial sales of interests (note 7.f)			8	8					-
Change in commitments to repurchase minority shareholders' interests			5	5					-
Other movements			(9)	(9)					-
Realised gains or losses reclassified to retained earnings			(6)	(6)	(11)	17			6
Changes in assets and liabilities recognised directly in equity				-	390	19	270		679
Net income for 2021			9,488	9,488					-
Reclassification of discontinued activities				-			125	(125)	-
Balance at 31 December 2021	26,347	9,207	82,110	117,664	840	(267)	549	(125)	997
Impact of IAS 29 first time application in Türkiye			(39)	(39)					-
Balance at 1 January 2022	26,347	9,207	82,071	117,625	840	(267)	549	(125)	997
Appropriation of net income for 2021			(4,527)	(4,527)					-
Increases in capital and issues		5,024	(4)	5,020					-
Reduction or redemption of capital		(2,430)	(123)	(2,553)					-
Movements in own equity instruments	(157)	(1)	(151)	(309)					-
Remuneration on preferred shares and undated super subordinated notes			(374)	(374)					-
Movements in consolidation scope impacting minority shareholders (note 7.f)				-					-
Change in commitments to repurchase minority shareholders' interests			1	1					-
Other movements			2	2					-
Realised gains or losses reclassified to retained earnings			263	263	(267)	3	1		(263)
Changes in assets and liabilities recognised directly in equity				-	(25)	383	(10)	6	354
Net income for 2022			10,196	10,196					-
Balance at 31 December 2022	26,190	11,800	87,355	125,345	548	119	540	(119)	1,088

BETWEEN 1 JANUARY 2021 AND 31 December 2022

Changes in assets and liabilities recognised directly in equity that may be reclassified to profit or loss						Total shareholders' equity	Minority interests (note 7.f)	Total equity
Exchange differences	Financial assets at fair value through equity	Financial investments of insurance activities	Derivatives used for hedging purposes	Discontinued activities	Total			
(5,033)	557	2,234	1,434		(808)	112,799	4,550	117,349
					-	74		74.00
					-	(3,323)	(221)	(3,544)
					-	1,025	10	1,035
					-	(2,691)	(73)	(2,764)
					-	210		210
					-	(412)		(412)
					-		(139)	(139)
					-	8	55	63
					-	5	38	43
					-	(9)	9	-
1,385	(476)	(423)	(453)		33	712		712
					-	9,488	392	9,880
(687)	41		38	608	-	-		-
(4,335)	122	1,811	1,019	608	(775)	117,886	4,621	122,507
165					165	126	48	174
(4,170)	122	1,811	1,019	608	(610)	118,012	4,669	122,681
					-	(4,527)	(133)	(4,660)
					-	5,020	34	5,054
					-	(2,553)		(2,553)
					-	(309)		(309)
					-	(374)		(374)
					-	-	(136)	(136)
					-	1	(157)	(156)
					-	2	(1)	1
					-	-		-
976	(633)	(3,165)	(769)	(440)	(4,031)	(3,677)	84	(3,593)
					-	10,196	401	10,597
(3,194)	(511)	(1,354)	250	168	(4,641)	121,792	4,763	126,555

NOTES TO THE FINANCIAL STATEMENTS

Prepared in accordance with IFRS as adopted by the European Union

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES APPLIED BY THE GROUP

1.a ACCOUNTING STANDARDS

1.a.1 APPLICABLE ACCOUNTING STANDARDS

The consolidated financial statements of the BNP Paribas Group have been prepared in accordance with international accounting standards (International Financial Reporting Standards – IFRS), as adopted for use in the European Union¹. Accordingly, certain provisions of IAS 39 on hedge accounting have been excluded.

Information on the nature and extent of risks relating to financial instruments as required by IFRS 7 “Financial Instruments: Disclosures” and to insurance contracts as required by IFRS 4 “Insurance Contracts”, along with information on regulatory capital required by IAS 1 “Presentation of Financial Statements” are presented in chapter 5 of the Universal Registration Document. This information, which is an integral part of the notes to the consolidated financial statements of the BNP Paribas Group at 31 December 2022, is covered by the opinion of the Statutory Auditors on the financial statements, and is identified in the management report by the word “Audited”. Section 4 of chapter 5, paragraph Exposures, provisions and cost of risk provides, in particular, IFRS 7 information on credit risk exposures and related impairment broken down according to whether the underlying loans are performing or non-performing, by geographic area and by industry, as well as details of loans and advances subject to moratoria or to public guarantee schemes in response to the health crisis.

- In relation to the IBOR and Eonia rates reform, at the end of 2018 the Group launched a global programme, involving all business lines and functions. The aim of the programme is to manage and implement the transition from the old benchmark interest rates to the new ones in major jurisdictions and currencies (euro, pound sterling, US dollar, Swiss franc and Japanese yen), while reducing the risks associated with this transition and meeting the deadlines set by the competent authorities. The Group contributed to market-wide workshops with central banks and financial regulators.

The announcements by public authorities in the United Kingdom and the United States and by the Libor rates administrator (ICE BA) at the end of November 2020 changed the transition phase, which was initially scheduled to be completed by the end of 2021. For the GBP and JPY Libor, synthetic Libor have been published beyond the end of 2021 for use in certain contracts known as “tough legacy” contracts, i.e. contracts that have not switched from Libor to a replacement index. Publication of GBP and JPY synthetic Libor was discontinued at the end of 2022. In the United States, the decision was taken to continue publishing the USD Libor until mid-2023, and a legislative solution was passed at the Federal level in the first quarter of 2022 to address legacy contracts. In addition, the United Kingdom’s Financial Conduct Authority (FCA) launched a consultation during summer 2022 regarding a potential publication of synthetic USD Libor, which would be applicable for contracts governed by UK law.

For contracts referencing the CHF Libor which could not be renegotiated before it was phased out at the end of 2021, the European Commission has provided a legislative solution replacing this rate with a daily capitalised Swiss Average Rate Overnight (SARON) rate, plus a spread aimed at ensuring the economic neutrality of this change.

In Europe, the Eonia-€STR transition, which is purely technical given the fixed link between these two indices, was finalised at the end of December 2021 while the maintenance of Euribor on a sine die basis was confirmed.

¹ The full set of standards adopted for use in the European Union can be found on the website of the European Commission at: https://ec.europa.eu/info/business-economy-euro/company-reporting-and-auditing/company-reporting_en

Based on the progress made to date, notably with the definition of a detailed plan and its execution, the Bank is confident in its operational capacity to manage the transition process of large volumes of transactions to the new benchmark rates.

The reform of IBOR rates exposes the Bank to various risks that the programme aims to manage closely, including in particular:

- change management risks, but also litigation and conduct risks linked to negotiations with customers and market counterparties to amend existing contracts;
- operational risks related to changes in the Bank's IT systems and processes;
- economic risks in the event of financial market disturbances linked to the various transitions brought about by the IBOR reform;
- valuation risks in a scenario of reduced liquidity during the transition in certain derivative market segments.

In September 2019, the IASB published "Phase 1" amendments to IAS 39 and IFRS 7, amending the hedge accounting requirements so that hedges affected by the benchmark interest rate reform could continue despite the uncertainty during the transition of the hedged items or hedging instruments to the reformed benchmark rates. These amendments, endorsed by the European Commission on 15 January 2020, have been applied by the Group since 31 December 2019.

In August 2020, the IASB published "Phase 2" amendments to IFRS 9, IAS 39, IFRS 7, IFRS 4 and IFRS 16 introducing several changes applicable during the effective transition to the new benchmark interest rates. These amendments allow for changes in the contractual cash flows of financial instruments resulting from the IBOR rates reform to be treated as a simple reset of their variable interest rate, provided, however, that such changes are made on an economically equivalent basis. They also allow the continuation of hedging relationships, subject to amendments to their documentation to reflect changes in hedged instruments, hedging instruments, hedged risk, and/or the method for measuring effectiveness during the transition to the new benchmark rates. The measures introduced in this framework also include:

- the possibility of documenting an interest rate as a hedged risk component even if this rate is not immediately separately identifiable, provided that it can reasonably be expected to become so within 24 months;
- the possibility of resetting cumulative fair value changes to zero in the hedge ineffectiveness test; and
- the obligation in the framework of portfolio hedges to isolate in subgroups instruments referring to the new risk-free rates (RFR).

These amendments, adopted by the European Commission in December 2020, have been applied by the Group since 31 December 2020 to maintain its existing hedging relationships which have been modified as a result of the transition to the new RFRs.

The Group has documented hedging relationships in respect of the benchmark interest rates in the scope of the reform, mainly Eonia and Libor. For these hedging relationships, the hedged items and hedging instruments are progressively amended, where necessary, to incorporate the new rates. The "Phase 1" amendments to IAS 39 and IFRS 7 are applicable when the contractual terms of the hedged instruments or of the hedging instruments have not yet been amended (i.e. with the inclusion of a "fallback" clause), or, if they have been amended, when the terms and the date of the transition to the new benchmark interest rates have not been clearly stipulated. Conversely, the "Phase 2" amendments are applicable when the contractual terms of the hedged instruments or of the hedging instruments have been amended, and the terms and date of transition to the new benchmark interest rates have been clearly stipulated.

The notional amounts of hedging instruments documented in the hedging relationships impacted by the benchmark interest rate reform are presented in note 4.b *Derivative instruments used for hedging purposes*.

At 31 December 2022, 56,808 contracts remain backed by USD Libor, including 50,478 derivative contracts.

At 31 December 2021, 112,405 contracts remain backed by USD Libor, including 72,867 contracts with a maturity date beyond 30 June 2023, including 54,628 derivative contracts.

- On 16 March 2022, the International Practices Task Force (IPTF) of the Center for Audit Quality (CAQ) included Türkiye in its list of hyperinflationary economies, the cumulative inflation rate over three years having reached 100.6% at the end of February 2022. Consequently, the Group applies IAS 29 "Financial Reporting in Hyperinflationary Economies" for the presentation of the financial statements of its consolidated subsidiaries in Türkiye.

Accordingly, for these subsidiaries, all non-monetary assets and liabilities, including shareholders' equity, and all line items in the income statement, are revalued according to the change in of the Consumer Price Index (CPI). This revaluation between 1 January and the closing date resulted in the recognition of a gain or loss on the net monetary position, recorded under "Net gains on non-current assets" (see note 2.i). The financial statements of these subsidiaries were converted into euros at the closing rate, in accordance with the specific provisions of IAS 21 "The Effects of Changes in Foreign Exchange Rates" applicable to the translation of the financial statements of entities located in hyperinflationary economies.

In accordance with the provisions of the IFRIC decision of March 2020 on the classification of the effects of the indexation and conversion of the financial statements of subsidiaries in hyperinflationary economies, the Group has opted to present these effects (including the effect on the net monetary position of the date of first application of IAS 29) as changes in assets and liabilities recognised directly in equity relative to exchange differences.

At 1 January 2022, the first-time application of IAS 29 resulted in a EUR 174 million increase in equity, of which EUR 227 million was recorded in "Changes in assets and liabilities recognised directly in equity – exchange differences".

The introduction of other standards, amendments and interpretations that are mandatory as from 1 January 2022 had no effect on the Group's financial statements at 31 December 2022.

The Group did not early adopt any of the new standards, amendments, and interpretations adopted by the European Union, when the application in 2022 was optional.

1.a.2 NEW MAJOR ACCOUNTING STANDARDS, PUBLISHED BUT NOT YET APPLICABLE

IFRS 17 "Insurance Contracts", issued in May 2017 and amended in June 2020 will replace IFRS 4 "Insurance Contracts". It was adopted by the European Union in November 2021, accompanied by an optional exemption from the application of the annual cohort grouping requirement for participating contracts based on intergenerational mutualisation of returns on the underlying assets of the technical commitments. It will be mandatory for financial periods beginning on or after 1 January 2023. The transition date for IFRS 17 will therefore be 1 January 2022 for the purposes of the opening balance sheet of the comparative period required by the standard.

As the Group has deferred the application of IFRS 9 for its insurance entities until the entry into force of IFRS 17, it will apply this standard from 1 January 2023.

The amendment to IFRS 17 relating to the presentation of the IFRS 9 and IFRS 17 comparative information, published by the IASB in December 2021, was adopted by the European union on 8 September 2022² and will also be applied by the Group.

Scope

IFRS 17 applies to insurance contracts issued, reinsurance contracts issued and held and investment contracts with discretionary participation features issued (if the entity also issues insurance contracts). The definition of an insurance contract is unchanged from IFRS 4, with the exception of the assessment of the risk of loss for the insurer which must be performed on a present value basis.

Accounting and measurement

Insurance contracts are accounted and measured by groups of contracts within portfolios of contracts covering similar risks and managed together. Groups of contracts are determined according to their expected profitability at inception: onerous contracts, profitable contracts with a low risk of becoming onerous, and others. A group of

² EU Regulation n°2022/1491 of 8 September 2022

contracts may contain only contracts issued no more than one year apart (corresponding to an annual “cohort”), except where the optional exemption provided for in the European regulation applies.

- **General measurement model (Building Block Approach – BBA)**

The general model for the measurement of insurance contracts is the best estimate of the future cash flows to be paid or received necessary to meet contractual obligations. This estimate should reflect the different possible scenarios and the effect of the options and guarantees included in the contracts on the limit or “contract boundary” determined according to the standard. Cash flows are discounted to reflect the time value of money. They correspond only to cash flows attributable to insurance contracts either directly or through allocation methods: premiums, acquisition and contract management costs, claims and benefits, indirect costs, taxes and depreciation of tangible and intangible assets. The cash flows estimate is supplemented by an explicit risk adjustment to cover the uncertainty for non-financial risk. These two elements constitute the fulfilment cash flows of the contracts. A contractual service margin is added representing the expected gain or loss on future services related to a group of contracts.

If the contractual service margin is positive, it is shown on the balance sheet within the insurance contract’s measurement and amortised as the services are rendered; if negative, it is recognised immediately in the income statement and then reversed over the life of the contracts or when the contracts become profitable again. Acquisition costs paid prior to the initial recognition of a group of contracts are initially recognised in the balance sheet (and presented as a decrease in insurance liabilities or increase in insurance assets depending on the overall position of the portfolio) and then deducted from the contractual service margin of the group of contracts to which they relate at the time of initial recognition.

At each reporting date, the carrying amount of a group of insurance contracts is the sum of the liabilities for the remaining coverage (which include the fulfilment cash flows related to future services and the contractual service margin remaining at that date) and liabilities for incurred claims (which include only the fulfilment cash flows for claims incurred, without any contractual service margin). The assumptions used to estimate future cash flows and the non-financial risk adjustment are updated, as well as the discount rate, to reflect the situation at the reporting date. The contractual service margin is adjusted for changes in the estimates of non-financial assumptions related to future services and then amortised in the income statement for services rendered over the period. The release of the expected contractual cash flows for the period and changes in the estimates for past services are recorded in the income statement. The effect of unwinding the discount on the liabilities related to the passage of time is recorded in the income statement as well as the effect of the change in the discount rate. The latter effect may, however, be recognised in equity as an option.

- **Measurement model for contracts with direct participation features (Variable Fee Approach – VFA)**

In the case of direct participating contracts, where the insurer has to pay the policyholder an amount corresponding to the market or model value of clearly identified underlying assets, less a variable compensation, a specific model (called the “Variable Fee Approach”) has been developed by adapting the general model.

At each reporting date, the liabilities related to these contracts are adjusted for the return earned and changes in the market or model value of the underlying assets: the policyholders’ share is recorded in the contract fulfilment cash flows against the profit or loss and the insurer’s share is included in the contractual service margin. The gain or loss of these contracts is therefore essentially represented by the release of the fulfilment cash flows and the amortisation of the contractual service margin. When the underlying assets fully match the liabilities and are measured at market value through profit or loss, the financial gain or loss of these contracts should be zero. If certain underlying assets are not measured at market value through profit or loss, the insurer may choose to reclassify the change in liabilities related to these assets to equity.

- **Simplified measurement model (Premium Allocation Approach – PAA)**

Short-term contracts (less than one year) may be measured using a simplified approach known as the Premium Allocation Approach, also applicable to longer-term contracts if it leads to results similar to those of the general model in terms of liability for the remaining coverage. For profitable contracts, the liability for the remaining coverage is measured based on the deferral of premiums collected according to a logic similar to that used under IFRS 4. Onerous contracts and liabilities for incurred claims are valued according to the general model. Liabilities for incurred claims are discounted if the expected settlement of claims takes place one year after the date of occurrence. In this case, the option of classifying the effect of changes in the discount rate in equity is also applicable.

At each reporting date, the adjustment of liabilities for remaining coverage and for incurred claims is recognised in profit or loss.

- **Treatment of the reinsurance**

Accepted reinsurance is treated as insurance contracts issued, either in the general model or in simplified model. The reinsurance ceded is also treated under the general model or simplified model, but the contractual service margin representing the expected reinsurance profit or loss may be negative, and the fulfilment cash flows includes the reinsurer's non-performance risk.

Presentation in the balance sheet and in the profit and loss

Pursuant to changes in IAS 1 resulting from IFRS 17:

- Insurance (and reinsurance) contracts issued, and reinsurance contracts held are shown in the balance sheet as assets or liabilities according to the overall position of the portfolios to which they belong;
- The various income and expenses of insurance and reinsurance contracts are broken down in the profit and loss into:
 - o Insurance revenues: release of fulfilment cash flows for the expected amount over the period (excluding investment components³), change in the risk adjustment, amortisation of the contractual service margin for services rendered, amount allocated for the amortisation of acquisition cost, adjustments arising from premiums received;
 - o Insurance service expenses: actual charges attributable to insurance contracts incurred over the period (excluding repayments of investment components) and changes related to past service, amortisation of acquisition costs, and loss component on the initial recognition of onerous contracts as well as its amortisation;
 - o Insurance financial income or expenses: change in the carrying amount of insurance contracts resulting from the effect of the time value of money and the financial risk including changes in financial assumptions (except for those adjusting the contractual service margin in the case of direct participating contracts), for the portion that the Group has chosen not to include directly in equity.
- Regarding the elements recognised in equity:
 - o For contracts valued according to the general model or the simplified approach, the effects of changes in financial variables (in particular the discount rate) can be presented separately between the profit and loss account and changes in fair value recognised directly in equity that may be reclassified in profit or loss. This option can be exercised by portfolio;
 - o For contracts valued using the variable fee method, the option to present separately financial income or expense between the income statement and shareholders' equity may be used to avoid an accounting mismatch with the income or expense recognised in the profit and loss account in respect of the underlying assets held.

Terms of application and main accounting options used by the Group for the transition

The main contracts in the scope of IFRS 17 issued by the Group are contracts covering risks related to persons or property and life savings contracts.

Creditor protection insurance (CPI), personal protection insurance and other non-life risks will be measured either, according to the general model or, if the conditions are met, using the simplified approach. For the constitution of portfolios of similar contracts, BNP Paribas takes into account the following discriminatory criteria: legal entity, nature of risks and distribution partner. The discount rate is based on the risk-free rate adjusted for the illiquidity of the liabilities. The risk adjustment is determined using the quantile method. The coverage unit used to amortise the contractual service margin is derived from the risk premium earned during the period.

Life and savings contracts consist of single and "multi-supports" contracts, with or without insurance risk, including a discretionary participation component backed by euro or foreign currency funds (generally financial and real estate assets), and unit-linked contracts with a minimum coverage in the event of death. These different types of contracts meet the definition of direct participating contracts and will therefore be valued using the variable fee approach. Where such contracts include a surrender value, this meets the definition of a non-distinct investment component. BNP Paribas takes into account the following criteria for life and savings portfolios: legal entity, product, and underlying asset. Savings and retirement activities have been classified in separate portfolios (including for the period prior to transition). The discount rate is based on the risk-free rate, extrapolated over a

³ A non-distinct investment component corresponds to the amount that would be paid to the policyholder in all cases, whether the covered event occurs.

period exceeding the observable data and adjusted by a liquidity premium based on the underlying assets. The risk adjustment is determined using the cost of capital method. The coverage unit used to amortise the contractual service margin is the change in savings due to policyholders (determined at present value), adjusted to take into account the impact of the real return on financial assets compared to the actuarial neutral risk projection. The Group has chosen to apply the option introduced by the European Regulation not to divide by annual cohort the portfolios of participating contracts based on intergenerational mutualisation. This option should apply to insurance contracts and investment contracts with discretionary participation eligible for the variable fee approach, euro single or “multi-supports” including a euro fund, for which the policyholders’ participation in the returns is pooled among the different generations of policyholders in France, Italy and Luxembourg.

Financial income or expense from issued insurance contracts will be presented separately between the profit and loss account and shareholders’ equity for portfolios for which this breakdown has been deemed relevant, as allowed by the standard. For the Protection contracts measured under the general model and for the liabilities for incurred claims arising from contracts measured under the simplified model, the choice of portfolios was made by taking into account both the effects in the profit and loss account of the discount of the liabilities and the accounting treatment of the assets backing them. For contracts measured using the Variable Fee Approach, the choice was made to offset any accounting mismatch that may exist in the profit and loss account between the effect of changes in fair value on insurance or investment liabilities and that on the underlying assets when these are not recognised at fair value through profit or loss.

The Group has chosen to present its financial statements in the format proposed by the *Autorité des Normes Comptables* recommendation n°2022-01 of 8 April 2022, as follows. Under the option introduced by the recommendation, the Group intends to present the insurance activity investments and the related income separately from the banking activity financial assets and liabilities.

Insurance contracts may be distributed and managed by non-insurance entities of the Group that are remunerated as such by commissions paid by insurance entities. The new model for valuing insurance contracts requires projecting into the contract fulfilment cash flows the acquisition and management costs that will be paid in the future and presenting in the profit and loss account, the release of the estimated costs for the period on the one hand, and on the other, the actual costs. For commissions between consolidated companies of the Group, in accordance with the recommendations of ESMA (32-63-1320) and the AMF (DOC-2022-06), the Group will restate the internal margin on the balance sheet⁴ and profit and loss account (in the breakdown of insurance liabilities and the related results between the fulfilment cash flows and contract services margin) by presenting as insurance service expenses the portion of the general expenses of banking entities that can be attributable to insurance activity. The restated internal margin is determined from normalised management data of each of the distribution networks.

Expected transition impacts

- **IFRS 17**

Launched in 2017, the IFRS 17 implementation project comes to an end with the date of first application of the standard. The deployment of the new modelling and reporting tools took place according to the defined timetable. Some options remain likely to evolve in the future, depending on the normative interpretations that may occur, in particular at the level of IFRIC.

The transition from IFRS 4 to IFRS 17 will result in the offsetting in equity of assets and liabilities of insurance contracts recognised in accordance with the previous standard net of deferred taxes effects: insurance liabilities and reinsurance assets held, deferred policyholders’ participation arising from “shadow accounting” and intangible assets specific to insurance contracts when recognised. Receivables and liabilities related to insurance or reinsurance contracts must be included in the new valuation of insurance asset and liabilities.

IFRS 17 applies retroactively to all contracts outstanding at the transition date, i.e. 1 January 2022 due to the mandatory comparative period. Three transition methods may be used: a full retrospective approach and, if this cannot be implemented, a modified retrospective approach or an approach based on the market or model value of the contracts at the transition date.

The majority of entities controlled by the Group applied the modified retrospective approach and, more marginally, for some portfolios, an approach based on the market or model value of contracts at the transition date.

⁴ This restatement was taken into account for the balance sheet at the transition date at 1 January 2022.

As a matter of fact, all the necessary information was not available or was not sufficiently granular, in particular due to systems migration and data retention requirements, to allow a full retrospective approach. This is the case for historical cash flows, discount rates and changes in assumptions and estimates that would have occurred in the period prior to the transition, especially changes in projection models occurred during this period. Moreover, the full retrospective approach would have required reconstituting management's assumptions or intentions in previous periods.

The objective of the modified retrospective approach is to achieve a result that is as close as possible to the result that would have been obtained by the retrospective application of the standard, based on reasonable and justifiable information that can be obtained without incurring excessive costs or effort. The transitional provisions of IFRS 17 under this approach allow for different simplifications in the grouping of contracts, the reconstitution of contract valuations at initial recognition, the measurement of the contractual service margin (or loss element) and for financial products or insurance charges (for the part recorded in equity).

Thus, the concerned entities applied the modified retrospective approach to most portfolios of existing contracts, whether in Protection or Life/Savings. Simplifications used depended on the valuation models and the availability of the necessary information on the related portfolios.

For protection contracts valued according to the general model, the principle of the modified retrospective approach consists in reconstituting liabilities at the initial recognition date from their valuation at the transition date, by retroactively reconstituting movements between the two dates with simplifications:

- cash flows at inception are estimated by adding to the amount at the transition date the effective cash flows recorded between the two dates;
- the original discount rate can be determined with interest rate curves simulating those at the date of first recognition;
- the changes in the adjustment for non-financial risk between the inception date and the transition date can be estimated based on release pattern observed on similar contracts.

For liabilities for remaining coverage that are reconstituted in this way at the inception date, the contractual service margin at inception (if any), less any acquisition costs paid in the interim period, is amortised based on the services provided in the period prior to the transition, in order to determine the amount of the remaining contractual service margin at that date, less any remaining acquisition costs.

When contracts are grouped into a single group on the transition date, the discount rate on that date can be used.

When the option to disaggregate financial changes between profit and loss and shareholders' equity has been elected, it requires the amount taken to shareholders' equity at the transition date to be recalculated from the inception rate for the liability for remaining coverage and from the rate at the date of claims occurrence for the liability for incurred claims. Where such reconstitution is not possible, the amount shown in equity shall be zero.

For the purposes of this reconstitution, the simplifications mainly covered the following:

- reconstitution of the annual cohorts or consolidation into a single group of contracts at the transition date according to available data;
- the reconstitution of fulfilment cash flows and unamortised acquisition costs;
- the release of the risk adjustment between the date of issuance of the contracts and the transition date;
- discount rates (the rate at inception in the case of a reconstitution by annual cohorts or an average rate in the case of a consolidation into a single group of contracts at the transition date);
- the amount transferred to changes in equity that may be reclassified to profit or loss at the transition date in respect of changes in the discount rate, that has been reconstituted based on historical rates or reset to zero if such a reconstitution is not achievable.

For protection contracts valued according to the simplified method, the reserves for remaining coverage were generally determined at transition from the previous reserves for unearned premiums, net of acquisition costs. The incurred claims reserves arising from these contracts consist of expected cash flows and risk adjustments for non-financial risks at the transition date. When cash flows were discounted and for portfolios for which the disaggregation option of financial changes between profit and loss account and shareholders' equity has been chosen, the amount carried in changes in equity that may be reclassified to profit or loss at the transition date in relation to changes in the discount rate was reconstituted based on the historical rates or set to zero if such a reconstitution was not achievable.

For Life/Savings contracts valued under the variable fees model, the modified retrospective approach consists in reconstituting the liability at the original date from the liability at the transition date. However, for these contracts, the standard provides that the contractual services margin at the transition date is determined using the following approach:

- the realisable value of the underlying assets at the transition date is first diminished by the fulfilment cash flows (discounted cash flows and risk adjustment) at that date;
- to this amount are added the income paid by the policyholders, changes in the risk adjustment and are deducted the acquisition costs paid during the interim period,
- the contractual service margin net of the acquisition costs initially reconstituted in this way is then amortised until the transition date to reflect the services provided on that date, as well as the remaining acquisition costs to be amortised.

The main simplifications in implementing this approach were as follows:

- existing contracts have been grouped according to the planned post-transition segmentation, without annual cohorts breakdown, in line with the election of the exception provided for by the European regulation;
- for general funds common to participating and non-participating contracts and to equity, the underlying assets have been defined on the basis of the breakdown used in the statutory accounts to calculate policyholders' participation;
- the contractual services margin at the transition date has been reconstituted:
 - o from the realisable value of the underlying assets (see above) less fulfilment cash flows on the transition date;
 - o by adding the historical margins (obtained from accounting or management information), the total being amortised up to the transition date (using the same approach, taking into account the "over-performance on assets", as used after the transition) and;
 - o deducting any remaining acquisition costs;
- the amount recorded in changes in equity that may be reclassified to profit or loss at the transition date as an adjustment for accounting mismatch was determined using the realisable value of the underlying assets recognised in equity at the transition date, in accordance with the standard.

Finally, under the market value method, the contractual service margin at the transition date is determined as the difference at the transition date between the realisable value ("fair value, determined without taking into account the amount payable on demand") and the fulfilment cash flows. This approach was used on some non-material portfolios when the modified retrospective approach could not be implemented. For these portfolios, the fair value has been estimated based on a Solvency 2 valuation and, in the particular case of a recent business combination dating from 2018, based on the amount allocated to the contracts during the acquisition price allocation process.

• IFRS 9

The IFRS 9 implementation project at the level of the Insurance activity built widely on the experience of other business lines in the Group already applying this standard, in particular to ensure consistency in classification.

Financial assets and liabilities of insurance entities are managed by portfolios corresponding to the insurance liabilities they back up or to the own funds. The business models were therefore determined according to these portfolios at the transition date to IFRS 9.

In accordance with the criteria of the business model and of the contractual cash flows, debt instruments will largely be classified under the "held to collect and sell" model, with the exception of those representing unit-linked contracts and debt instruments held by consolidated UCITS and managed at net asset value, which will be classified at fair value through profit or loss. Certain specific assets will be classified as at fair value on option. The majority of equity instruments will be measured at fair value through profit or loss, except in the case of certain assets backing up own funds and non-participating contracts portfolios, which will be measured at fair value through equity. Non-consolidated funds classified as available for sale under IAS 39 will be reclassified at fair value through profit or loss. The treatment of derivatives remains unchanged, including hedge accounting as IAS 39 rules have been maintained by the Group.

Since the beginning of 2022, financial assets have been monitored according to both IAS 39 and IFRS 9. The Group is planning to use the optional “overlay classification” approach introduced by the amendment to IFRS 17 relating to the presentation of IFRS 9 - IFRS 17 comparisons, which allows financial assets to be presented in the 2022 comparative as if IFRS 9 had been applicable at that date. This choice would apply to all financial instruments, including those derecognised in 2022, in terms of both classification and valuation (including impairment).

- **Amendments to other standards**

The Group is also planning to apply the amendments to IAS 40 and IAS 16 resulting from IFRS 17, leading to the valuation at fair value through profit or loss of the buildings held as underlying components of direct participating contracts. The amendments to IAS 32 and IFRS 9 are expected to be applied, enabling the financial assets issued by the Group that are held as underlying items of direct participating contracts and are measured at fair value through profit or loss to be maintained in the balance sheet.

- **Impacts estimated at 1 January 2022**

Regarding insurance contracts, a full valuation exercise was realised during 2022 to establish the opening balance sheet at 1 January 2022 and prepare the 2022 comparative period.

Based on this work, at 1 January 2022, the estimated impact on Group’s shareholders’ equity⁵ of the application of IFRS 17 and IFRS 9 and of the various amendments to other standards amounted to - EUR 1.6 billion. This impact consists of EUR 0.5 billion related to the transition from IAS 39 to IFRS 9 and - EUR 2.1 billion related to the transition from IFRS 4 to IFRS 17⁶.

At 1 January 2022, for controlled entities, liabilities related to insurance contracts, net of insurance portfolios in assets, amounted to EUR 239.3 billion, and consist of the following:

- EUR 219.2 billion for the best estimate of future cash flows;
- EUR 1.5 billion for the risk adjustment;
- EUR 18.6 billion for the contractual service margin.

1.b CONSOLIDATION

1.b.1 SCOPE OF CONSOLIDATION

The consolidated financial statements of BNP Paribas include entities that are controlled by the Group, jointly controlled, and under significant influence, with the exception of those entities whose consolidation is regarded as immaterial to the Group. Companies that hold shares in consolidated companies are also consolidated.

Subsidiaries are consolidated from the date on which the Group obtains effective control. Entities under temporary control are included in the consolidated financial statements until the date of disposal.

1.b.2 CONSOLIDATION METHODS

Exclusive control

Controlled enterprises are fully consolidated. The Group controls a subsidiary when it is exposed, or has rights, to variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity.

⁵ Including change in assets and liabilities recognised in changes in equity that may be reclassified to profit or loss.

⁶ Including amendments to other standards related to the application of IFRS 17, of which the impact of the EUR 1.5 billion in relation to the revaluation of buildings at fair value, offset by the corresponding revaluation of liabilities in direct participating contracts.

For entities governed by voting rights, the Group generally controls the entity if it holds, directly or indirectly, the majority of the voting rights (and if there are no contractual provisions that alter the power of these voting rights) or if the power to direct the relevant activities of the entity is conferred on it by contractual agreements.

Structured entities are entities established so that they are not governed by voting rights, for instance when those voting rights relate to administrative tasks only, whereas the relevant activities are directed by means of contractual arrangements. They often have the following features or attributes: restricted activities, a narrow and well-defined objective and insufficient equity to permit them to finance their activities without subordinated financial support.

For these entities, the analysis of control shall consider the purpose and design of the entity, the risks to which the entity is designed to be exposed and to what extent the Group absorbs the related variability. The assessment of control shall consider all facts and circumstances able to determine the Group's practical ability to make decisions that could significantly affect its returns, even if such decisions are contingent on uncertain future events or circumstances.

In assessing whether it has power, the Group considers only substantive rights which it holds or which are held by third parties. For a right to be substantive, the holder must have the practical ability to exercise that right when decisions about the relevant activities of the entity need to be made.

Control is reassessed if facts and circumstances indicate that there are changes to one or more of the elements of control.

Where the Group contractually holds the decision-making power, for instance where the Group acts as fund manager, it shall determine whether it is acting as agent or principal. Indeed, when associated with a certain level of exposure to the variability of returns, this decision-making power may indicate that the Group is acting on its own account and that it thus has control over those entities.

Minority interests are presented separately in the consolidated profit and loss account and balance sheet within consolidated equity. The calculation of minority interests takes into account the outstanding cumulative preferred shares classified as equity instruments issued by subsidiaries, when such shares are held outside the Group.

As regards fully consolidated funds, units held by third-party investors are recognised as debts at fair value through profit or loss, inasmuch as they are redeemable at fair value at the subscriber's initiative.

For transactions resulting in a loss of control, any equity interest retained by the Group is remeasured at its fair value through profit or loss.

Joint control

Where the Group carries out an activity with one or more partners, sharing control by virtue of a contractual agreement which requires unanimous consent on relevant activities (those that significantly affect the entity's returns), the Group exercises joint control over the activity. Where the jointly controlled activity is structured through a separate vehicle in which the partners have rights to the net assets, this joint venture is accounted for using the equity method. Where the jointly controlled activity is not structured through a separate vehicle or where the partners have rights to the assets and obligations for the liabilities of the jointly controlled activity, the Group accounts for its share of the assets, liabilities, revenues and expenses in accordance with the applicable IFRS.

Significant influence

Companies over which the Group exercises significant influence or associates are accounted for by the equity method. Significant influence is the power to participate in the financial and operating policy decisions of a company without exercising control. Significant influence is presumed to exist when the Group holds, directly or indirectly, 20% or more of the voting rights of a company. Interests of less than 20% can be included in the consolidation scope if the Group effectively exercises significant influence. This is the case for example for entities developed in partnership with other associates, where the BNP Paribas Group participates in strategic decisions of the enterprise through representation on the Board of Directors or equivalent governing body, or exercises influence over the enterprise's operational management by supplying management systems or senior managers, or provides technical assistance to support the enterprise's development.

Changes in the net assets of associates (companies accounted for under the equity method) are recognised on the assets side of the balance sheet under "Investments in equity-method entities" and in the relevant component of shareholders' equity. Goodwill recorded on associates is also included under "Equity-method investments".

Whenever there is an indication of impairment, the carrying amount of the investment consolidated under the equity method (including goodwill) is subjected to an impairment test, by comparing its recoverable value (the higher of value-in-use and market value less costs to sell) to its carrying amount. Where appropriate, impairment is recognised under "Share of earnings of equity-method entities" in the consolidated income statement and can be reversed at a later date.

If the Group's share of losses of an equity-method entity equals or exceeds the carrying amount of its investment in this entity, the Group discontinues including its share of further losses. The investment is reported at nil value. Additional losses of the equity-method entity are provided for only to the extent that the Group has contracted a legal or constructive obligation or has made payments on behalf of this entity.

Where the Group holds an interest in an associate, directly or indirectly through an entity that is a venture capital organisation, a mutual fund, an open-ended investment company or similar entity such as an investment-related insurance fund, it may elect to measure that interest at fair value through profit or loss.

Realised gains and losses on investments in consolidated undertakings are recognised in the profit and loss account under "Net gain on non-current assets".

The consolidated financial statements are prepared using uniform accounting policies for similar transactions and other events occurring in similar circumstances.

1.b.3 CONSOLIDATION RULES

- **Elimination of intragroup balances and transactions**

Intragroup balances arising from transactions between consolidated enterprises, and the transactions themselves (including income, expenses and dividends), are eliminated. Profits and losses arising from intragroup sales of assets are eliminated, except where there is an indication that the asset sold is impaired. Unrealised gains and losses included in the value of financial instruments at fair value through equity and available-for-sale assets are maintained in the consolidated financial statements.

- **Translation of accounts expressed in foreign currencies**

The consolidated financial statements of BNP Paribas are prepared in euros.

The financial statements of enterprises whose functional currency is not the euro are translated using the closing rate method. Under this method, all assets and liabilities, both monetary and non-monetary, are translated using the spot exchange rate at the balance sheet date. Income and expense items are translated at the average rate for the period.

Financial statements of the Group's subsidiaries located in hyperinflationary economies, previously adjusted for inflation by applying a general price index, are translated using the closing rate. This rate applies to the translation of assets and liabilities as well as income and expenses.

Differences arising from the translation of balance sheet items and profit and loss items are recorded in shareholders' equity under "Exchange differences", and in "Minority interests" for the portion attributable to outside investors. Under the optional treatment permitted by IFRS 1, the Group has reset to zero all translation differences, by booking all cumulative translation differences attributable to shareholders and to minority interests in the opening balance sheet at 1 January 2004 to retained earnings.

On liquidation or disposal of some or all of an interest held in a foreign enterprise located outside the eurozone, leading to a change in the nature of the investment (loss of control, loss of significant influence or loss of joint control without keeping a significant influence), the cumulative exchange difference at the date of liquidation or sale is recognised in the profit and loss account.

Should the percentage of interest change without leading to a modification in the nature of the investment, the exchange difference is reallocated between the portion attributable to shareholders and that attributable to minority interests if the entity is fully consolidated; if the entity is consolidated under the equity method, it is recorded in profit or loss for the portion related to the interest sold.

1.b.4 BUSINESS COMBINATION AND MEASUREMENT OF GOODWILL

- **Business combinations**

Business combinations are accounted for using the purchase method.

Under this method, the acquiree's identifiable assets and liabilities assumed are measured at fair value at the acquisition date except for non-current assets classified as assets held for sale which are accounted for at fair value less costs to sell.

The acquiree's contingent liabilities are not recognised in the consolidated balance sheet unless they represent a present obligation on the acquisition date and their fair value can be measured reliably.

The cost of a business combination is the fair value, at the date of exchange, of assets given, liabilities incurred or assumed, and equity instruments issued to obtain control of the acquiree. Costs directly attributable to the business combination are treated as a separate transaction and recognised through profit or loss.

Any contingent consideration is included in the cost, as soon as control is obtained, at fair value on the date when control was acquired. Subsequent changes in the value of any contingent consideration recognised as a financial liability are recognised through profit or loss.

The Group may recognise any adjustments to the provisional accounting within 12 months of the acquisition date.

Goodwill represents the difference between the cost of the combination and the acquirer's interest in the net fair value of the identifiable assets and liabilities of the acquiree at the acquisition date. Positive goodwill is recognised in the acquirer's balance sheet, while negative goodwill is recognised immediately in profit or loss, on the acquisition date. Minority interests are measured at their share of the fair value of the acquiree's identifiable assets and liabilities. However, for each business combination, the Group can elect to measure minority interests at fair value, in which case a proportion of goodwill is allocated to them. To date, the Group has never used this latter option.

Goodwill is recognised in the functional currency of the acquiree and translated at the closing exchange rate.

On the acquisition date, any previously held equity interest in the acquiree is remeasured at its fair value through profit or loss. In the case of a step acquisition, the goodwill is therefore determined by reference to the acquisition-date fair value.

Since the revised IFRS 3 has been applied prospectively, business combinations completed prior to 1 January 2010 were not restated for the effects of changes to IFRS 3.

As permitted under IFRS 1, business combinations that took place before 1 January 2004 and were recorded in accordance with the previously applicable accounting standards (French GAAP), had not been restated in accordance with the principles of IFRS 3.

- **Measurement of goodwill**

The BNP Paribas Group tests goodwill for impairment on a regular basis.

- Cash-generating units

The BNP Paribas Group has split all its activities into cash-generating units⁷ representing major business lines. This split is consistent with the Group's organisational structure and management methods, and reflects the independence of each unit in terms of results and management approach. It is reviewed on a regular basis in order to take account of events likely to affect the composition of cash-generating units, such as acquisitions, disposals and major reorganisations.

⁷ As defined by IAS 36.

- Testing cash-generating units for impairment

Goodwill allocated to cash-generating units is tested for impairment annually and whenever there is an indication that a unit may be impaired, by comparing the carrying amount of the unit with its recoverable amount. If the recoverable amount is less than the carrying amount, an irreversible impairment loss is recognised, and the goodwill is written down by the excess of the carrying amount of the unit over its recoverable amount.

- Recoverable amount of a cash-generating unit

The recoverable amount of a cash-generating unit is the higher of the fair value of the unit less costs to sell, and its value in use.

Fair value is the price that would be obtained from selling the unit at the market conditions prevailing at the date of measurement, as determined mainly by reference to actual prices of recent transactions involving similar entities or on the basis of stock market multiples for comparable companies.

Value in use is based on an estimate of the future cash flows to be generated by the cash-generating unit, derived from the annual forecasts prepared by the unit's management and approved by Group Executive Management, and from analyses of changes in the relative positioning of the unit's activities on their market. These cash flows are discounted at a rate that reflects the return that investors would require from an investment in the business sector and region involved.

1.c TRANSLATION OF FOREIGN CURRENCY TRANSACTIONS

The methods used to account for assets and liabilities relating to foreign currency transactions entered into by the Group, and to measure the foreign exchange risk arising on such transactions, depend on whether the asset or liability in question is classified as a monetary or a non-monetary item.

- **Monetary assets and liabilities⁸ expressed in foreign currencies**

Monetary assets and liabilities expressed in foreign currencies are translated into the functional currency of the relevant Group entity at the closing rate. Foreign exchange differences are recognised in the profit and loss account, except for those arising from financial instruments designated as a cash flow hedge or a net foreign investment hedge, which are recognised in shareholders' equity.

- **Non-monetary assets and liabilities expressed in foreign currencies**

Non-monetary assets may be measured either at historical cost or at fair value. Non-monetary assets expressed in foreign currencies are translated using the exchange rate at the date of the transaction (i.e. date of initial recognition of the non-monetary asset) if they are measured at historical cost, and at the closing rate if they are measured at fair value.

Foreign exchange differences relating to non-monetary assets denominated in foreign currencies and recognised at fair value (equity instruments) are recognised in profit or loss when the asset is classified in "Financial assets at fair value through profit or loss" and in equity when the asset is classified under "Financial assets at fair value through equity".

⁸ Monetary assets and liabilities are assets and liabilities to be received or paid in fixed or determinable amounts of cash.

1.d NET INTEREST INCOME, COMMISSIONS AND INCOME FROM OTHER ACTIVITIES

1.d.1 NET INTEREST INCOME

Income and expenses relating to debt instruments measured at amortised cost and at fair value through shareholders' equity are recognised in the income statement using the effective interest rate method.

The effective interest rate is the rate that ensures the discounted value of estimated future cash flows through the expected life of the financial instrument or, when appropriate, a shorter period, is equal to the carrying amount of the asset or liability in the balance sheet. The effective interest rate measurement takes into account all fees received or paid that are an integral part of the effective interest rate of the contract, transaction costs, and premiums and discounts.

Commissions considered as an additional component of interest are included in the effective interest rate and are recognised in the profit and loss account in "Net interest income". This category includes notably commissions on financing commitments when it is considered that the setting up of a loan is more likely than unlikely. Commissions received in respect of financing commitments are deferred until they are drawn and then included in the effective interest rate calculation and amortised over the life of the loan. Syndication commissions are also included in this category for the portion of the commission equivalent to the remuneration of other syndication participants.

1.d.2 COMMISSIONS AND INCOME FROM OTHER ACTIVITIES

Commissions received with regards to banking and similar services provided (except for those that are integral part of the effective interest rate), revenues from property development and revenues from services provided in connection with lease contracts fall within the scope of IFRS 15 "Revenue from Contracts with Customers".

This standard defines a single model for recognising revenue based on five-step principles. These five steps enable to identify the distinct performance obligations included in the contracts and allocate the transaction price among them. The income related to those performance obligations is recognised as revenue when the latter are satisfied, namely when the control of the promised goods or services has been transferred.

The price of a service may contain a variable component. Variable amounts may be recognised in the income statement only if it is highly probable that the amounts recorded will not result in a significant downward adjustment.

Commission

The Group records commission income and expense in profit or loss:

- either over time as the service is rendered when the client receives continuous service. These include, for example, certain commissions on transactions with customers when services are rendered on a continuous basis, commissions on financing commitments that are not included in the interest margin, because the probability that they give rise to the drawing up of a loan is low, commissions on financial collateral, clearing commissions on financial instruments, commissions related to trust and similar activities, securities custody fees, *etc.*

Commissions received under financial guarantee commitments are deemed to represent the initial fair value of the commitment. The resulting liability is subsequently amortised over the term of the commitment, in Commission income;

- or at a point in time when the service is rendered, in other cases. These include, for example, distribution fees received, loan syndication fees remunerating the arrangement service, advisory fees, *etc.*

Income from other activities

Income from property development as well as income from services provided in connection with lease contracts is recorded under 'income from other activities' in the income statement.

As regards property development income, the Group records it in profit or loss:

- over time, when the performance obligation creates or enhances an asset on which the customer obtains control as it is created or enhanced (e.g. work in progress controlled by the client on the land in which the asset is located, *etc.*), or where the service performed does not create an asset that the entity could otherwise use and gives it enforceable right to payment for performance completed to date. This is the case for contracts such as VEFA (sale in the future state of completion) in France.
- at completion in other cases.

Regarding income from services provided in connection with lease contracts, the Group records them in profit or loss as the service is rendered, i.e. in proportion to the costs incurred for maintenance contracts.

1.e FINANCIAL ASSETS AND LIABILITIES

Financial assets, except those relating to insurance activities (see note 1.f) are classified at amortised cost, at fair value through shareholders' equity or at fair value through profit or loss depending on the business model and the contractual features of the instruments at initial recognition.

Financial liabilities are classified at amortised cost or at fair value through profit or loss at initial recognition.

Financial assets and liabilities are recognised in the balance sheet when the Group becomes a party to the contractual provisions of the instrument. Purchases and sales of financial assets made within a period established by the regulations or by a convention in the relevant marketplace are recognised in the balance sheet at the settlement date.

1.e.1 FINANCIAL ASSETS AT AMORTISED COST

Financial assets are classified at amortised cost if the following two criteria are met: the business model objective is to hold the instrument in order to collect the contractual cash flows and the cash flows consist solely of payments relating to principal and interest on the principal.

Business model criterion

Financial assets are managed within a business model whose objective is to hold financial assets in order to collect cash flows through the collection of contractual payments over the life of the instrument.

The realisation of disposals close to the maturity of the instrument and for an amount close to the remaining contractual cash-flows, or due to an increase in the counterparty's credit risk is consistent with a business model whose objective is to collect the contractual cash flows ("collect"). Sales imposed by regulatory requirements or to manage the concentration of credit risk (without an increase in the asset's credit risk) are also consistent with this business model when they are infrequent or insignificant in value.

Cash flow criterion

The cash flow criterion is satisfied if the contractual terms of the debt instrument give rise, on specified dates, to cash flows that are solely repayments of principal and interest on the principal amount outstanding.

The criterion is not met in the event of a contractual characteristic that exposes the holder to risks or to the volatility of contractual cash flows that are inconsistent with those of a non-structured or "basic lending" arrangement. It is also not satisfied in the event of leverage that increases the variability of the contractual cash flows.

Interest consists of consideration for the time value of money, for the credit risk, and for the remuneration of other risks (e.g. liquidity risk), costs (e.g. administration fees), and a profit margin consistent with that of a basic lending arrangement. The existence of negative interest does not call into question the cash flow criterion.

The time value of money is the component of interest - usually referred to as the “rate” component - which provides consideration for only the passage of time. The relationship between the interest rate and the passage of time must not be modified by specific characteristics that could call into question the respect of the cash flow criterion.

Thus, when the variable interest rate of the financial asset is periodically reset at a frequency that does not match the duration for which the interest rate is established, the time value of money may be considered as modified and, depending on the significance of that modification, the cash flow criterion may not be met. Some financial assets held by the Group present a mismatch between the interest rate reset frequency and the maturity of the index, or interest rates indexed to an average of benchmark rate. The Group has developed a consistent methodology for analysing this alteration of the time value of money.

Regulated rates meet the cash flow criterion when they provide consideration that is broadly consistent with the passage of time and does not expose to risks or volatility in the contractual cash flows that would be inconsistent with those of a basic lending arrangement (example: loans granted in the context of *Livret A* savings accounts).

Some contractual clauses may change the timing or the amount of cash flows. Early redemption options do not call into question the cash flow criterion if the prepayment amount substantially represents the principal amount outstanding and the interest thereon, which may include reasonable compensation for the early termination of the contract. For example, as regards loans to retail customers, the compensation limited to 6 months of interest or 3% of the capital outstanding is considered reasonable. Actuarial penalties, corresponding to the discounted value of the difference between the residual contractual cash-flows of the loan, and their reinvestment in a loan to a similar counterparty or in the interbank market for a similar residual maturity are also considered as reasonable, even when the compensation can be positive or negative (i.e. “symmetric” compensation). An option that permits the issuer or the holder of a financial instrument to change the interest rate from floating to fixed rate does not breach the cash flow criterion if the fixed rate is determined at origination, or if it represents the time value of money for the residual maturity of the instrument at the date of exercise of the option. Clauses included in financing granted to encourage the sustainable development of companies which adjust the interest margin depending on the achievement of environmental, social or governance (ESG) objectives do not call into question the cash flow criterion when such an adjustment is considered to be minimal. Structured instruments indexed to ESG market indices do not meet the cash flow criterion.

In the particular case of financial assets contractually linked to payments received on a portfolio of underlying assets and which include a priority order for payment of cash flows between investors (“tranches”), thereby creating concentrations of credit risk, a specific analysis is carried out. The contractual characteristics of the tranche and those of the underlying financial instrument portfolios must meet the cash flow criterion and the credit risk exposure of the tranche must be equal to or lower than the exposure to credit risk of the underlying pool of financial instruments.

Certain loans may be “non-recourse”, either contractually, or in substance when they are granted to a special purpose entity. That is in particular the case of numerous project financing or asset financing loans. The cash-flow criterion is met as long as these loans do not represent a direct exposure on the assets acting as collateral. In practice, the sole fact that the financial asset explicitly gives rise to cash flows that are consistent with payments of principal and interest is not sufficient to conclude that the instrument meets the cash flow criterion. In that case, the particular underlying assets to which there is limited recourse shall be analysed using the “look-through” approach. If those assets do not themselves meet the cash flow criterion, the existing credit enhancement is assessed. The following aspects are considered: structuring and sizing of the transaction, own funds level of the structure, expected source of repayment, price volatility of the underlying assets. This analysis is applied to “non-recourse” loans granted by the Group.

The “financial assets at amortised cost” category includes, in particular, loans granted by the Group, as well as reverse repurchase agreements and securities held by the Group ALM Treasury in order to collect contractual flows and meeting the cash flow criterion.

Recognition

On initial recognition, financial assets are recognised at fair value, including transaction costs directly attributable to the transaction as well as commissions related to the origination of the loans.

They are subsequently measured at amortised cost, including accrued interest and net of repayments of principal and interest during the past period. These financial assets are also subject from their initial recognition, to the measurement of a loss allowance for expected credit losses (note 1.e.5).

Interest is calculated using the effective interest method determined at inception of the contract.

1.e.2 FINANCIAL ASSETS AT FAIR VALUE THROUGH SHAREHOLDERS' EQUITY

Debt instruments

Debt instruments are classified at fair value through shareholders' equity if the following two criteria are met:

- business model criterion: Financial assets are held in a business model whose objective is achieved by both holding the financial assets in order to collect contractual cash flows and selling the financial assets ("collect and sale"). The latter is not incidental but is an integral part of the business model.
- cash flow criterion: The principles are identical to those applicable to financial assets at amortised cost.

The securities held by the Group ALM Treasury in order to collect contractual flows or to be sold and meeting the cash flow criterion are in particular classified in this category.

On initial recognition, financial assets are recognised at their fair value, including transaction costs directly attributable to the transaction. They are subsequently measured at fair value and changes in fair value are recognised, under a specific line of shareholders' equity entitled "Changes in assets and liabilities recognised directly in equity that may be reclassified to profit or loss". These financial assets are also subject to the measurement of a loss allowance for expected credit losses on the same approach as for debt instruments at amortised cost. The counterparty of the related impact in cost of risk is recognised in the same specific line of shareholders' equity. On disposal, changes in fair value previously recognised in shareholders' equity are reclassified to profit or loss.

In addition, interest is recognised in the income statement using the effective interest method determined at the inception of the contract.

Equity instruments

Investments in equity instruments such as shares are classified on option, and on a case by case basis, at fair value through shareholders' equity (under a specific line). On disposal of the shares, changes in fair value previously recognised in equity are not recognised in profit or loss. Only dividends, if they represent remuneration for the investment and not repayment of capital, are recognised in profit or loss. These instruments are not subject to impairment.

Investments in mutual funds puttable to the issuer do not meet the definition of equity instruments. They do not meet the cash flow criterion either, and thus are recognised at fair value through profit or loss.

1.e.3 FINANCING AND GUARANTEE COMMITMENTS

Financing and financial guarantee commitments that are not recognised at fair value through profit or loss are presented in the note relating to financing and guarantee commitments. They are subject to the measurement of a loss allowance for expected credit losses. These loss allowances are presented under “Provisions for contingencies and charges”.

1.e.4 REGULATED SAVINGS AND LOAN CONTRACTS

Home savings accounts (*Comptes Épargne-Logement* – “CEL”) and home savings plans (*Plans d'Épargne Logement* – “PEL”) are government-regulated retail products sold in France. They combine a savings phase and a loan phase which are inseparable, with the loan phase contingent upon the savings phase.

These products contain two types of obligations for BNP Paribas: an obligation to pay interest on the savings for an indefinite period, at a rate set by the government at the inception of the contract (in the case of PEL products) or at a rate reset every six months using an indexation formula set by law (in the case of CEL products); and an obligation to lend to the customer (at the customer's option) an amount contingent upon the rights acquired during the savings phase, at a rate set at the inception of the contract (in the case of PEL products) or at a rate contingent upon the savings phase (in the case of CEL products).

The Group's future obligations with respect to each generation (in the case of PEL products, a generation comprises all products with the same interest rate at inception; in the case of CEL products, all such products constitute a single generation) are measured by discounting potential future earnings from at-risk outstandings for that generation.

At-risk outstandings are estimated on the basis of a historical analysis of customer behaviour, and are equivalent to:

- for the loan phase: statistically probable loans outstanding and actual loans outstanding;
- for the savings phase: the difference between statistically probable outstandings and minimum expected outstandings, with minimum expected outstandings being deemed equivalent to unconditional term deposits.

Earnings for future periods from the savings phase are estimated as the difference between the reinvestment rate and the fixed savings interest rate on at-risk savings outstanding for the period in question. Earnings for future periods from the loan phase are estimated as the difference between the refinancing rate and the fixed loan interest rate on at-risk loans outstanding for the period in question.

The reinvestment rate for savings and the refinancing rate for loans are derived from the swap yield curve and from the spreads expected on financial instruments of similar type and maturity. Spreads are determined on the basis of actual spreads on fixed-rate home loans in the case of the loan phase and products offered to individual clients in the case of the savings phase. In order to reflect the uncertainty of future interest rate trends, and the impact of such trends on customer behaviour models and on at-risk outstandings, the obligations are estimated using the Monte-Carlo method.

Where the sum of the Group's estimated future obligations with respect to the savings and loan phases of any generation of contracts indicates a potentially unfavourable situation for the Group, a provision is recognised (with no offset between generations) in the balance sheet in “Provisions for contingencies and charges”. Movements in this provision are recognised as interest income in the profit and loss account.

1.e.5 IMPAIRMENT OF FINANCIAL ASSETS MEASURED AT AMORTISED COST AND DEBT INSTRUMENTS MEASURED AT FAIR VALUE THROUGH SHAREHOLDERS' EQUITY

The impairment model for credit risk is based on expected losses.

This model applies to loans and debt instruments measured at amortised cost or at fair value through equity, to loan commitments and financial guarantee contracts that are not recognised at fair value, as well as to lease receivables, trade receivables and contract assets.

General model

The Group identifies three “stages” that each correspond to a specific status with regards to the evolution of counterparty credit risk since the initial recognition of the asset.

- 12-month expected credit losses (“stage 1”): If at the reporting date, the credit risk of the financial instrument has not increased significantly since its initial recognition, this instrument is impaired at an amount equal to 12-month expected credit losses (resulting from the risk of default within the next 12 months).
- Lifetime expected credit losses for non-impaired assets (“stage 2”): The loss allowance is measured at an amount equal to the lifetime expected credit losses if the credit risk of the financial instrument has increased significantly since initial recognition, but the financial asset is not considered credit-impaired or doubtful.
- Lifetime expected credit losses for credit-impaired or doubtful financial assets (“stage 3”): The loss allowance is also measured for an amount equal to the lifetime expected credit losses.

This general model is applied to all instruments within the scope of IFRS 9 impairment, except for purchased or originated credit-impaired financial assets and instruments for which a simplified model is used (see below).

The IFRS 9 expected credit loss approach is symmetrical, i.e. if lifetime expected credit losses have been recognised in a previous reporting period, and if it is assessed in the current reporting period that there is no longer any significant increase in credit risk since initial recognition, the loss allowance reverts to a 12-months expected credit loss.

As regards interest income, under “stages” 1 and 2, it is calculated on the gross carrying amount. Under “stage 3”, interest income is calculated on the amortised cost (i.e. the gross carrying amount adjusted for the loss allowance).

Definition of default

The definition of default is aligned with the Basel regulatory default definition, with a rebuttable presumption that the default occurs no later than 90 days past due. This definition takes into account the EBA guidelines of 28 September 2016, notably those regarding the thresholds applicable for the counting of past-due and probation periods.

The definition of default is used consistently for assessing the increase in credit risk and measuring expected credit losses.

Credit-impaired or doubtful financial assets

Definition

A financial asset is considered credit-impaired or doubtful and classified in “stage 3” when one or more events that have a detrimental impact on the estimated future cash flows of that financial asset have occurred.

At an individual level, objective evidence that a financial asset is credit-impaired includes observable data regarding the following events: the existence of accounts that are more than 90 days past due; knowledge or indications that the borrower is experiencing significant financial difficulties, such that a risk can be considered to have arisen regardless of whether the borrower has missed any payments; concessions with respect to the credit terms granted to the borrower that the lender would not have considered had the borrower not been in financial difficulty (see section *Restructuring of financial assets for financial difficulties*).

Specific cases of purchased or originated credit-impaired assets

In some cases, financial assets are credit-impaired at initial recognition.

For these assets, no loss allowance is recorded on initial recognition. The effective interest rate is calculated taking into account the lifetime expected credit losses in the initial estimated cash flows. Any change in lifetime expected credit losses since initial recognition, positive or negative, is recognised as a loss allowance adjustment in profit or loss.

Simplified model

The simplified approach consists in accounting for a loss allowance corresponding to lifetime expected credit losses since initial recognition, and at each reporting date.

The group applies this model to trade receivables with a maturity shorter than 12 months.

Significant increase in credit risk

A significant increase in credit risk may be assessed on an individual basis or on a collective basis (by grouping financial instruments according to common credit risk characteristics), taking into account all reasonable and supportable information and comparing the risk of default of the financial instrument at the reporting date with the risk of default of the financial instrument at the date of initial recognition.

Assessment of deterioration is based on the comparison of the probabilities of default derived from the ratings on the date of initial recognition with those existing at the reporting date.

There is also, according to the standard, a rebuttable presumption that the credit risk of an instrument has significantly increased since initial recognition when the contractual payments are more than 30 days past due.

In the consumer credit specialist business, a significant increase in credit risk is also considered when a past due event has occurred within the last 12 months, even if it has since been regularised.

In the context of the health crisis, the granting of moratoria that meet the criteria defined in the EBA guidelines published on 2 April 2020, and amended on 2 December 2020, has not been considered, in isolation, as an indicator of a significant increase in credit risk leading to an automatic transfer to stage 2. The granting of “private” moratoria that meet equivalent criteria to those defined in the EBA guidelines has followed the same treatment. Moratoria do not trigger the counting of past-due days as long as the new payment schedule is respected.

The principles applied to assess the significant increase in credit risk are detailed in note 2.h *Cost of risk*.

Measurement of expected credit losses

Expected credit losses are defined as an estimate of credit losses (i.e. the present value of all cash shortfalls) weighted by the probability of occurrence of these losses over the expected life of the financial instruments. They are measured on an individual basis, for all exposures.

In practice, for exposures classified in stage 1 and stage 2, expected credit losses are measured as the product of the probability of default (“PD”), loss given default (“LGD”) and exposure at default (“EAD”), discounted at the effective interest rate of the exposure (EIR). They result from the risk of default within the next 12 months (stage 1), or from the risk of default over the maturity of the facility (stage 2). In the consumer credit specialist business, because of the specificity of credit exposures, the methodology used is based on the probability of transition to term forfeiture, and on discounted loss rates after term forfeiture. These parameters are measured on a statistical basis for homogeneous populations.

For exposures classified in stage 3, expected credit losses are measured as the value, discounted at the effective interest rate, of all cash shortfalls over the life of the financial instrument. Cash shortfalls represent the difference between the cash-flows that are due in accordance with the contract, and the cash-flows that are expected to be received. Where appropriate, the estimate of expected cash flows takes into account a cash flow scenario arising from the sale of the defaulted loans or groups of loans. Proceeds from the sale are recorded net of costs to sell.

The methodology developed is based on existing concepts and methods (in particular the Basel framework) on exposures for which capital requirement for credit risk is measured according to the IRBA methodology. This method is also applied to portfolios for which capital requirement for credit risk is measured according to the standardised approach. Besides, the Basel framework has been adjusted in order to be compliant with IFRS 9 requirements, in particular the use of forward-looking information.

Maturity

All contractual terms of the financial instrument are taken into account, including prepayment, extension and similar options. In the rare cases where the expected life of the financial instrument cannot be estimated reliably, the residual contractual term is used. The standard specifies that the maximum period to consider when measuring expected credit losses is the maximum contractual period. However, for revolving credit cards and overdrafts, in accordance with the exception provided by IFRS 9 for these products, the maturity considered for measuring expected credit losses is the period over which the entity is exposed to credit risk, which may extend beyond the contractual maturity (notice period). For revolving credits and overdrafts to non-retail counterparties, the contractual maturity can be used, for example if the next review date is the contractual maturity as they are individually managed.

Probabilities of Default (PD)

Probability of Default is an estimate of the likelihood of default over a given time horizon.

The determination of the PD is based on the Group's internal rating system, which is described in chapter 5 of the Universal Registration Document (section 5.4 Credit risk – Credit risk management policy). This section describes how environmental, social and governance (ESG) risks are taken into account in credit and rating policies, notably with the introduction of a new tool: the *ESG Assessment*.

The measurement of expected credit losses requires the estimation of both 1-year probabilities of default and lifetime probabilities of default.

1-year PDs are derived from long term average regulatory “through the cycle” PDs to reflect the current situation (“Point in Time” or “PIT”).

Lifetime PDs are determined based on the rating migration matrices reflecting the expected changes in the rating of the exposure until maturity, and the associated probabilities of default.

Loss Given Default (LGD)

Loss Given Default is the difference between contractual cash-flows and expected cash-flows, discounted using the effective interest rate (or an approximation thereof) at the default date. LGD is expressed as a percentage of the Exposure At Default (EAD).

The estimate of expected cash flows takes into account cash flows resulting from the sale of collateral held or other credit enhancements if they are part of the contractual terms and are not accounted for separately by the entity (for example, a mortgage associated with a residential loan), net of the costs of obtaining and selling the collateral.

For guaranteed loans, the guarantee is considered as integral to the loan agreement if it is embedded in the contractual clauses of the loan, or if it was granted concomitantly to the loan, and if the expected reimbursement amount can be attached to a loan in particular (i.e. absence of pooling effect by means of a tranching mechanism, or the existence of a global cap for a whole portfolio). In such case, the guarantee is taken into account when measuring the expected credit losses. Otherwise, it is accounted for as a separate reimbursement asset.

The LGD used for IFRS 9 purposes is derived from the Basel LGD parameters. It is adjusted for downturn and conservatism margins (in particular regulatory margins), except for margins for model uncertainties.

Exposure At Default (EAD)

Exposure At Default (EAD) of an instrument is the anticipated outstanding amount owed by the obligor at the time of default. It is determined by the expected payment profile taking into account, depending on the product type: the contractual repayment schedule, expected early repayments and expected future drawings for revolving facilities.

Forward looking information

The amount of expected credit losses is measured on the basis of probability-weighted scenarios, in view of past events, current conditions and reasonable and supportable economic forecasts.

The principles applied to take into account forward looking information when measuring expected credit losses are detailed in note 2.h *Cost of risk*.

Write-offs

A write-off consists in reducing the gross carrying amount of a financial asset when there are no longer reasonable expectations of recovering that financial asset in its entirety or a portion thereof, or when it has been fully or partially forgiven. The write-off is recorded when all other means available to the Bank for recovering the receivables or guarantees have failed, and also generally depends on the context specific to each jurisdiction.

If the amount of loss on write-off is greater than the accumulated loss allowance, the difference is recognised as an additional impairment loss in “Cost of risk”. For any recovery once the financial asset (or part thereof) is no longer recognised on the balance sheet, the amount received is recorded as a gain in “Cost of risk”.

Recoveries through the repossession of the collateral

When a loan is secured by a financial or a non-financial asset serving as a guarantee and the counterparty is in default, the Group may decide to exercise the guarantee and, depending on the jurisdiction, it may then become owner of the asset. In such a situation, the loan is written-off against the asset received as collateral.

Once ownership of the asset is effective, it is recognised at fair value and classified according to the intent of use.

Restructuring of financial assets for financial difficulties

A restructuring due to the borrower's financial difficulties is defined as a change in the terms and conditions of the initial transaction that the Group is considering only for economic or legal reasons related to the borrower's financial difficulties.

For restructurings not resulting in derecognition of the financial asset, the restructured asset's gross carrying amount is reduced to the discounted amount, using the original effective interest rate of the asset, of the new expected future flows. The change in the gross carrying amount of the asset is recorded in the income statement in “Cost of risk”.

The existence of a significant increase in credit risk for the financial instrument is then assessed by comparing the risk of default after the restructuring (under the revised contractual terms) and the risk of default at the initial recognition date (under the original contractual terms). In order to demonstrate that the criteria for recognising lifetime expected credit losses are no longer met, good payment behaviour will have to be observed over a certain period of time.

When the restructuring consists of a partial or total exchange against other substantially different assets (for example, the exchange of a debt instrument against an equity instrument), it results in the extinction of the original asset and the recognition of the assets remitted in exchange, measured at their fair value at the date of exchange. The difference in value is recorded in the income statement in “Cost of risk”.

As a reminder, in response to the health crisis, several moratoria have been granted to clients. These moratoria mostly consisted in payment suspension of a few months, with additional interest that may or not continue to accrue during the suspension period. Accordingly, the modification was generally considered as not substantial. The associated discount (linked to the absence of interest accruing, or interest accruing at a rate that was lower than the EIR of the loan) was therefore recognised in NBI, subject to meeting certain criteria⁹. In such cases, the moratorium was considered as not being granted in response to the borrower's financial difficulties, but in response to a temporary liquidity crisis and the credit risk was not considered to have significantly increased.

Modifications to financial assets that are not due to a borrower's financial difficulties, or granted in the context of a moratorium (i.e. commercial renegotiations) are generally analysed as the early repayment of the former loan, which is then derecognised, followed by the set-up of a new loan at market conditions. They consist in resetting the interest rate of the loan at market conditions, with the client being in a position to change lender and not encountering any financial difficulties.

⁹ Moratoria qualified as “COVID-19 General moratorium Measure” (i.e. meeting the criteria defined in EBA Guidelines published on 2 April 2020 and amended on 2 December 2020) or similar measures that do not lead to a transfer to stage 3.

Probation periods

The Group applies observation periods to assess the possible return to a better stage. Accordingly, a 3-month probation period is observed for the transition from stage 3 to stage 2 which is extended to 12 months in the event of restructuring due to financial difficulties.

For the transition from stage 2 to stage 1, a probation period of two years is observed for loans that have been restructured due to financial difficulties.

1.e.6 COST OF RISK

Cost of risk includes the following items of profit or loss:

- impairment gains and losses resulting from the accounting of loss allowances for 12-month expected credit losses and lifetime expected credit losses (“stage 1” and “stage 2”) relating to debt instruments measured at amortised cost or at fair value through shareholders' equity, loan commitments and financial guarantee contracts that are not recognised at fair value as well as lease receivables, contract assets and trade receivables;
- impairment gains and losses resulting from the accounting of loss allowances relating to financial assets (including those at fair value through profit or loss) for which there is objective evidence of impairment (“stage 3”), write-offs on irrecoverable loans and amounts recovered on loans written-off;
- impairment gains and losses relating to fixed-income securities of insurance entities that are individually impaired (which fall under IAS 39).

It also includes expenses relating to fraud and to disputes inherent to the financing activity.

1.e.7 FINANCIAL INSTRUMENTS AT FAIR VALUE THROUGH PROFIT OR LOSS

Trading portfolio and other financial assets measured at fair value through profit or loss

The trading portfolio includes instruments held for trading (trading transactions), including derivatives.

Other financial assets measured at fair value through profit or loss include debt instruments that do not meet the “collect” or “collect and sale” business model criterion or that do not meet the cash flow criterion, as well as equity instruments for which the fair value through shareholders' equity option has not been retained.

All those financial instruments are measured at fair value at initial recognition, with transaction costs directly posted in profit or loss. At the reporting date, they are measured at fair value, with changes presented in “Net gain/loss on financial instruments at fair value through profit or loss”. Income, dividends, and realised gains and losses on disposal related to held-for-trading transactions are accounted for in the same profit or loss account.

Financial liabilities designated as at fair value through profit or loss

Financial liabilities are recognised under option in this category in the two following situations:

- for hybrid financial instruments containing one or more embedded derivatives which otherwise would have been separated and accounted for separately. An embedded derivative is such that its economic characteristics and risks are not closely related to those of the host contract;
- when using the option enables the entity to eliminate or significantly reduce a mismatch in the measurement and accounting treatment of assets and liabilities that would otherwise arise if they were to be classified in separate categories.

Changes in fair value due to the own credit risk are recognised under a specific heading of shareholders' equity.

1.e.8 FINANCIAL LIABILITIES AND EQUITY INSTRUMENTS

A financial instrument issued or its various components are classified as a financial liability or equity instrument, in accordance with the economic substance of the legal contract.

Financial instruments issued by the Group are qualified as debt instruments if the entity in the Group issuing the instruments has a contractual obligation to deliver cash or another financial asset to the holder of the instrument. The same applies if the Group is required to exchange financial assets or financial liabilities with another entity under conditions that are potentially unfavourable to the Group, or to deliver a variable number of the Group's own equity instruments.

Equity instruments result from contracts evidencing a residual interest in an entity's assets after deducting all of its liabilities.

Debt securities and subordinated debt

Debt securities and subordinated debt are measured at amortised cost unless they are recognised at fair value through profit or loss.

Debt securities are initially recognised at the issue value including transaction costs and are subsequently measured at amortised cost using the effective interest method.

Bonds redeemable or convertible into own equity are hybrid instruments that may contain a debt component and an equity component, determined upon initial recognition of the transaction.

Equity instruments

The term "own equity instruments" refers to shares issued by the parent company (BNP Paribas SA) and by its fully consolidated subsidiaries. External costs that are directly attributable to an issue of new shares are deducted from equity net of all related taxes.

Own equity instruments held by the Group, also known as treasury shares, are deducted from consolidated shareholders' equity irrespective of the purpose for which they are held. Gains and losses arising on such instruments are eliminated from the consolidated profit and loss account.

When the Group acquires equity instruments issued by subsidiaries under the exclusive control of BNP Paribas, the difference between the acquisition price and the share of net assets acquired is recorded in retained earnings attributable to BNP Paribas shareholders. Similarly, the liability corresponding to put options granted to minority shareholders in such subsidiaries, and changes in the value of that liability, are offset against minority interests, with any surplus offset against retained earnings attributable to BNP Paribas shareholders. Until these options have been exercised, the portion of net income attributable to minority interests is allocated to minority interests in the profit and loss account. A decrease in the Group's interest in a fully consolidated subsidiary is recognised in the Group's accounts as a change in shareholders' equity.

Financial instruments issued by the Group and classified as equity instruments (e.g. Undated Super Subordinated Notes) are presented in the balance sheet in "Capital and retained earnings".

Distributions from a financial instrument classified as an equity instrument are recognised directly as a deduction from equity. Similarly, the transaction costs of an instrument classified as equity are recognised as a deduction from shareholders' equity.

Own equity instrument derivatives are treated as follows, depending on the method of settlement:

- as equity instruments if they are settled by physical delivery of a fixed number of own equity instruments for a fixed amount of cash or other financial asset. Such instruments are not revalued;
- as derivatives if they are settled in cash or by choice by physical delivery of the shares or in cash. Changes in value of such instruments are taken to the profit and loss account.

If the contract includes an obligation, whether contingent or not, for the bank to repurchase its own shares, the bank recognises the debt at its present value with an offsetting entry in shareholders' equity.

1.e.9 HEDGE ACCOUNTING

The Group retained the option provided by the standard to maintain the hedge accounting requirements of IAS 39 until the future standard on macro-hedging is entered into force. Furthermore, IFRS 9 does not explicitly address the fair value hedge of the interest rate risk on a portfolio of financial assets or liabilities. The provisions in IAS 39 for these portfolio hedges, as adopted by the European Union, continue to apply.

Derivatives contracted as part of a hedging relationship are designated according to the purpose of the hedge.

Fair value hedges are particularly used to hedge interest rate risk on fixed-rate assets and liabilities, both for identified financial instruments (securities, debt issues, loans, borrowings) and for portfolios of financial instruments (in particular, demand deposits and fixed-rate loans).

Cash flow hedges are particularly used to hedge interest rate risk on floating-rate assets and liabilities, including rollovers, and foreign exchange risks on highly probable forecast foreign currency revenues.

At the inception of the hedge, the Group prepares formal documentation which details the hedging relationship, identifying the instrument, or portion of the instrument, or portion of risk that is being hedged, the hedging strategy and the type of risk hedged, the hedging instrument, and the methods used to assess the effectiveness of the hedging relationship.

On inception and at least quarterly, the Group assesses, in consistency with the original documentation, the actual (retrospective) and expected (prospective) effectiveness of the hedging relationship. Retrospective effectiveness tests are designed to assess whether the ratio of actual changes in the fair value or cash flows of the hedging instrument to those in the hedged item is within a range of 80% to 125%. Prospective effectiveness tests are designed to ensure that expected changes in the fair value or cash flows of the derivative over the residual life of the hedge adequately offset those of the hedged item. For highly probable forecast transactions, effectiveness is assessed largely on the basis of historical data for similar transactions.

Under IAS 39 as adopted by the European Union, which excludes certain provisions on portfolio hedging, interest rate risk hedging relationships based on portfolios of assets or liabilities qualify for fair value hedge accounting as follows:

- the risk designated as being hedged is the interest rate risk associated with the interbank rate component of interest rates on commercial banking transactions (loans to customers, savings accounts and demand deposits);
- the instruments designated as being hedged correspond, for each maturity band, to a portion of the interest rate gap associated with the hedged underlying;
- the hedging instruments used consist exclusively of "plain vanilla" swaps;
- prospective hedge effectiveness is established by the fact that all derivatives must, on inception, have the effect of reducing interest rate risk in the portfolio of hedged underlying. Retrospectively, a hedge will be disqualified from hedge accounting once a shortfall arises in the underlying specifically associated with that hedge for each maturity band (due to prepayment of loans or withdrawals of deposits).

The accounting treatment of derivatives and hedged items depends on the hedging strategy.

In a fair value hedging relationship, the derivative instrument is remeasured at fair value in the balance sheet, with changes in fair value recognised in profit or loss in "Net gain/loss on financial instruments at fair value through profit or loss", symmetrically with the remeasurement of the hedged item to reflect the hedged risk. In the balance sheet, the fair value remeasurement of the hedged component is recognised in accordance with the classification of the hedged item in the case of a hedge of identified assets and liabilities, or under "Remeasurement adjustment on interest rate risk hedged portfolios" in the case of a portfolio hedging relationship.

If a hedging relationship ceases or no longer fulfils the effectiveness criteria, the hedging instrument is transferred to the trading book and accounted for using the treatment applied to this category. In the case of identified fixed-income instruments, the remeasurement adjustment recognised in the balance sheet is amortised at the effective interest rate over the remaining life of the instrument. In the case of interest rate risk hedged fixed-income portfolios, the adjustment is amortised on a straight-line basis over the remainder of the original term of the hedge. If the hedged item no longer appears in the balance sheet, in particular due to prepayments, the adjustment is taken to the profit and loss account immediately.

In a cash flow hedging relationship, the derivative is measured at fair value in the balance sheet, with changes in fair value taken to shareholders' equity on a separate line, "Changes in fair value recognised directly in equity". The amounts taken to shareholders' equity over the life of the hedge are transferred to the profit and loss account under "Net interest income" as and when the cash flows from the hedged item impact profit or loss. The hedged items continue to be accounted for using the treatment specific to the category to which they belong.

If the hedging relationship ceases or no longer fulfils the effectiveness criteria, the cumulative amounts recognised in shareholders' equity as a result of the remeasurement of the hedging instrument remain in equity until the hedged transaction itself impacts profit or loss, or until it becomes clear that the transaction will not occur, at which point they are transferred to the profit and loss account.

If the hedged item ceases to exist, the cumulative amounts recognised in shareholders' equity are immediately taken to the profit and loss account.

Whatever the hedging strategy used, any ineffective portion of the hedge is recognised in the profit and loss account under "Net gain/loss on financial instruments at fair value through profit or loss".

Hedges of net foreign currency investments in subsidiaries and branches are accounted for in the same way as cash flow hedges. Hedging instruments may be foreign exchange derivatives or any other non-derivative financial instrument.

1.e.10 DETERMINATION OF FAIR VALUE

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants in the principal market or most advantageous market, at the measurement date.

The Group determines the fair value of financial instruments either by using prices obtained directly from external data or by using valuation techniques. These valuation techniques are primarily market and income approaches encompassing generally accepted models (e.g. discounted cash flows, Black-Scholes model, and interpolation techniques). They maximise the use of observable inputs and minimise the use of unobservable inputs. They are calibrated to reflect current market conditions and valuation adjustments are applied as appropriate, when some factors such as model, liquidity and credit risks are not captured by the models or their underlying inputs but are nevertheless considered by market participants when setting the exit price.

The unit of measurement is the individual financial asset or financial liability but a portfolio-based measurement can be elected, subject to certain conditions. Accordingly, the Group retains this portfolio-based measurement exception to determine the fair value when some group of financial assets and financial liabilities and other contracts within the scope of the standard relating to financial instruments with substantially similar and offsetting market risks or credit risks are managed on the basis of a net exposure, in accordance with the documented risk management strategy.

Assets and liabilities measured or disclosed at fair value are categorised into the three following levels of the fair value hierarchy:

- Level 1: fair values are determined using directly quoted prices in active markets for identical assets and liabilities. Characteristics of an active market include the existence of a sufficient frequency and volume of activity and of readily available prices;
- Level 2: fair values are determined based on valuation techniques for which significant inputs are observable market data, either directly or indirectly. These techniques are regularly calibrated and the inputs are corroborated with information from active markets;
- Level 3: fair values are determined using valuation techniques for which significant inputs are unobservable or cannot be corroborated by market-based observations, due for instance to illiquidity of the instrument and significant model risk. An unobservable input is a parameter for which there are no market data available and that is therefore derived from proprietary assumptions about what other market participants would consider when assessing fair value. The assessment of whether a product is illiquid or subject to significant model risks is a matter of judgment.

The level in the fair value hierarchy within which the asset or liability is categorised in its entirety is based upon the lowest level input that is significant to the entire fair value.

For financial instruments disclosed in Level 3 of the fair value hierarchy, and marginally some instruments disclosed in Level 2, a difference between the transaction price and the fair value may arise at initial recognition. This "Day One Profit" is deferred and released to the profit and loss account over the period during which the valuation parameters are expected to remain non-observable. When parameters that were originally non-observable become observable, or when the valuation can be substantiated in comparison with recent similar

transactions in an active market, the unrecognised portion of the day one profit is released to the profit and loss account.

1.e.11 DERECOGNITION OF FINANCIAL ASSETS AND FINANCIAL LIABILITIES

Derecognition of financial assets

The Group derecognises all or part of a financial asset when the contractual rights to the cash flows of the asset expire, or when the Group transfers the asset – either on the basis of a transfer of the contractual rights to its cash flows, or by retaining the contractual rights to receive the cash flows of the asset while assuming an obligation to pay the cash flows of the asset under an eligible pass-through arrangement – as well as substantially all the risks and rewards of the asset.

Where the Group has transferred the cash flows of a financial asset but has neither transferred nor retained substantially all the risks and rewards of ownership of the financial asset and has not in practice retained control of the financial asset, the Group derecognises the financial asset and then records separately, if necessary, an asset or liability representing the rights and obligations created or held as part of the transfer of the asset. If the Group has retained control of the financial asset, it maintains it on its balance sheet to the extent of its continuing involvement in that asset.

Upon the derecognition of a financial asset in its entirety, a gain or loss on disposal is recognised in the profit and loss account for an amount equal to the difference between the carrying amount of the asset and the value of the consideration received, adjusted where appropriate for any unrealised gain or loss previously recognised directly in equity.

If all these conditions are not met, the Group retains the asset in its balance sheet and recognises a liability for the obligations arising on the transfer of the asset.

Derecognition of financial liabilities

The Group derecognises all or part of a financial liability when the liability is extinguished, i.e. when the obligation specified in the contract is extinguished, cancelled or expired. A financial liability may also be derecognised in the event of a substantial change in its contractual terms or if exchanged with the lender for an instrument with substantially different contractual terms.

Repurchase agreements and securities lending/borrowing

Securities temporarily sold under repurchase agreements continue to be recognised in the Group's balance sheet in the category of securities to which they belong. The corresponding liability is recognised at amortised cost under the appropriate "Financial liabilities at amortised cost" category on the balance sheet, except in the case of repurchase agreements contracted for trading purposes, for which the corresponding liability is recognised in "Financial liabilities at fair value through profit or loss".

Securities temporarily acquired under reverse repurchase agreements are not recognised in the Group's balance sheet. The corresponding receivable is recognised at amortised cost under the appropriate "Financial assets at amortised cost" category in the balance sheet, except in the case of reverse repurchase agreements contracted for trading purposes, for which the corresponding receivable is recognised in "Financial assets at fair value through profit or loss".

Securities lending transactions do not result in derecognition of the lent securities, and securities borrowing transactions do not result in recognition of the borrowed securities on the balance sheet. In cases where the borrowed securities are subsequently sold by the Group, the obligation to deliver the borrowed securities on maturity is recognised on the balance sheet under "Financial liabilities at fair value through profit or loss".

1.e.12 OFFSETTING FINANCIAL ASSETS AND FINANCIAL LIABILITIES

A financial asset and a financial liability are offset and the net amount presented in the balance sheet if, and only if, the Group has a legally enforceable right to set off the recognised amounts, and intends either to settle on a net basis, or to realise the asset and settle the liability simultaneously.

Repurchase agreements and derivatives that meet the two criteria set out in the accounting standard are offset in the balance sheet.

1.f ACCOUNTING STANDARDS SPECIFIC TO INSURANCE ACTIVITIES

The specific accounting policies and valuation rules relating to assets and liabilities generated by insurance contracts and financial contracts with a discretionary participation feature written by fully consolidated insurance companies are retained for the purposes of the consolidated financial statements. These policies comply with IFRS 4.

The amendment to IFRS 4 “Insurance Contracts” published by the IASB on 25 June 2020 provides the option for entities that predominantly undertake insurance activities to defer the effective date of IFRS 9 application until 1 January 2023 in line with the deferral of the mandatory application date for IFRS 17 “Insurance Contracts”.

The effect of such a deferral is that those entities may continue to report their financial statements under the existing standard IAS 39.

This temporary exemption from IFRS 9, limited to groups that predominantly undertake insurance activities according to the IASB amendment, has been extended to the insurance segment of financial conglomerates as defined by the Directive 2002/87/EC as adopted by the European Union. This exemption is subject to certain conditions, notably the absence of internal transfers of financial instruments, other than financial instruments that are measured at fair value through profit or loss, between insurance entities and other entities of the financial conglomerate.

BNP Paribas Group applies this amendment to all its insurance entities, including funds related to this activity, which will apply IAS 39 “Financial instruments: Recognition and Measurement” until 31 December 2022.

All other insurance company assets and liabilities are accounted for using the policies applied to the Group’s assets and liabilities generally and are included in the relevant balance sheet and profit and loss account headings in the consolidated financial statements.

1.f.1 PROFIT AND LOSS ACCOUNT

Income and expenses recognised under insurance contracts issued by the Group are presented in the income statement under “Net income from insurance activities”.

This heading in the income statement includes premiums earned, net gain in investment contracts with no discretionary participation feature and other services, net investment income (including income on investment property and impairment on shares and other equity instruments), technical charges related to contracts; (including policyholders surplus reserve), net charges from ceded reinsurance and external charges related to contracts (including commissions).

Other income and expenses relating to insurance activities (i.e. recorded by insurance entities) are presented in the other income statement headings according to their nature.

1.f.2 FINANCIAL INVESTMENTS AND OTHER ASSETS RELATED TO INSURANCE ACTIVITIES

Financial investments and other assets related to insurance activities mainly include:

- investments by insurance entities in financial instruments that are recognised in accordance with the principles of IAS 39, which include investments representing technical reserves of insurance activities and notably unit-linked contracts;
- derivative instruments with a positive fair value. Group insurance entities underwrite derivative instruments for hedging purposes;
- investment properties;
- equity method investments;
- reinsurers' share in liabilities arising from insurance and investment contracts;
- and policyholders' surplus reserve.

Investments in financial instruments

Financial investments held by the Group's insurance entities are classified in one of the four categories provided for in IAS 39: Financial assets at fair value through profit or loss, held-to-maturity financial assets, loans and receivables and available-for-sale financial assets.

- *Financial assets at fair value through profit or loss*

The category 'Financial assets at fair value through profit or loss' includes derivatives and financial assets that the Group has elected to recognise and measure at fair value through profit or loss at inception, in accordance with the option offered by IAS 39.

Financial assets may be designated at fair value through profit or loss in the following cases (in accordance with IAS 39):

- hybrid financial instruments containing one or more embedded derivatives which otherwise would have been separated and accounted for separately. An embedded derivative is such that its economic characteristics and risks are not closely related to those of the host contract;
- where using the option enables the entity to eliminate or significantly reduce a mismatch in the measurement and accounting treatment of assets and liabilities that would arise if they were to be classified in separate accounting categories;
- when the group of financial assets and/or financial liabilities is managed and measured on the basis of fair value, in accordance with a documented risk management and investment strategy.

Investments held in respect of insurance or investment contracts where the financial risk is borne by policyholders (unit-linked contracts) are recognised at fair value option through profit or loss.

When the Group measures at fair value through profit or loss investments made in respect of its insurance activities in entities over which it exercises significant influence or joint control, these investments are presented under the line "Financial assets at fair value through profit or loss" (see §1.b.2).

Financial instruments classified in this category are initially recognised at their fair value, with transaction costs being directly recognised in the income statement.

At the closing date, they are valued at their fair value.

Changes in value compared to the last valuation, income, dividends and realised gains and losses are presented under "Net income from insurance activities" and under "Net gain on financial instruments at fair value through profit or loss".

- *Loans and advances*

Fixed or determinable -income securities, which are not quoted in an active market, other than those for which the holder may not recover substantially all of its initial investment for reasons other than credit deterioration, are classified as "Loans and receivables" when they do not meet the conditions for classification as financial assets at fair value through profit or loss.

Loans and receivables are initially recognised at their fair value or equivalent, which generally corresponds to the net amount originally paid.

Loans and receivables are subsequently measured at amortised cost using the effective interest method and net of repayments of principal and interest.

Interest is calculated using the effective interest method, which includes interest, transaction costs and commissions included in their initial value and is presented under “Net income from insurance activities” and under sub-heading “Net gain on financial instruments at amortised cost”.

Impairment losses recognised when there is objective evidence of impairment related to an event subsequent to the acquisition of the asset are presented under “Cost of risk”.

- Held-to-maturity financial assets

“Held-to-maturity financial assets” include debt securities, with fixed maturity, that the Group has the intention and ability to hold until maturity.

Securities classified in this category are recognised at amortised cost using the effective interest method.

Income received on these securities is presented under “Net income from insurance activities” and under sub-heading “Net gain on financial instruments at amortised cost”. Impairment losses recognised when there is objective evidence of impairment related to an event subsequent to the acquisition of the asset are presented under “Cost of risk”.

- Available-for-sale financial assets

The category “Available-for-sale financial assets” includes debt or equity securities that do not fall within the previous three categories.

Assets included in the available-for-sale category are initially recorded at fair value, plus transaction costs where material. At the end of the reporting period, they are valued at their fair value and the changes in the latter, excluding accrued income, are presented under a specific heading of equity. On disposal of the securities, these unrealised gains or losses previously recognised in equity are reclassified in the income statement under the heading “Net income from insurance activities”.

Income recognised using the effective interest method on debt securities, dividends received and impairment (in the event of a significant or lasting decline in the value of the securities) of equity securities are presented under “Net income from insurance activities” and under section “Net gain on available-for-sale financial assets”. Impairment losses on debt securities are presented under “Cost of risk”.

Investment property

Investment property corresponds to buildings held directly by insurance companies and property companies controlled.

Investment property, except for those used for unit-linked contracts, is recognised at cost and follows the accounting methods of the assets described elsewhere.

Investment property, held in respect of unit-linked contracts, is valued at fair value or equivalent, with changes in value recognised in the income statement.

Equity method investments

Investments in entities or real estate funds over which the Group exercises significant influence or joint control and for which the equity method is applied are recognised in the line “Equity method investments”.

1.f.3 TECHNICAL RESERVES AND OTHER INSURANCE LIABILITIES

The item “Technical reserves and other insurance liabilities” includes:

- commitments to policyholders and beneficiaries of contracts, which include technical reserves for insurance contracts subject to significant insurance hazard (mortality, longevity, disability, incapacity, etc.) and technical liabilities of investment contracts with a discretionary profit-sharing feature, falling within IFRS 4. The discretionary participation clause grants life insurance policyholders the right to receive, in addition to the guaranteed remuneration, a share of the financial results achieved;
- other insurance liabilities related to unit-linked contracts that fall within the scope of IAS 39 (i.e. investment contracts with no discretionary participating features);
- policyholders’ surplus reserve;
- liabilities arising from insurance and reinsurance operations, including liabilities due to policyholders;
- financial derivative instruments of insurance activities carried at fair value through profit or loss, the fair value of which is negative. Group insurance entities underwrite derivative instruments for hedging purposes.

Financial liabilities that are not insurance liabilities (e.g. subordinated debt) fall under IAS 39. They are presented in “Financial liabilities at amortised cost”.

Insurance and reinsurance contracts and investment contracts with discretionary participating features

Life insurance guarantees cover mainly death risk (term life insurance, annuities, repayment of loans or guaranteed minimum on unit-linked contracts) and, regarding borrowers’ insurance, to disability, incapacity and unemployment risks.

For life insurance, technical reserves consist mainly of mathematical reserves that corresponds as a minimum, to the surrender value of contracts and surplus reserve.

The policyholders’ surplus reserve also includes amounts resulting from the application of shadow accounting representing the interest of policyholders, mainly within French life insurance subsidiaries, in unrealised gains and losses on assets where the benefit paid under the policy is linked to the return on those assets. This interest is an average derived from stochastic analyses of unrealised gains and losses attributable to policyholders in various scenarios.

A capitalisation reserve is set up in individual statutory accounts of French life-insurance companies on the sale of amortisable securities in order to defer part of the net realised gain and hence maintain the yield to maturity on the portfolio of admissible assets. In the consolidated financial statements, this reserve is reclassified into “Policyholders’ surplus” on the liabilities side of the consolidated balance sheet, to the extent that it is highly probable it will be used.

Non-life technical reserves consist of unearned premium reserves (corresponding to the portion of written premiums relating to future periods) and outstanding claims reserves, inclusive of claims handling costs.

At the reporting date, a liability adequacy test is performed: The level of technical reserves (net of acquisition costs outstanding) is compared to the average value of future cash flows resulting from stochastic calculations. Related adjustment to technical reserves, if any, is taken to the profit and loss account for the period.

In the event of an unrealised loss on shadow accounted assets, a policyholders’ loss reserve is recognised on the assets side of the consolidated balance sheet in an amount equal to the probable deduction from the policyholders’ future profit share. This policyholders’ loss reserve is presented with the other assets of insurance activities under “Financial investments and other assets related to insurance activities”. The recoverability of the policyholders’ loss reserve is assessed prospectively, taking into account policyholders’ surplus reserves recognised elsewhere, capital gains on financial assets that are not shadow accounted due to accounting elections made (held-to-maturity financial assets and property investments measured at cost) and the company’s ability and intention to hold the assets carrying the unrealised loss.

Investment contracts with no discretionary participating features

Investment contracts with no discretionary participating features correspond mainly to unit-linked contracts that do not meet the definition of insurance and investment contracts with discretionary participating features.

Liabilities arising from unit-linked contracts are measured by reference to the fair value of the assets backing these contracts at the closing date.

1.g PROPERTY, PLANT, EQUIPMENT AND INTANGIBLE ASSETS

Property, plant and equipment and intangible assets shown in the consolidated balance sheet are composed of assets used in operations and investment property. Rights-of-use related to leased assets (see note 1.h.2) are presented by the lessee within fixed assets in the same category as similar assets held.

Assets used in operations are those used in the provision of services or for administrative purposes, and include non-property assets leased by the Group as lessor under operating leases.

Investment property comprises property assets held to generate rental income and capital gains.

Investment property is recognised at cost, with the exception of those representing insurance or investment contracts whose risk is borne by policyholders (unit-linked contracts), which are measured at fair value through profit or loss and presented in the balance sheet under "Financial investments and other assets related to insurance activities" (note 1.f.2).

Property, plant and equipment and intangible assets are initially recognised at purchase price plus directly attributable costs, together with borrowing costs where a long period of construction or adaptation is required before the asset can be brought into service.

Software developed internally by the BNP Paribas Group that fulfils the criteria for capitalisation is capitalised at direct development cost, which includes external costs and the labour costs of employees directly attributable to the project.

Subsequent to initial recognition, property, plant and equipment and intangible assets are measured at cost less accumulated depreciation or amortisation and any impairment losses.

The depreciable amount of property, plant and equipment and intangible assets is calculated after deducting the residual value of the asset. Only assets leased by the Group as the lessor under operating leases are presumed to have a residual value, as the useful life of property, plant and equipment and intangible assets used in operations is generally the same as their economic life.

Property, plant and equipment and intangible assets are depreciated or amortised using the straight-line method over the useful life of the asset. Depreciation and amortisation expense is recognised in the profit and loss account under "Depreciation, amortisation and impairment of property, plant and equipment and intangible assets".

Where an asset consists of a number of components which may require replacement at regular intervals, or which have different uses or generate economic benefits at different rates, each component is recognised separately and depreciated using a method appropriate to that component. The BNP Paribas Group has adopted the component-based approach for property used in operations and for investment property.

The depreciation periods used for office property are as follows: 80 years or 60 years for the shell (for prime and other property respectively); 30 years for facades; 20 years for general and technical installations; and 10 years for fixtures and fittings.

Software is amortised, depending on its type, over periods of no more than 8 years in the case of infrastructure developments and 3 years or 5 years in the case of software developed primarily for the purpose of providing services to customers.

Software maintenance costs are expensed as incurred. However, expenditure that is regarded as upgrading the software or extending its useful life is included in the initial acquisition or production cost.

Depreciable property, plant and equipment and intangible assets are tested for impairment if there is an indication of potential impairment at the balance sheet date. Non-depreciable assets are tested for impairment at least annually, using the same method as for goodwill allocated to cash-generating units.

If there is an indication of impairment, the new recoverable amount of the asset is compared with the carrying amount. If the asset is found to be impaired, an impairment loss is recognised in the profit and loss account. This loss is reversed in the event of a change in the estimated recoverable amount or if there is no longer an indication of impairment. Impairment losses are taken to the profit and loss account in “Depreciation, amortisation and impairment of property, plant and equipment and intangible assets”.

Gains and losses on disposals of property, plant and equipment and intangible assets used in operations are recognised in the profit and loss account in “Net gain on non-current assets”.

Gains and losses on disposals of investment property are recognised in the profit and loss account in “Income from other activities” or “Expense on other activities”.

1.h LEASES

Group companies may either be the lessee or the lessor in a lease agreement.

1.h.1 GROUP COMPANY AS LESSOR

Leases contracted by the Group as lessor are categorised as either finance leases or operating leases.

- **Finance leases**

In a finance lease, the lessor transfers substantially all the risks and rewards of ownership of an asset to the lessee. It is treated as a loan made to the lessee to finance the purchase of the asset.

The present value of the lease payments, plus any residual value, is recognised as a receivable. The net income earned from the lease by the lessor is equal to the amount of interest on the loan, and is taken to the profit and loss account under “Interest income”. The lease payments are spread over the lease term, and are allocated to reduction of the principal and to interest such that the net income reflects a constant rate of return on the net investment outstanding in the lease. The rate of interest used is the rate implicit in the lease.

Impairments of lease receivables are determined using the same principles as applied to financial assets measured at amortised cost.

- **Operating leases**

An operating lease is a lease under which substantially all the risks and rewards of ownership of an asset are not transferred to the lessee.

The asset is recognised under property, plant and equipment in the lessor’s balance sheet and depreciated on a straight-line basis over its useful life. The depreciable amount excludes the residual value of the asset. The lease payments are taken to the profit and loss account in full on a straight-line basis over the lease term. Lease payments and depreciation expenses are taken to the profit and loss account under “Income from other activities” and “Expense on other activities”.

1.h.2 GROUP COMPANY AS LESSEE

Lease contracts concluded by the Group, with the exception of contracts whose term is shorter than or equal to 12 months and low-value contracts, are recognised in the balance-sheet in the form of a right-of-use on the leased asset presented under fixed assets, along with the recognition of a financial liability for the rent and other payments to be made over the leasing period. The right of use assets is amortised on a straight-line basis and the financial liabilities are amortised on an actuarial basis over the lease period. Dismantling costs corresponding to specific and significant fittings and fixtures are included in the initial right-of-use estimation, in counterparty of a provision liability.

The key hypothesis used by the Group for the measurement of rights of use and lease liabilities are the following:

- the lease term corresponds to the non-cancellable period of the contract, together with periods covered by an extension option if the Group is reasonably certain to exercise this option. In France, the standard commercial lease contract is the so-called “three, six, nine” contract for which the maximum period of use is nine years, with a first non-cancellable period of three years followed by two optional extension periods of three years each; hence, depending on the assessment, the lease term can be of three, six or nine years. When investments like fittings or fixtures are performed under the contract, the lease term is aligned with their useful lives. For tacitly renewable contracts, with or without an enforceable period, related right of use and lease liabilities are recognised based on an estimate of the reasonably foreseeable economic life of the contracts, minimal occupation period included.
- the discount rate used to measure the right of use and the lease liability is assessed for each contract as the interest rate implicit in the lease, if that rate can be readily determined, or more generally based on the incremental borrowing rate of the lessee at the date of signature. The incremental borrowing rate is determined considering the average term (duration) of the contract.
- when the contract is modified, a new assessment of the lease liability is made taking into account the new residual term of the contract, and therefore a new assessment of the right of use and the lease liability is established.

1.i ASSETS HELD FOR SALE AND DISCONTINUED OPERATIONS

Where the Group decides to sell assets or a group of assets and liabilities and it is highly probable that the sale will occur within 12 months, these assets are shown separately in the balance sheet, on the line “Assets held for sale”. Any liabilities associated with these assets are also shown separately in the balance sheet, on the line “Liabilities associated with assets held for sale”. When the Group is committed to a sale plan involving loss of control of a subsidiary and the sale is highly probable within 12 months, all the assets and liabilities of that subsidiary are classified as held for sale.

Once classified in this category, assets and the group of assets and liabilities are measured at the lower of carrying amount or fair value less costs to sell.

Such assets are no longer depreciated. If an asset or group of assets and liabilities becomes impaired, an impairment loss is recognised in the profit and loss account. Impairment losses may be reversed.

Where a group of assets and liabilities held for sale represents a cash generating unit, it is categorised as a “discontinued operation”. Discontinued operations include operations that are held for sale, operations that have been shut down, and subsidiaries acquired exclusively with a view to resell.

In this case, gains and losses related to discontinued operations are shown separately in the profit and loss account, on the line “Net income from discontinued activities”. This line includes after tax profits or losses of discontinued operations, after tax gain or loss arising from remeasurement at fair value less costs to sell, and after tax gain or loss on disposal of the operation.

1.j EMPLOYEE BENEFITS

Employee benefits are classified in one of four following categories:

- short-term benefits, such as salary, annual leave, incentive plans, profit-sharing and additional payments;
- long-term benefits, including compensated absences, long-service awards, and other types of cash-based deferred compensation;
- termination benefits;
- post-employment benefits, including top-up banking industry pensions and retirement bonuses in France and pension plans in other countries, some of which are operated through pension funds.

- **Short-term benefits**

The Group recognises an expense when it has used services rendered by employees in exchange for employee benefits.

- **Long-term benefits**

These are benefits, other than short-term benefits, post-employment benefits and termination benefits. This relates, in particular, to compensation deferred for more than 12 months and not linked to the BNP Paribas share price, which is accrued in the financial statements for the period in which it is earned.

The actuarial techniques used are similar to those used for defined-benefit post-employment benefits, except that the revaluation items are recognised in the profit and loss account and not in equity.

- **Termination benefits**

Termination benefits are employee benefits payable in exchange for the termination of an employee's contract as a result of either a decision by the Group to terminate a contract of employment before the legal retirement age, or a decision by an employee to accept voluntary redundancy in exchange for these benefits. Termination benefits due more than 12 months after the balance sheet date are discounted.

- **Post-employment benefits**

In accordance with IFRS, the BNP Paribas Group draws a distinction between defined-contribution plans and defined-benefit plans.

Defined-contribution plans do not give rise to an obligation for the Group and do not require a provision. The amount of the employer's contributions payable during the period is recognised as an expense.

Only defined-benefit schemes give rise to an obligation for the Group. This obligation must be measured and recognised as a liability by means of a provision.

The classification of plans into these two categories is based on the economic substance of the plan, which is reviewed to determine whether the Group has a legal or constructive obligation to pay the agreed benefits to employees.

Post-employment benefit obligations under defined-benefit plans are measured using actuarial techniques that take demographic and financial assumptions into account.

The net liability recognised with respect to post-employment benefit plans is the difference between the present value of the defined-benefit obligation and the fair value of any plan assets.

The present value of the defined-benefit obligation is measured on the basis of the actuarial assumptions applied by the Group, using the projected unit credit method. This method takes into account various parameters, specific to each country or Group entity, such as demographic assumptions, the probability that employees will leave before retirement age, salary inflation, a discount rate, and the general inflation rate.

When the value of the plan assets exceeds the amount of the obligation, an asset is recognised if it represents a future economic benefit for the Group in the form of a reduction in future contributions or a future partial refund of amounts paid into the plan.

The annual expense recognised in the profit and loss account under "Salaries and employee benefits", with respect to defined-benefit plans includes the current service cost (the rights vested by each employee during the period in return for service rendered), the net interests linked to the effect of discounting the net defined-benefit liability (asset), the past service cost arising from plan amendments or curtailments, and the effect of any plan settlements.

Remeasurements of the net defined-benefit liability (asset) are recognised in shareholders' equity and are never reclassified to profit or loss. They include actuarial gains and losses, the return on plan assets and any change in the effect of the asset ceiling (excluding amounts included in net interest on the defined-benefit liability or asset).

1.k SHARE-BASED PAYMENTS

Share-based payment transactions are payments based on shares issued by the Group, whether the transaction is settled in the form of equity or cash of which the amount is based on trends in the value of BNP Paribas shares.

- **Stock option and share award plans**

The expense related to stock option and share award plans is recognised over the vesting period, if the benefit is conditional upon the grantee's continued employment.

Stock options and share award expenses are recorded under salary and employee benefits expenses, with a corresponding adjustment to shareholders' equity. They are calculated on the basis of the overall plan value, determined at the date of grant by the Board of Directors.

In the absence of any market for these instruments, financial valuation models are used that take into account any performance conditions related to the BNP Paribas share price. The total expense of a plan is determined by multiplying the unit value per option or share awarded by the estimated number of options or shares awarded vested at the end of the vesting period, taking into account the conditions regarding the grantee's continued employment.

The only assumptions revised during the vesting period, and hence resulting in a remeasurement of the expense, are those relating to the probability that employees will leave the Group and those relating to performance conditions that are not linked to the price value of BNP Paribas shares.

- **Share price-linked cash-settled deferred compensation plans**

The expense related to these plans is recognised in the year during which the employee rendered the corresponding services.

If the payment of share-based variable compensation is explicitly subject to the employee's continued presence at the vesting date, the services are presumed to have been rendered during the vesting period and the corresponding compensation expense is recognised on a pro rata basis over that period. The expense is recognised under salary and employee benefits expenses with a corresponding liability in the balance sheet. It is revised to take into account any non-fulfilment of the continued presence or performance conditions and the change in BNP Paribas share price.

If there is no continued presence condition, the expense is not deferred, but recognised immediately with a corresponding liability in the balance sheet. This is then revised on each reporting date until settlement to take into account any performance conditions and the change in the BNP Paribas share price.

1.l PROVISIONS RECORDED UNDER LIABILITIES

Provisions recorded under liabilities (other than those relating to financial instruments, employee benefits and insurance contracts) mainly relate to restructuring, claims and litigation, fines and penalties.

A provision is recognised when it is probable that an outflow of resources embodying economic benefits will be required to settle an obligation arising from a past event, and a reliable estimate can be made of the amount of the obligation. The amount of such obligations is discounted, where the impact of discounting is material, in order to determine the amount of the provision.

1.m CURRENT AND DEFERRED TAX

The current income tax charge is determined on the basis of the tax laws and tax rates in force in each country in which the Group operates during the period in which the income is generated.

Deferred taxes are recognised when temporary differences arise between the carrying amount of an asset or liability in the balance sheet and its tax base.

Deferred tax liabilities are recognised for all taxable temporary differences other than:

- taxable temporary differences on initial recognition of goodwill;
- taxable temporary differences on investments in enterprises under the exclusive or joint control of the Group, where the Group is able to control the timing of the reversal of the temporary difference and it is probable that the temporary difference will not reverse in the foreseeable future.

Deferred tax assets are recognised for all deductible temporary differences and unused carryforwards of tax losses only to the extent that it is probable that the entity in question will generate future taxable profits against which these temporary differences and tax losses can be offset.

Deferred tax assets and liabilities are measured using the liability method, using the tax rate which is expected to apply to the period when the asset is realised or the liability is settled, based on tax rates and tax laws that have been or will have been enacted by the balance sheet date of that period. They are not discounted.

Deferred tax assets and liabilities are offset when they arise within the same tax group, they fall under the jurisdiction of a single tax authority, and there is a legal right to offset.

As regards the assessment of uncertainty over income tax treatments, the Group adopts the following approach:

- the Group assesses whether it is probable that a taxation authority will accept an uncertain tax treatment;
- any uncertainty shall be reflected when determining the taxable profit (loss) by considering either the most likely amount (having the higher probability of occurrence), or the expected value (sum of the probability-weighted amounts).

Current and deferred taxes are recognised as tax income or expenses in the profit and loss account, except for those relating to a transaction or an event directly recognised in shareholders' equity, which are also recognised in shareholders' equity. This concerns in particular the tax effect of coupons paid on financial instruments issued by the Group and qualified as equity instruments, such as Undated Super Subordinated Notes.

When tax credits on revenues from receivables and securities are used to settle corporate income tax payable for the period, the tax credits are recognised on the same line as the income to which they relate. The corresponding tax expense continues to be carried in the profit and loss account under "Corporate income tax".

1.n CASH FLOW STATEMENT

The cash and cash equivalents balance is composed of the net balance of cash accounts and accounts with central banks, and the net balance of interbank demand loans and deposits.

Changes in cash and cash equivalents related to operating activities reflect cash flows generated by the Group's operations, including those relating to financial investments of insurance activities and negotiable certificates of deposit.

Changes in cash and cash equivalents related to investing activities reflect cash flows resulting from acquisitions and disposals of subsidiaries, associates or joint ventures included in the consolidated Group, as well as acquisitions and disposals of property, plant and equipment excluding investment property and property held under operating leases.

Changes in cash and cash equivalents related to financing activities reflect the cash inflows and outflows resulting from transactions with shareholders, cash flows related to bonds and subordinated debt, and debt securities (excluding negotiable certificates of deposit).

1.0 USE OF ESTIMATES IN THE PREPARATION OF THE FINANCIAL STATEMENTS

Preparation of the financial statements requires managers of core businesses and corporate functions to make assumptions and estimates that are reflected in the measurement of income and expense in the profit and loss account and of assets and liabilities in the balance sheet, and in the disclosure of information in the notes to the financial statements. This requires the managers in question to exercise their judgement and to make use of information available at the date of the preparation of the financial statements when making their estimates. The actual future results from operations where managers have made use of estimates may in reality differ significantly from those estimates, mainly according to market conditions. This may have a material effect on the financial statements.

This applies in particular to:

- the analysis of the cash flow criterion for specific financial assets;
- the measurement of expected credit losses. This applies in particular to the assessment of significant increase in credit risk, the models and assumptions used to measure expected credit losses, the determination of the different economic scenarios and their weighting;
- the analysis of renegotiated loans, in order to assess whether they should be maintained on the balance-sheet or derecognised;
- the assessment of an active market, and the use of internally developed models for the measurement of the fair value of financial instruments not quoted in an active market classified in “Financial assets at fair value through equity”, or in “Financial instruments at fair value through profit or loss”, whether as assets or liabilities, and more generally calculations of the fair value of financial instruments subject to a fair value disclosure requirement;
- the assumptions applied to assess the sensitivity to each type of market risk of the market value of financial instruments and the sensitivity of these valuations to the main unobservable inputs as disclosed in the notes to the financial statements;
- the appropriateness of the designation of certain derivative instruments such as cash flow hedges, and the measurement of hedge effectiveness;
- impairment tests performed on intangible assets;
- the estimation of residual assets values under simple lease agreements. These values are used as a basis for the determination of depreciation as well as any impairment, notably in relation to the effect of environmental considerations on the evaluation of future prices of second-hand vehicles;
- the deferred tax assets;
- the estimation of insurance technical reserves and policyholders’ surplus reserves;
- the measurement of uncertainty over income tax treatments and other provisions for contingencies and charges. In particular, while investigations and litigations are ongoing, it is difficult to foresee their outcome and potential impact. Provision estimation is established by taking into account all available information at the date of the preparation of the financial statements, in particular the nature of the dispute, the underlying facts, the ongoing legal proceedings and court decisions, including those related to similar cases. The Group may also use the opinion of experts and independent legal advisers to exercise its judgement.

2. NOTES TO THE PROFIT AND LOSS ACCOUNT FOR THE YEAR ENDED 31 DECEMBER 2022

2.a NET INTEREST INCOME

The BNP Paribas Group includes in “Interest income” and “Interest expense” all income and expense calculated using the effective interest method (interest, fees and transaction costs) from financial instruments measured at amortised cost and financial instruments measured at fair value through equity.

These items also include the interest income and expense of non-trading financial instruments the characteristics of which do not allow for recognition at amortised cost or at fair value through equity, as well as of financial instruments that the Group has designated as at fair value through profit or loss. The change in fair value on financial instruments at fair value through profit or loss (excluding accrued interest) is recognised under “Net gain on financial instruments at fair value through profit or loss”.

Interest income and expense on derivatives accounted for as fair value hedges are included with the revenues generated by the hedged item. Similarly, interest income and expense arising from derivatives used to hedge transactions designated as at fair value through profit or loss is allocated to the same accounts as the interest income and expense relating to the underlying transactions.

In the case of a negative interest rates related to loans and receivables or deposits from customers and credit institutions, they are accounted for in interest expense or interest income respectively.

In millions of euros	Year to 31 Dec. 2022			Year to 31 Dec. 2021		
	Income	Expense	Net	Income	Expense	Net
Financial instruments at amortised cost	34,794	(15,507)	19,287	24,122	(7,032)	17,090
Deposits, loans and borrowings	30,749	(11,714)	19,035	21,423	(5,024)	16,399
Repurchase agreements	274	(83)	191	199	(56)	143
Finance leases	1,762	(102)	1,660	1,626	(101)	1,525
Debt securities	2,009		2,009	874		874
Issued debt securities and subordinated debt		(3,608)	(3,608)		(1,851)	(1,851)
Financial instruments at fair value through equity	738	-	738	851	-	851
Financial instruments at fair value through profit or loss (Trading securities excluded)	59	(279)	(220)	36	(163)	(127)
Cash flow hedge instruments	3,025	(1,449)	1,576	1,982	(1,010)	972
Interest rate portfolio hedge instruments	2,466	(2,966)	(500)	2,527	(2,031)	496
Lease liabilities	-	(50)	(50)	-	(44)	(44)
Total interest income/(expense)	41,082	(20,251)	20,831	29,518	(10,280)	19,238

Interest income on individually impaired loans amounted to EUR 287 million for the year ended 2022, compared to EUR 331 million for the year ended 2021.

The Group subscribed to the TLTRO III (*Targeted Longer-Term Refinancing Operations*) programme, as modified by the Governing Council of the European Central Bank in March 2020, in December 2020 and in October 2022 (see note 4.g). The Group achieved the lending performance thresholds that enabled it to benefit from favourable interest rate conditions applicable for each of the reference period, namely:

- over the two special interest periods (i.e. from June 2020 to June 2022): the average deposit facility rate (“DFR”) -50 basis points, or -1%;
- over the next period (i.e. from June 2022 to November 2022): the average of the DFR between the TLTRO III initial date of subscription and 22 November 2022, i.e., for the main draws, -0.36% for the June 2020 tranche and -0.29% for the March 2021 tranche;
- over the last period (since 23 November 2022): the average of the DFR between 23 November 2022 and the redemption date. The average effective interest rate for the latter period was 1.64% at 31 December 2022.

This floating interest rate is considered as a market rate as it is applicable to all financial institutions meeting the lending criteria defined by the European Central Bank. The effective interest rate of these financial liabilities is determined for each reference period, its two components (reference rate and margin) being adjustable; it corresponds to the nominal interest rate. The addition of the last interest period in October 2022 is part of the European Central Bank’s monetary policy and is therefore not considered a contractual amendment according to IFRS 9 but a revision of the market rate.

2.b COMMISSION INCOME AND EXPENSE

In millions of euros	Year to 31 Dec. 2022			Year to 31 Dec. 2021		
	Income	Expense	Net	Income	Expense	Net
Customer transactions	4,772	(1,172)	3,600	4,489	(1,024)	3,465
Securities and derivatives transactions	2,051	(1,578)	473	2,363	(1,628)	735
Financing and guarantee commitments	1,181	(100)	1,081	1,152	(55)	1,097
Asset management and other services	5,425	(337)	5,088	5,912	(748)	5,164
Others	1,193	(1,257)	(64)	1,121	(1,220)	(99)
Commission income/expense	14,622	(4,444)	10,178	15,037	(4,675)	10,362
<i>- of which net commission income related to trust and similar activities through which the Group holds or invests assets on behalf of clients, trusts, pension and personal risk funds or other institutions</i>	<i>3,248</i>	<i>(268)</i>	<i>2,980</i>	<i>3,333</i>	<i>(357)</i>	<i>2,976</i>
<i>- of which commission income and expense on financial instruments not measured at fair value through profit or loss</i>	<i>3,048</i>	<i>(370)</i>	<i>2,678</i>	<i>3,129</i>	<i>(337)</i>	<i>2,792</i>

2.c NET GAIN ON FINANCIAL INSTRUMENTS AT FAIR VALUE THROUGH PROFIT OR LOSS

Net gain on financial instruments measured at fair value through profit or loss includes all profit and loss items relating to financial instruments held for trading, financial instruments that the Group has designated as at fair value through profit or loss, non-trading equity instruments that the Group did not choose to measure at fair value through equity, as well as debt instruments whose cash flows are not solely repayments of principal and interest on the principal or whose business model is not to collect cash flows nor to collect cash flows and sell the assets.

These income items include dividends on these instruments and exclude interest income and expense from financial instruments designated as at fair value through profit or loss and instruments whose cash flows are not only repayments of principal and interest on the principal or whose business model is not to collect cash flows nor to collect cash flows and sell the assets, which are presented in "Net interest income" (note 2.a).

In millions of euros	Year to 31 Dec. 2022	Year to 31 Dec. 2021
Financial instruments held for trading	(2,017)	6,293
Interest rate and credit instruments	(6,014)	(2,633)
Equity financial instruments	(3,268)	5,641
Foreign exchange financial instruments	5,898	2,317
Loans and repurchase agreements	(1,320)	(116)
Other financial instruments	2,687	1,084
Financial instruments designated as at fair value through profit or loss	11,328	281
Other financial instruments at fair value through profit or loss	143	956
Impact of hedge accounting	(96)	85
Fair value hedging derivatives	(9,123)	(2,445)
Hedged items in fair value hedge	9,027	2,530
Net gain on financial instruments at fair value through profit or loss	9,358	7,615

Gains and losses on financial instruments designated as at fair value through profit or loss are mainly related to instruments which changes in value may be compensated by changes in the value of economic hedging derivative financial instruments held for trading.

Net gain on financial instruments held for trading in 2022 and 2021 include a non-material amount related to the ineffective portion of cash flow hedges.

Potential sources of ineffectiveness can be the differences between hedging instruments and hedged items, notably generated by mismatches in the terms of hedged and hedging instruments, such as the frequency and timing of interest rates resetting, the frequency of payments and the discounting factors, or when hedging derivatives have a non-zero fair value at inception date of the hedging relationship. Credit valuation adjustments applied to hedging derivatives are also sources of ineffectiveness.

Cumulated changes in fair value related to discontinued cash flow hedge relationships, previously recognised in equity and included in 2022 in profit and loss accounts are not material, whether the hedged item ceased to exist or not.

2.d NET GAIN ON FINANCIAL INSTRUMENTS AT FAIR VALUE THROUGH EQUITY

In millions of euros	Year to 31 Dec. 2022	Year to 31 Dec. 2021
Net gain on debt instruments	9	58
Dividend income on equity instruments	129	106
Net gain on financial instruments at fair value through equity	138	164

Interest income from debt instruments is included in note 2.a *Net interest income*, and impairment losses related to potential issuer default are included in note 2.h *Cost of risk*.

2.e NET INCOME FROM INSURANCE ACTIVITIES

In millions of euros	Year to 31 Dec. 2022	Year to 31 Dec. 2021
Premiums earned	25,810	27,619
Net gain from investment contracts with discretionary participation feature and other services	30	12
Net income from financial investments	(9,280)	14,503
Technical charges related to contracts	(10,008)	(35,848)
Net charges from ceded reinsurance	(405)	(215)
External services expenses	(1,851)	(1,739)
Net income from insurance activities	4,296	4,332

- **Net income from financial investments**

In millions of euros	Year to 31 Dec. 2022	Year to 31 Dec. 2021
Net gain on available-for-sale financial assets	1,975	3,082
<i>Interest income and dividends</i>	2,770	2,634
<i>Additions to impairment provisions</i>	(57)	(10)
<i>Net disposal gains</i>	(738)	458
Net gain on financial instruments at fair value through profit or loss	(11,359)	11,163
Net gain on financial instruments at amortised cost	78	118
Investment property income	45	142
Share of earnings of equity-method investments	(4)	1
Other expense	(15)	(3)
Net income from financial investments	(9,280)	14,503

2.f NET INCOME FROM OTHER ACTIVITIES

In millions of euros	Year to 31 Dec. 2022			Year to 31 Dec. 2021		
	Income	Expense	Net	Income	Expense	Net
Net income from investment property	58	(30)	28	103	(43)	60
Net income from assets held under operating leases	13,134	(10,365)	2,769	12,426	(10,525)	1,901
Net income from property development activities	773	(653)	120	988	(777)	211
Other net income	1,736	(1,782)	(46)	1,965	(2,084)	(119)
Total net income from other activities	15,701	(12,830)	2,871	15,482	(13,429)	2,053

2.g OTHER OPERATING EXPENSES

In millions of euros	Year to 31 Dec. 2022	Year to 31 Dec. 2021
External services and other operating expenses	(9,191)	(8,712)
Taxes and contributions ⁽¹⁾	(2,505)	(1,993)
Total other operating expenses	(11,696)	(10,705)

⁽¹⁾ Contributions to European resolution fund, including exceptional contributions, amount to EUR 1,256 million for the year ended 2022 compared with EUR 967 million for the year ended 2021.

2.h COST OF RISK

The general model for impairment described in note 1.e.5 used by the Group relies on the following two steps:

- assessing whether there has been a significant increase in credit risk since initial recognition, and
- measuring impairment allowance as either 12-month expected credit losses or lifetime expected credit loss (i.e. loss expected at maturity).

Both steps rely on forward looking information.

Significant increase in credit risk

At 31 December 2022, BNP Paribas revised its criteria for assessing the significant increase in credit risk in line with the recommendations issued by the European Banking Authority and the European Central Bank.

Previously, except for the consumer credit specialist business, the credit risk deterioration was mainly evaluated based on changes in the internal credit rating, an indicator of the average 1-year probability of default through the cycle. In order to fully consider forward looking information, the new criteria use the probability of default to maturity, which is derived from the internal rating, incorporating the expected consequences of changes in macroeconomic scenarios, as the main indicator.

Under these new criteria, credit risk is assumed to have significantly increased, and the asset is classified in stage 2, if the probability of default to maturity of the instrument has increased at least threefold since its origination. This relative variation criterion is supplemented by an absolute variation criterion of the default probability of 400 basis points.

Furthermore, for all portfolios (except for the consumer credit specialist business):

- the facility is assumed to be in stage 1 when its 1-year "Point in Time" probability of default (PiT PD) is below 0.3% at the reporting date, since changes in probability of default due to credit downgrades in this zone are not material, and therefore not considered "significant";
- when the 1-year PiT PD is greater than 20% at the reporting date, given the Group's credit issuance practices, the deterioration is considered significant, and the facility is classified in stage 2 (as long as the facility is not credit-impaired).

In the consumer credit specialist business, the existence of a potentially regularised payment incident during the last 12 months is considered to be an indication of significant increase in credit risk and the facility is therefore classified in stage 2.

The table below shows a comparison between the previous and the new criteria for assessing the significant increase in credit risk:

		Stage 1 presumption	Deterioration from origination leading to transfer to stage 2	Stage 2 presumption
Previous criteria	Retail	One year probability of default* < 0.25%	$\frac{\text{One year probability of default}}{\text{One year probability of default at origination}} > 4$ or Rating downgrade \geq 6 notches	One year probability of default > 10%
	Small and Medium Entreprises	Rating \leq 4-	Rating downgrade \geq 6 notches	Rating \geq 9+
	Large Corporates		Rating downgrade \geq 3 notches	
New criteria		One year PiT probability of default** < 0.3%	$\frac{\text{Lifetime PiT probability of default}}{\text{Lifetime PiT probability of default at origination}} > 3$ or Variation of lifetime PiT probability of default since origination > 400 bps	One year PiT probability of default > 20%

* Probability of default through the cycle.

** "Point in Time" (PiT) probability of default including forward looking.

Credit risk is assumed to have increased significantly since initial recognition and the asset is classified in stage 2, in the event of late payment of more than 30 days or restructuring due to financial difficulties (as long as the facility is not credit-impaired).

In the first half of 2022, the internal ratings of the Russian counterparties (including the sovereign rating) were systematically downgraded to take into account recent events, thus leading to the transfer of their outstandings to stage 2. However, given the Group's limited level of exposure to this country, this deterioration had no significant effect on the cost of risk for the period.

Forward Looking Information

The Group considers forward-looking information both when assessing significant increase in credit risk and when measuring Expected Credit Losses (ECL).

Regarding the measurement of expected credit losses, the Group has chosen to use 3 macroeconomic scenarios by geographic area covering a wide range of potential future economic conditions:

- a baseline scenario, consistent with the scenario used for budgeting;
- an adverse scenario, corresponding to the scenario used for the Group's quarterly stress tests;
- a favourable scenario, capturing situations where the economy performs better than anticipated.

The link between the macroeconomic scenarios and the ECL measurement is mainly achieved through a modelling of the probabilities of default and deformation of migration matrices based on internal rating (or risk parameter). The probabilities of default determined according to these scenarios are used to measure expected credit losses in each of these scenarios.

The Group's setup is broken down by sector to take into account the heterogeneity of sectoral dynamics when assessing the probability of default for corporates.

Forward-looking information is also considered when determining the significant deterioration in credit risk, since the probabilities of default used as the basis for this assessment include forward-looking multi-scenario information in the same way as for the calculation of the ECL.

The weight to be attributed to the expected credit losses calculated in each of the scenarios is defined as 50% for the baseline scenario and:

- the weight of the two alternative scenarios is defined according to the position in the credit cycle. In this approach, the adverse scenario carries more weight in situations at the upper end of the cycle than those at the lower end of the cycle, in anticipation of a potential downturn in the economy.
- the minimum weight of each the alternative scenarios is 10% and therefore the maximum weight is 40%.

When appropriate, the ECL measurement can take into account asset sale scenarios.

Macroeconomic scenarios

The three macroeconomic scenarios are defined over a three-year projection horizon. They correspond to:

- a baseline scenario, which describes the most likely path of the economy over the projection horizon. This scenario is updated on a quarterly basis and is prepared by the Group Economic Research department in collaboration with various experts within the Group. Projections are designed for each key market of the Group (France, Belgium, Italy, the United States and the eurozone) using key macroeconomic variables (Gross Domestic Product - GDP - and its components, unemployment rate, consumer prices, interest rates, foreign exchange rates, oil prices, real estate prices, etc.) which are key drivers for modeling risk parameters used in the stress test process;
- an adverse scenario, which describes the impact of the materialisation of some of the risks weighing on the baseline scenario, resulting in a much less favourable economic path than in the baseline scenario. The GDP shock is applied with varying magnitudes, but simultaneously, to the economies under consideration. Generally, these assumptions are broadly consistent with those proposed by the regulators. The calibration of shocks on other variables (e.g. unemployment, consumer prices, interest rates, etc.) is based on models and expert judgment;
- a favourable scenario, which reflects the impact of the materialisation of some of the upside risks for the economy, resulting in a more favourable economic path. The favourable shock on GDP is deducted from the adverse shock on GDP in such a way that the probabilities of the two shocks are equal on average over the cycle. Other variables (e.g. unemployment, inflation, interest rates, etc.) are defined in the same way as in the adverse scenario.

Since June 2021, the favourable shocks applied have been substantially reduced, as any stronger path than in the baseline scenario could be limited by supply side constraints.

The link between the macroeconomic scenarios and the measurement of the ECL is complemented by an approach allowing to take into account anticipation aspects not captured by the models in the generic approach. This is particularly the case when unprecedented events in the historical chronicle taken into account to build the models occur or are anticipated, or when the nature or amplitude of change in macroeconomic parameter calls into question past correlations. Thus, the situation of high inflation and the current and projected increase in interest rates correspond to aspects not observed in the reference history. In this context, the Group has developed an approach to take into account the future economic outlook when assessing the financial strength of counterparties. This approach consists in simulating the impact of rate hikes on their financial ratios and the effect on their ratings.

In addition, post-model adjustments are considered to take into account, where applicable, the consequences of climatic events on expected credit losses.

Baseline scenario

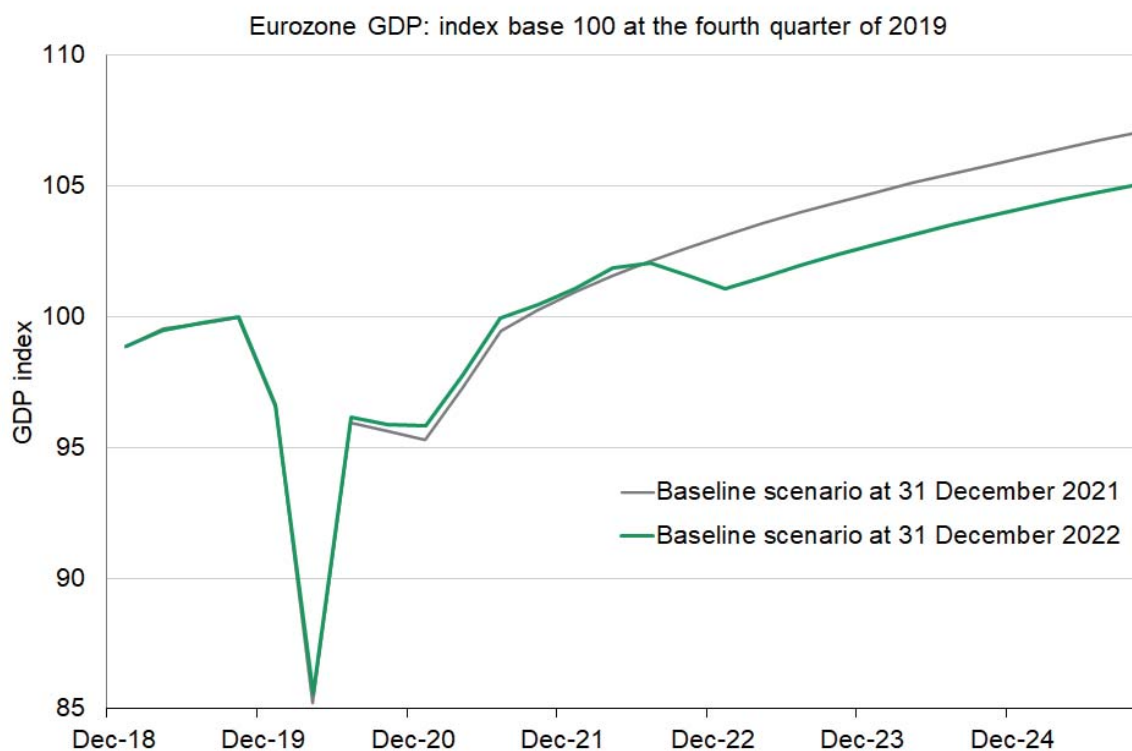
Several major developments have contributed to a more marked deterioration than anticipated (after a rebound year in 2021), in both Europe and the United States. Beyond the humanitarian aspects, the consequences of the invasion of Ukraine have had a number of adverse economic effects, the first of which is to contribute to raising inflation to very high levels due to severe disruptions in energy and food markets. European countries have been particularly affected from this point of view. In response to expected inflation levels, central banks have carried out the most severe monetary tightening in decades, leading to a sharp tightening of financial conditions, which in turn penalise activity. Finally, the health crisis has continued to strongly disrupt activity in some countries, particularly in Asia, where there is less vaccine protection or stricter measures to contain the health crisis.

Faced with these combined energy and monetary shocks, activity is expected to contract in a number of economies (including the eurozone and the United States) in late 2022 and early 2023, leading to substantial downward revisions to growth projections for 2023. Activity is expected to stagnate in both the eurozone and the United States in 2023 (while, at 30 June 2022, GDP was expected to grow by around 1.5% in both regions). Activity growth is generally expected to rebound in 2024 and 2025.

After reaching very high levels in late 2022, inflation is expected to moderate in the course of 2023, mainly due to lower energy inflation and to the consequences of the slowdown in activity (e.g. higher unemployment, more limited supply chain disruptions). However, on an annual average, inflation will remain very high in 2023 in many countries, significantly exceeding central bank targets in most cases (notably in Europe and in the United States). Inflation is expected to come down to more usual levels in 2024 and 2025.

In this context, major central banks have so far prioritised the fight against inflation by tightening monetary policy. By the end of 2022, both short-term and long-term interest rates were at much higher levels than those observed in the past ten years, even though the central banks have not yet completed their tightening cycle. Key interest rates are expected to peak in 2023, before moderating in 2024 and 2025 (when the central banks are expected to lower policy rates in line with more moderate inflation).

The graph below presents a comparison of eurozone GDP projections used in the baseline scenario for the calculation of ECLs at 31 December 2021 and 2022.



- **Macroeconomic variables, baseline scenario at 31 December 2022**

<i>(annual averages)</i>	2022	2023	2024	2025
GDP growth rate				
Eurozone	3.2%	0.1%	1.6%	1.3%
France	2.5%	0.1%	1.4%	1.2%
Italy	3.7%	-0.2%	1.1%	0.9%
Belgium	2.3%	0.0%	1.5%	1.2%
United States	1.7%	0.0%	1.7%	1.6%
Unemployment rate				
Eurozone	6.8%	7.5%	7.6%	7.3%
France	7.5%	8.0%	8.1%	7.9%
Italy	8.1%	8.6%	8.4%	8.3%
Belgium	5.8%	6.4%	6.3%	6.1%
United States	3.7%	4.7%	4.6%	4.5%
Inflation rate				
Eurozone	8.5%	6.3%	2.4%	2.0%
France	6.0%	5.4%	2.5%	2.0%
Italy	8.7%	7.3%	2.1%	1.7%
Belgium	10.6%	7.5%	2.7%	2.2%
United States	8.1%	3.9%	2.3%	2.2%
10-year sovereign bond yields				
Germany	1.22%	2.64%	2.19%	2.00%
France	1.76%	3.19%	2.74%	2.55%
Italy	3.18%	4.94%	4.49%	4.30%
Belgium	1.76%	3.24%	2.79%	2.60%
United States	3.02%	4.24%	3.44%	3.25%

Adverse Scenario

The adverse scenario is based on the assumption that certain downside risks will materialise, resulting in a much less favourable economic path than in the baseline scenario.

The following risks are identified:

- **A dominant risk, the invasion of Ukraine and its implications** (especially higher inflation): the impacts mentioned in the baseline scenario could worsen due to additional negative developments. In particular, the adverse scenario assumes a more pronounced shock on commodity prices, further fueling inflation and leading to more severe disruptions in activity. Higher inflation would have a direct negative effect on consumption and production. In addition, governments of the most exposed economies could take rationing measures targeting the most energy-intensive sectors (with potential indirect consequences for other sectors). Activity can also be negatively affected by other channels (e.g. supply chain disruptions, trade, financial stress, uncertainty and confidence effects).
- **The remaining risk related to the health crisis:** although the link between health challenges and economic disruptions has eased markedly in many economies, particularly thanks to vaccination, health crisis-related challenges remain a significant risk, at least in some countries.
- **Less favourable public finances:** public debt-to-GDP ratios are high and central banks are tightening their monetary policy, leading to a rise in bond yields that could generate tensions in some countries due to the widening of spreads between sovereign bonds.
- **China's economy-related risks:** additional difficulties in China (e.g. sanitary measures, real estate) could affect global markets and activity in other countries through trade and supply-chain channels.
- **Geopolitical risks:** geopolitical tensions can weigh on the global economy through shocks to commodity prices, financial markets and business confidence. Beyond the invasion of Ukraine, other regions are also worth to be monitored (Asia and the Middle East).
- **Developments in trade and globalisation:** the invasion of Ukraine creates additional obstacles to trade and globalisation, adding to already negative developments of recent years (trade disagreements between the United States and China, willingness of some western governments to become more self-sufficient in certain strategic areas).

The adverse scenario assumes the materialisation of these identified latent risks from the first quarter of 2023.

The risks related to the invasion of Ukraine are taken into account in the adverse scenario through some specificities. First, an additional activity shock is applied to the different economies, depending on their perceived exposure to this situation. This shock reflects the countries' dependence on Russian gas as well as their vulnerability to other transmission channels (exports, dependence on the supply chain, weight of food and energy in inflation, investment links, political ties with Russia). Second, inflation is higher in the adverse scenario than in the baseline scenario in the first year of the projection horizon, in order to materialise the specific effects of this crisis in this area (reflecting more upward pressure on commodity prices and supply chain disruptions).

Among the countries considered, GDP levels in the adverse scenario stand between 5.8% and 12.2% lower than in the baseline scenario at the end of the shock period (three years). In particular, this deviation reaches 10.2% on average in the eurozone and 5.8% in the United States.

Scenario weighting and cost of risk sensitivity

At 31 December 2022, the weight of the adverse scenario considered by the Group was 16% and 34% for the favourable scenario. At 31 December 2021, the weight of the adverse scenario was on average equivalent to that of the favourable scenario.

The sensitivity of the amount of expected credit losses for all financial assets at amortised cost or at fair value through equity and credit commitments is assessed by comparing the estimated expected credit losses resulting from the weighting of the above scenarios with that resulting from each of the two alternative scenarios:

- an increase in ECL of 22%, or EUR 1,250 million according to the adverse scenario (18% at 31 December 2021);
- a decrease in ECL of 7%, or EUR 400 million according to the favourable scenario (12% at 31 December 2021).

Adaptation of the ECL assessment process to factor in the specific nature of the health crisis:*Macroeconomic scenarios provisioning the models:*

The measurement of the impact of macroeconomic scenarios on expected credit losses was adjusted to reflect the specificities of the current health crisis. Given the exceptional nature of the shock linked to the temporary lockdown measures and strong support provided by governments and central banks, macroeconomic parameters for each country or geographic area included in the pre-existing models (calibrated on past crises) were adapted in order to extract information on the medium-term impacts on the macroeconomic environment and thus minimise excessive short-term volatility.

In 2020, the medium-term perspective adopted for the baseline scenario reduced the loss of income for the eurozone by an amount much lower than that of governments and European Central Bank support measures. Conversely, it moderated the favourable impacts of the economic rebounds observed in 2021. This adaptation ended in 2021.

Moratoria and state guarantees:

For the loans secured by a state guarantee (mainly in France and Italy), the calculation of expected credit losses is adjusted accordingly.

The absence of a general maturity extension scheme for individuals, notably in France, led to classify as forborne the loans that benefited from accompanying measures that were not initially provided for under the contract. However, these measures were not considered as an automatic criterion for transfer to stage 2.

Post-model adjustments:

Conservative adjustments were taken into account when the models used were based on indicators that show unusual levels in the context of the health crisis and the support programmes, such as the increase in deposits and the decrease in past due events for retail customers and entrepreneurs.

For the consumer credit specialist business, a conservative adjustment had been considered in 2020 for loans that benefitted from a moratorium. In 2021, this adjustment was reversed in connection with the satisfactory return to payment observed on these loans. However, a conservative adjustment was made to compensate for the atypical level of late payments.

These post-model adjustments were reversed in 2022.

Adaptation of the ECL assessment process to factor in the significant rise in inflation and in interest rates:

Additional adjustments were made in 2022 to take into account the effects of inflation and interest rate hikes when this effect is not directly estimated by the models. For example, within the consumer credit specialist business, adjustments were considered for the categories of customers most sensitive to the gradual decline in the level of their net income.

All of these adjustments represent 6.1% of the total amount of expected credit losses at 31 December 2022, compared to 4.8% at 31 December 2021.

Cost of credit risk for the period

In millions of euros	Year to 31 Dec. 2022	Year to 31 Dec. 2021
Net allowances to impairment	(2,444)	(2,591)
Recoveries on loans and receivables previously written off	343	321
Losses on irrecoverable loans	(714)	(701)
Act on assistance to borrowers in Poland	(189)	
Total cost of risk for the period	(3,004)	(2,971)

Cost of risk for the period by accounting category and asset type

In millions of euros	Year to 31 Dec. 2022	Year to 31 Dec. 2021
Cash and balances at central banks	(6)	(8)
Financial instruments at fair value through profit or loss	(28)	6
Financial assets at fair value through equity	14	(6)
Financial assets at amortised cost	(2,853)	(2,779)
<i>Loans and receivables</i>	(2,845)	(2,763)
<i>Debt securities</i>	(8)	(16)
Other assets	(17)	12
Financing and guarantee commitments and other items	(114)	(196)
Total cost of risk for the period	(3,004)	(2,971)
<i>Cost of risk on unimpaired assets and commitments</i>	<i>(570)</i>	<i>(17)</i>
<i>of which stage 1</i>	<i>(511)</i>	<i>268</i>
<i>of which stage 2</i>	<i>(59)</i>	<i>(285)</i>
<i>Cost of risk on impaired assets and commitments - stage 3</i>	<i>(2,434)</i>	<i>(2,954)</i>

Credit risk impairment

Changes in impairment by accounting category and asset type during the period

In millions of euros	31 December 2021	Net allowance to impairment	Impairment provisions used	Changes in scope, exchange rates and other items	31 December 2022
Assets impairment					
Amounts due from central banks	18	5		(2)	21
Financial instruments at fair value through profit or loss	121	15		(28)	108
Financial assets at fair value through equity	140	(14)		4	130
Financial assets at amortised cost	20,196	2,374	(4,187)	128	18,511
<i>Loans and receivables</i>	20,028	2,329	(4,106)	130	18,381
<i>Debt securities</i>	168	45	(81)	(2)	130
Other assets	59	(6)	(3)	(5)	45
Total impairment of financial assets	20,534	2,374	(4,190)	97	18,815
<i>of which stage 1</i>	1,891	223	(4)	(36)	2,074
<i>of which stage 2</i>	2,748	87	(3)	49	2,881
<i>of which stage 3</i>	15,895	2,064	(4,183)	84	13,860
Provisions recognised as liabilities					
Provisions for commitments	958	32	(15)	5	980
Other provisions	467	38	(56)	1	450
Total provisions recognised for credit commitments	1,425	70	(71)	6	1,430
<i>of which stage 1</i>	230	94		2	326
<i>of which stage 2</i>	374	(33)		(3)	338
<i>of which stage 3</i>	821	9	(71)	7	766
Total impairment and provisions	21,959	2,444	(4,261)	103	20,245

Change in impairment by accounting category and asset type during the previous period

In millions of euros	31 December 2020	Net allowance to impairment	Impairment provisions used	Changes in scope, exchange rates and other items	31 December 2021
Assets impairment					
Amounts due from central banks	17	9		(8)	18
Financial instruments at fair value through profit or loss	148	(20)		(7)	121
Financial assets at fair value through equity	132	6		2	140
Financial assets at amortised cost	21,704	2,438	(3,867)	(79)	20,196
<i>Loans and receivables</i>	21,546	2,421	(3,867)	(72)	20,028
<i>Debt securities</i>	158	17		(7)	168
Other assets	104	(15)	(29)	(1)	59
Total impairment of financial assets	22,105	2,418	(3,896)	(93)	20,534
<i>of which stage 1</i>	2,379	(219)	(8)	(261)	1,891
<i>of which stage 2</i>	3,166	176	(6)	(588)	2,748
<i>of which stage 3</i>	16,560	2,461	(3,882)	756	15,895
Provisions recognised as liabilities					
Provisions for commitments	964	60	(1)	(65)	958
Other provisions	383	113	(52)	23	467
Total provisions recognised for credit commitments	1,347	173	(53)	(42)	1,425
<i>of which stage 1</i>	319	(55)		(34)	230
<i>of which stage 2</i>	297	100		(23)	374
<i>of which stage 3</i>	731	128	(53)	15	821
Total impairment and provisions	23,452	2,591	(3,949)	(135)	21,959

Changes in impairment of financial assets at amortised cost during the period

In millions of euros	Impairment on assets subject to 12-month Expected Credit Losses (Stage 1)	Impairment on assets subject to lifetime Expected Credit Losses (Stage 2)	Impairment on doubtful assets (Stage 3)	Total
At 31 December 2021	1,867	2,714	15,615	20,196
Net allowance to impairment	211	102	2,061	2,374
Financial assets purchased or originated during the period	682	234		916
Financial assets derecognised during the period ⁽¹⁾	(390)	(388)	(822)	(1,600)
Transfer to stage 2	(133)	1,773	(212)	1,428
Transfer to stage 3	(65)	(665)	1,806	1,076
Transfer to stage 1	63	(502)	(36)	(475)
Change in the significant increase in credit risk assessment criteria	29	(280)		(251)
Other allowances / reversals without stage transfer ⁽²⁾	25	(70)	1,325	1,280
Impairment provisions used	(3)	(3)	(4,181)	(4,187)
Changes in exchange rates	(6)	(30)	104	68
Changes in scope of consolidation and other items	(34)	77	17	60
At 31 December 2022	2,035	2,860	13,616	18,511

⁽¹⁾ including disposals

⁽²⁾ including amortisation

In 2022, the increase in financial assets subject to impairment relates mainly to outstandings classified in stage 1. Thus, the gross value of loans and advances to customers classified in stage 1 increased by EUR 61 billion compared to 31 December 2021 (see note 4.e Financial assets at amortised cost). This change includes transfers of outstandings from stage 2 to stage 1 for a net amount of EUR 27 billion as a result of the change in the criteria used to assess the significant increase in credit risk, mainly within the French and Belgian Commercial & Personal Banking activities. This transfer mainly concerns the least risky outstandings among those previously classified in stage 2 (see section 5.4 Credit risk of the Universal Registration Document, Table n° 52: *Breakdown of financial assets subject to impairment by stage and internal rating*). The impact of this transfer on the amount of expected credit losses is a net reversal of provision of EUR 251 million.

Excluding the effect of this change in estimate, outstandings in stage 2 increased by EUR 10 billion during the year ended 31 December 2022. This development is closely linked to the deterioration of the economic environment that weighed on the assessment of the significant increase in credit risk criterion.

These combined effects led to net additions to impairment in stages 1 and 2 in 2022. The provisioning rate for loans and advances to customers classified in stage 2 increased to 3.2% at 31 December 2022, compared with 2.6% at 31 December 2021.

Changes in impairment of financial assets at amortised cost during the previous period

In millions of euros	Impairment on assets subject to 12-month Expected Credit Losses (Stage 1)	Impairment on assets subject to lifetime Expected Credit Losses (Stage 2)	Impairment on doubtful assets (Stage 3)	Total
At 31 December 2020	2,343	3,142	16,219	21,704
Net allowance to impairment	(216)	168	2,486	2,438
Financial assets purchased or originated during the period	608	242		850
Financial assets derecognised during the period ⁽¹⁾	(353)	(295)	(896)	(1,544)
Transfer to stage 2	(190)	1,726	(393)	1,143
Transfer to stage 3	(22)	(598)	1,837	1,217
Transfer to stage 1	117	(724)	(45)	(652)
Other allowances / reversals without stage transfer ⁽²⁾	(376)	(183)	1,983	1,424
Impairment provisions used	(8)	(6)	(3,853)	(3,867)
Changes in exchange rates	(1)	(32)	95	62
Changes in scope of consolidation and other items	(28)	(355)	739	356
Reclassification of assets held for sale	(223)	(203)	(71)	(497)
At 31 December 2021	1,867	2,714	15,615	20,196

⁽¹⁾ including disposals

⁽²⁾ including amortisation

2.i NET GAIN ON NON-CURRENT ASSETS

In millions of euros	Year to 31 Dec. 2022	Year to 31 Dec. 2021
Gain or loss on investments in consolidated undertakings (note 6.c)	(257)	355
Gain or loss on tangible and intangible assets	7	479
Results from net monetary position	(3)	
Net gain on non-current assets	(253)	834

According to IAS 29 in connection with the hyperinflation situation of the economy in Türkiye, the line “Results from net monetary positions” mainly includes the effect of the evolution of the consumer price index in Türkiye on the valuation of non-monetary assets and liabilities (- EUR 434 million) and on accrued income from the Turkish government bonds portfolio indexed to inflation and held by Turk Ekonomi Bankasi AS (+ EUR 431 million, reclassified from interest margin).

2.j CORPORATE INCOME TAX

Reconciliation of the effective tax expense to the theoretical tax expense at standard tax rate in France	Year to 31 Dec. 2022		Year to 31 Dec. 2021	
	in millions of euros	tax rate	in millions of euros	tax rate
Corporate income tax expense on pre-tax income at standard tax rate in France ⁽¹⁾	(3,275)	25.8%	(3,454)	28.4%
Impact of differently taxed foreign profits	(61)	0.5%	201	-1.7%
Impact of dividends and disposals taxed at reduced rate	54	-0.4%	153	-1.3%
Impact of the non-deductibility of taxes and bank levies ⁽²⁾	(300)	2.4%	(253)	2.1%
Other items	(134)	1.0%	(231)	2.0%
Corporate income tax expense from continuing activities	(3,716)	29.3%	(3,584)	29.5%
<i>Current tax expense for the year to 31 December</i>	<i>(2,844)</i>		<i>(2,806)</i>	
<i>Deferred tax expense for the year to 31 December (note 4.k)</i>	<i>(872)</i>		<i>(778)</i>	

⁽¹⁾ Restated for the share of profits in equity-method entities and goodwill impairment.

⁽²⁾ Contribution to the Single Resolution Fund and other non-deductible banking taxes.

3. SEGMENT INFORMATION

The Group is composed of three operating divisions:

- **Corporate & Institutional Banking (CIB)** which covers Global Banking, Global Markets and Securities Services;
- **Commercial, Personal Banking & Services (CPBS)** which covers Commercial & Personal banking in the euro zone, with Commercial & Personal Banking in France (CPBF), Commercial & Personal Banking in Italy (BNL bc), Commercial & Personal Banking in Belgium (CPBB) and Commercial & Personal Banking in Luxembourg (CPBL); Commercial banking outside the euro zone, which are organised around Europe-Mediterranean, to cover Central and Eastern Europe and Türkiye, and BancWest in the United States. Lastly, it also covers specialised businesses, (Arval, BNP Paribas Leasing Solutions, BNP Paribas Personal Finance, BNP Paribas Personal Investors and New digital business lines like Nickel, Floa, Lyf);
- **Investment & Protection Services (IPS)** which covers Insurance (BNP Paribas Cardif), Wealth and Asset Management (BNP Paribas Asset Management, BNP Paribas Wealth Management and BNP Paribas Real Estate), Management of the BNP Paribas Group's portfolio of unlisted and listed industrial and commercial investments (BNP Paribas Principal Investments).

Other activities mainly include activities related to the Group's central treasury function, some costs related to cross-business projects, the residential mortgage lending business of Personal Finance (a significant part of which is managed in run-off), and certain investments.

They also include non-recurring items resulting from applying the rules on business combinations. In order to provide consistent and relevant economic information for each core business, the impact of amortising fair value adjustments recognised in the net equity of entities acquired and restructuring costs incurred in respect to the integration of entities, have been allocated to the "Other Activities" segment. The same applies to transformation, adaptation and IT reinforcement costs relating to the Group's savings programmes.

Inter-segment transactions are conducted at arm's length. The segment information presented comprises agreed inter-segment transfer prices.

The capital allocation is carried out on the basis of risk exposure, taking into account various conventions relating primarily to the capital requirement of the business as derived from the risk-weighted asset calculations required under capital adequacy rules. Normalised equity income by segment is determined by attributing to each segment the income of its allocated equity. The equity allocation to segments is based on a minimum of 11 % of weighted assets. The breakdown of balance sheet by core business follows the same rules as the breakdown of the profit or loss by core business.

To provide a consistent reference with the presentation of the 2022 financial statements, the year ended 31 December 2021 of this note was restated for the following effects as if they had occurred on 1 January 2021:

- the new organisation of the Group;
- the change in method of internal allocation of the contribution to the Single Resolution Fund (SRF), impacting the breakdown among business lines of the banking taxes and contributions submitted to IFRIC 21. The Group has defined a new allocation key for the SRF between the businesses to better reflect the increased liquidity resources generated by commercial activity and the changing regulatory environment;
- limited internal transfers of activities and results, having marginal impact on the vision with 2/3 of Private Banking in the Commercial, Personal Banking in France and in Belgium.

These effects do not change the results for the Group as a whole but only the analytical breakdown.

The information and financial elements contained in this note reflect an operational view and include BancWest's activity within the various income statement aggregates. A separate line reconciles the operational view with the one impacted by the application of IFRS 5.

Income by business segment

In millions of euros	Year to 31 Dec. 2022						Year to 31 Dec. 2021					
	Revenues	Operating expenses	Cost of risk	Operating income	Non-operating items	Pre-tax income	Revenues	Operating expenses	Cost of risk	Operating income	Non-operating items	Pre-tax income
Corporate & Institutional Banking	16,465	(10,753)	(325)	5,387	10	5,398	14,236	(9,467)	(173)	4,596	58	4,654
Global Banking	5,218	(2,878)	(336)	2,004	4	2,009	5,087	(2,652)	(201)	2,234	11	2,246
Global Markets	8,660	(5,806)	11	2,866	4	2,870	6,820	(4,924)	27	1,923	19	1,942
Securities Services	2,587	(2,069)		517	2	519	2,329	(1,892)	1	439	27	466
Commercial, Personal Banking & Services	27,563	(17,518)	(2,458)	7,586	414	8,000	25,216	(16,523)	(2,586)	6,106	340	6,447
<i>Commercial & Personal Banking in the eurozone</i>	12,948	(8,976)	(726)	3,246	42	3,288	12,303	(8,659)	(1,018)	2,626	56	2,682
Commercial & Personal Banking in France ⁽¹⁾	6,361	(4,530)	(245)	1,587	26	1,613	5,966	(4,395)	(428)	1,144	37	1,181
BNL banca commerciale ⁽¹⁾	2,548	(1,676)	(464)	408	3	410	2,591	(1,726)	(488)	377		377
Commercial & Personal Banking in Belgium ⁽¹⁾	3,577	(2,502)	(36)	1,039	10	1,049	3,332	(2,277)	(100)	954	19	973
Commercial & Personal Banking in Luxembourg ⁽¹⁾	461	(268)	19	213	3	216	414	(262)	(2)	150		150
<i>Commercial & Personal Banking in the rest of the world</i>	4,953	(3,655)	(113)	1,185	292	1,477	4,286	(3,255)	(99)	932	201	1,133
Europe-Mediterranean ⁽¹⁾	2,321	(1,641)	(152)	528	289	817	1,926	(1,598)	(145)	182	181	364
BancWest ⁽¹⁾	2,632	(2,014)	39	657	4	660	2,361	(1,656)	45	750	19	769
<i>Specialised businesses</i>	9,662	(4,888)	(1,619)	3,155	80	3,235	8,627	(4,609)	(1,469)	2,549	84	2,632
Personal Finance	5,387	(2,922)	(1,373)	1,092	28	1,121	5,216	(2,804)	(1,314)	1,097	78	1,175
Arval & Leasing Solutions	3,438	(1,395)	(146)	1,897	60	1,957	2,675	(1,298)	(150)	1,227	8	1,235
New Digital Businesses & Personal Investors ⁽¹⁾	837	(571)	(100)	166	(9)	157	735	(506)	(5)	224	(2)	222
Investment & Protections Services	6,670	(4,363)	3	2,309	310	2,620	6,476	(4,218)	(7)	2,251	249	2,499
Insurance	2,774	(1,558)	(2)	1,214	161	1,376	2,827	(1,536)	(1)	1,289	79	1,368
Wealth Management	1,612	(1,230)	3	385	39	424	1,476	(1,134)	(10)	332	1	333
Asset Management ⁽²⁾	2,284	(1,576)	2	710	110	820	2,173	(1,548)	5	630	168	798
Other Activities	(279)	(1,067)	(185)	(1,531)	(36)	(1,567)	308	(903)	(159)	(754)	792	38
Total Group	50,419	(33,702)	(2,965)	13,752	698	14,450	46,235	(31,111)	(2,925)	12,199	1,438	13,637
Reclassification of discontinued activities (note 7.d)	(2,788)	2,007	(39)	(820)	(3)	(823)	(2,473)	1,645	(46)	(874)	(19)	(893)
Total continuing activities⁽³⁾	47,631	(31,695)	(3,004)	12,932	695	13,627	43,762	(29,466)	(2,971)	11,325	1,419	12,744

⁽¹⁾ Commercial & Personal Banking in France, BNL banca commerciale, Commercial & Personal Banking in Belgium, Commercial & Personal Banking in Luxembourg, Europe-Mediterranean, BancWest and Personal Investors after the reallocation within Wealth and Asset Management of one-third of the Wealth Management activities in France, Italy, Belgium, Luxembourg, Germany, Türkiye, Poland and the United States.

⁽²⁾ including Real Estate and Principal Investments.

- **Net commission income by business segment, including fees accounted for under « Net income from insurance activities »**

In millions of euros	Year to 31 Dec. 2022	Year to 31 Dec. 2021
Corporate & Institutional Banking	2,310	2,766
Global Banking	2,037	2,199
Global Markets	(1,223)	(891)
Securities Services	1,497	1,458
Commercial, Personal Banking & Services	7,220	6,930
<i>Commercial & Personal Banking in the eurozone</i>	<i>5,059</i>	<i>4,795</i>
Commercial & Personal Banking in France ⁽¹⁾	2,896	2,664
BNL banca commerciale ⁽¹⁾	1,047	1,071
Commercial & Personal Banking in Belgium ⁽¹⁾	1,028	981
Commercial & Personal Banking in Luxembourg ⁽¹⁾	88	79
<i>Commercial & Personal Banking in the rest of the world</i>	<i>876</i>	<i>849</i>
Europe-Mediterranean ⁽¹⁾	448	467
BancWest ⁽¹⁾	428	382
<i>Specialised businesses</i>	<i>1,285</i>	<i>1,286</i>
Personal Finance	743	750
Arval & Leasing Solutions	41	40
New Digital Businesses & Personal Investors ⁽¹⁾	501	495
Investment & Protections Services	(893)	(607)
Insurance	(3,288)	(3,072)
Wealth Management	789	836
Asset Management ⁽²⁾	1,606	1,630
Other activities	58	(55)
Total Group	8,696	9,034

⁽¹⁾ Commercial & Personal Banking in France, BNL banca commerciale, Commercial & Personal Banking in Belgium, Commercial & Personal Banking in Luxembourg, Europe-Mediterranean, BancWest and Personal Investors after the reallocation within Wealth and Asset Management of one-third of the Wealth Management activities in France, Italy, Belgium, Luxembourg, Germany, Türkiye, Poland and the United States.

⁽²⁾ including Real Estate and Principal Investments.

- Assets and liabilities by business segment**

In millions of euros, at	31 December 2022		31 December 2021	
	Asset	Liability	Asset	Liability
Corporate & Institutional Banking	1,136,501	1,302,279	1,098,288	1,232,312
Global Banking	183,096	239,352	165,082	202,807
Global Markets	913,848	908,354	871,532	872,645
Securities Services	39,557	154,573	61,674	156,860
Commercial, Personal Banking & Services	843,216	793,620	818,842	774,956
<i>Commercial & Personal Banking in the eurozone</i>	<i>546,268</i>	<i>584,747</i>	<i>529,698</i>	<i>578,604</i>
Commercial & Personal Banking in France	235,614	255,334	218,249	250,094
BNL banca commerciale	94,230	93,880	94,229	92,427
Commercial & Personal Banking in Belgium	189,119	204,538	188,732	204,867
Commercial & Personal Banking in Luxembourg	27,305	30,995	28,488	31,216
<i>Commercial & Personal Banking in the rest of the world</i>	<i>141,356</i>	<i>138,231</i>	<i>145,625</i>	<i>131,837</i>
Europe-Mediterranean	59,132	55,360	57,323	51,206
BancWest	82,224	82,871	88,302	80,631
<i>Specialised businesses</i>	<i>155,592</i>	<i>70,642</i>	<i>143,519</i>	<i>64,515</i>
Personal Finance	94,906	24,412	90,753	23,507
Arval & Leasing Solutions	56,668	12,443	50,654	9,439
New Digital Businesses & Personal Investors	4,019	33,787	2,112	31,569
Investment & Protections Services	283,029	312,142	318,241	336,654
Insurance	247,403	234,129	280,766	262,238
Wealth Management	28,242	74,563	29,583	70,686
Asset Management	7,384	3,450	7,892	3,730
Other activities	403,630	258,335	399,073	290,522
Total Group	2,666,376	2,666,376	2,634,444	2,634,444

Information by business segment relating to goodwill is presented in note 4.o Goodwill.

- Information by geographic area**

The geographic split of segment results, assets and liabilities is based on the region in which they are recognised for accounting purposes, adjusted as per the managerial origin of the business activity. It does not necessarily reflect the counterparty's nationality or the location of operational businesses.

Revenues by geographic area including net income from discontinued activities

In millions of euros	Year to 31 Dec. 2022	Year to 31 Dec. 2021
EMEA	39,770	36,506
Americas (North and South)	6,650	6,153
APAC	3,999	3,576
Total Group	50,419	46,235

Assets and liabilities, in contribution to the consolidated accounts, by geographic area

In millions of euros	31 December 2022	31 December 2021
EMEA	2,190,667	2,173,683
Americas (North and South)	305,141	294,601
APAC	170,568	166,160
Total Group	2,666,376	2,634,444

4. NOTES TO THE BALANCE SHEET AT 31 DECEMBER 2022

4.a FINANCIAL INSTRUMENTS AT FAIR VALUE THROUGH PROFIT OR LOSS

FINANCIAL ASSETS AND LIABILITIES AT FAIR VALUE THROUGH PROFIT OR LOSS

Financial assets and financial liabilities at fair value through profit or loss consist of held-for-trading transactions - including derivatives -, of certain liabilities designated by the Group as at fair value through profit or loss at the time of issuance and of non-trading instruments whose characteristics prevent their accounting at amortised cost or at fair value through equity.

	31 December 2022				31 December 2021			
	Financial instruments held for trading	Financial instruments designated as at fair value through profit or loss	Other financial assets at fair value through profit or loss	Total	Financial instruments held for trading	Financial instruments designated as at fair value through profit or loss	Other financial assets at fair value through profit or loss	Total
In millions of euros								
Securities	157,138	1,273	7,666	166,077	181,079	2,898	7,530	191,507
Loans and repurchase agreements	186,968		4,157	191,125	247,507		2,301	249,808
FINANCIAL ASSETS AT FAIR VALUE THROUGH PROFIT OR LOSS	344,106	1,273	11,823	357,202	428,586	2,898	9,831	441,315
Securities	99,155			99,155	112,338			112,338
Deposits and repurchase agreements	232,351	1,725		234,076	291,577	1,879		293,456
Issued debt securities (note 4.h)		70,460		70,460		70,383		70,383
<i>of which subordinated debt</i>		675		675		947		947
<i>of which non subordinated debt</i>		64,110		64,110		62,334		62,334
<i>of which debt representative of shares of consolidated funds held by third parties</i>		5,675		5,675		7,102		7,102
FINANCIAL LIABILITIES AT FAIR VALUE THROUGH PROFIT OR LOSS	331,506	72,185		403,691	403,915	72,262		476,177

Detail of these assets and liabilities is provided in note 4.d.

- **Financial liabilities designated as at fair value through profit or loss**

Financial liabilities at fair value through profit or loss mainly consist of issued debt securities, originated and structured on behalf of customers, where the risk exposure is managed in combination with the hedging strategy. These types of issued debt securities contain significant embedded derivatives, which changes in value may be compensated by changes in the value of economic hedging derivatives.

The redemption value of debt issued and designated as at fair value through profit or loss at 31 December 2022 was EUR 70,940 million (EUR 59,958 million at 31 December 2021).

- **Other financial assets measured at fair value through profit or loss**

Other financial assets at fair value through profit or loss are financial assets not held for trading:

- Debt instruments that do not meet the criteria defined by IFRS 9 to be classified as financial instruments at “fair value through equity” or at “amortised cost”:
 - Their business model is not to “collect contractual cash flows” nor “collect contractual cash flows and sell the instruments”; and/or
 - Their cash flows are not solely repayments of principal and interest on the principal amount outstanding.
- Equity instruments that the Group did not choose to classify as at “fair value through equity”.

DERIVATIVE FINANCIAL INSTRUMENTS

The majority of derivative financial instruments held for trading are related to transactions initiated for trading purposes. They may result from market-making or arbitrage activities. BNP Paribas actively trades in derivatives. Transactions include trades in “ordinary” instruments such as credit default swaps, and structured transactions with complex risk profiles tailored to meet the needs of its customers. The net position is in all cases subject to limits.

Some derivative instruments are also contracted to hedge financial assets or financial liabilities for which the Group has not documented a hedging relationship, or which do not qualify for hedge accounting under IFRS.

In millions of euros	31 December 2022		31 December 2021	
	Positive market value	Negative market value	Positive market value	Negative market value
Interest rate derivatives	150,122	125,215	119,219	107,490
Foreign exchange derivatives	134,382	129,274	75,314	75,694
Credit derivatives	7,294	7,731	8,371	8,451
Equity derivatives	22,602	27,291	24,217	35,071
Other derivatives	13,532	10,610	13,302	10,691
Derivative financial instruments	327,932	300,121	240,423	237,397

The table below shows the total notional amount of trading derivatives. The notional amounts of derivative instruments are merely an indication of the volume of the Group’s activities in financial instruments markets, and do not reflect the market risks associated with such instruments.

In millions of euros	31 December 2022				31 December 2021			
	Exchange-traded	Over-the-counter, cleared through central clearing houses	Over-the-counter	Total	Exchange-traded	Over-the-counter, cleared through central clearing houses	Over-the-counter	Total
Interest rate derivatives	1,442,663	12,349,703	5,254,166	19,046,532	1,319,006	9,761,179	4,846,327	15,926,512
Foreign exchange derivatives	40,292	130,148	7,610,392	7,780,832	56,415	133,330	6,873,623	7,063,368
Credit derivatives		464,228	518,926	983,154		392,338	545,919	938,257
Equity derivatives	1,177,728		535,465	1,713,193	799,005		506,164	1,305,169
Other derivatives	133,820		95,722	229,542	107,162		92,077	199,239
Derivative financial instruments	2,794,503	12,944,079	14,014,671	29,753,253	2,281,588	10,286,847	12,864,110	25,432,545

As part of its *Client Clearing* activity, the Group guarantees the risk of default of its clients to central counterparties. The corresponding notional amount is EUR 1,187 billion at 31 December 2022 (EUR 1,050 billion at 31 December 2021).

4.b DERIVATIVES USED FOR HEDGING PURPOSES

The table below shows the notional amounts and the fair value of derivatives used for hedging purposes.

In millions of euros	31 December 2022			31 December 2021		
	Notional amounts	Positive fair value	Negative fair value	Notional amounts	Positive fair value	Negative fair value
Fair value hedges	1,103,455	24,213	36,872	755,989	7,010	9,593
Interest rate derivatives	1,094,689	23,955	36,525	746,253	6,689	9,512
Foreign exchange derivatives	8,766	258	347	9,736	321	81
Cash flow hedges	213,866	1,126	3,070	213,743	1,606	481
Interest rate derivatives	59,641	429	1,602	50,509	1,085	254
Foreign exchange derivatives	153,811	664	1,416	162,827	442	209
Other derivatives	414	33	52	407	79	18
Net foreign investment hedges	1,719	62	59	2,659	64	2
Foreign exchange derivatives	1,719	62	59	2,659	64	2
Derivatives used for hedging purposes	1,319,040	25,401	40,001	972,391	8,680	10,076

Interest rate risk and foreign exchange risk management strategies are described in Chapter 5 – Pillar 3 of the Universal Registration Document (section 5.7 – *Market risk – Market risk related to banking activities*). Quantitative information related to foreign currency borrowings used for net investment hedges is also mentioned in this chapter.

The table below presents the detail of fair value hedge relationships for identified financial instruments and portfolios of financial instruments that are continuing at 31 December 2022:

In millions of euros, at 31 December 2022	Hedging instruments				Hedged instruments			
	Notional amounts	Positive fair value	Negative fair value	Cumulated changes in fair value used as the basis for recognising ineffectiveness	Carrying amount - asset	Cumulated changes in fair value - asset	Carrying amount - liability	Cumulated changes in fair value - liability
Fair value hedges of identified instruments	332,749	11,155	12,711	1,500	114,741	(12,204)	122,280	(10,588)
Interest rate derivatives hedging the interest rate risk related to	325,470	10,992	12,376	1,487	110,376	(12,128)	119,694	(10,540)
Loans and receivables	19,827	613	171	527	18,394	(541)		
Securities	131,460	10,297	1,258	11,521	91,982	(11,587)		
Deposits	8,081	31	291	(375)			7,878	(388)
Debt securities	166,102	51	10,656	(10,186)			111,816	(10,152)
Foreign exchange derivatives hedging the interest rate and foreign exchange risks related to	7,279	163	335	13	4,365	(76)	2,586	(48)
Loans and receivables	2,619	95	64	35	2,410	(42)		
Securities	1,957	55	12	34	1,955	(34)		
Deposits	64		30	2			76	2
Debt securities	2,639	13	229	(58)			2,510	(50)
Interest rate risk hedged portfolios	770,706	13,058	24,161	(11,240)	204,827	(8,877)	310,192	(20,063)
Interest rate derivatives hedging the interest rate risk related to ⁽¹⁾	769,218	12,963	24,149	(11,292)	203,490	(8,830)	310,192	(20,063)
Loans and receivables	346,924	9,243	162	9,680	203,490	(8,830)		
Deposits	422,294	3,720	23,987	(20,972)			310,192	(20,063)
Foreign exchange derivatives hedging the interest rate and foreign exchange risks related to	1,488	95	12	52	1,337	(47)		
Loans and receivables	1,488	95	12	52	1,337	(47)		
Total fair value hedge	1,103,455	24,213	36,872	(9,740)	319,568	(21,081)	432,472	(30,651)

⁽¹⁾Are included in this section the notional amounts of hedging derivatives and of swaps that reverse the interest rate positions, thus reducing the hedge relationship, when the hedged item still exists, for respectively EUR 121,183 million for derivatives hedging loans and receivables and EUR 103,261 million for derivatives hedging deposits.

The table below presents the detail of fair value hedge relationships for identified financial instruments and portfolios of financial instruments that are continuing at 31 December 2021:

In millions of euros, at 31 December 2021	Hedging instruments				Hedged instruments			
	Notional amounts	Positive fair value	Negative fair value	Cumulated changes in fair value used as the basis for recognising ineffectiveness	Carrying amount - asset	Cumulated changes in fair value - asset	Carrying amount - liability	Cumulated changes in fair value - liability
Fair value hedges of identified instruments	302,733	3,013	6,008	(643)	110,232	1,530	116,360	1,131
Interest rate derivatives hedging the interest rate risk related to	294,121	2,818	5,939	(741)	105,419	1,601	112,726	1,099
Loans and receivables	20,854	213	518	(278)	19,242	276		
Securities	112,596	1,179	5,399	(1,531)	86,177	1,325		
Deposits	6,725	351	17	274			6,644	271
Debt securities	153,946	1,075	5	794			106,082	828
Foreign exchange derivatives hedging the interest rate and foreign exchange risks related to	8,612	195	69	98	4,813	(71)	3,634	32
Loans and receivables	2,433	140	2	48	2,308	(51)		
Securities	2,518	28	12	20	2,505	(20)		
Deposits	181	3	21	9			197	9
Debt securities	3,480	24	34	21			3,437	23
Interest rate risk hedged portfolios	453,256	3,997	3,585	(16)	109,933	1,463	178,771	1,320
Interest rate derivatives hedging the interest rate risk related to ⁽¹⁾	452,132	3,871	3,573	(58)	108,893	1,504	178,771	1,320
Loans and receivables	183,765	606	2,574	(1,603)	108,893	1,504		
Deposits	268,367	3,265	999	1,545			178,771	1,320
Foreign exchange derivatives hedging the interest rate and foreign exchange risks related to	1,124	126	12	42	1,040	(41)		
Loans and receivables	1,124	126	12	42	1,040	(41)		
Total fair value hedge	755,989	7,010	9,593	(659)	220,165	2,993	295,131	2,451

⁽¹⁾Are included in this section the notional amounts of hedging derivatives and of swaps that reverse the interest rate positions, thus reducing the hedge relationship, when the hedged item still exists, for respectively EUR 55,414 million for derivatives hedging loans and receivables and EUR 86,139 million for derivatives hedging deposits.

An asset or a liability or set of assets and liabilities, can be hedged over several periods of time with different derivative financial instruments. Besides, some hedges are achieved by the combination of two derivative instruments. In this case, the notional amounts add up and their total amount is higher than the hedged amount. The first situation is observed more particularly for interest rate risk hedged portfolios and the second for hedges of issued debt securities.

As regards discontinued fair value hedge relationships where the derivative contract was terminated, the cumulated amount of revaluation remaining to be amortised over the residual life of the hedged instruments amounts to EUR 1,399 million in assets at 31 December 2022, and to EUR -138 million in liabilities, for hedges of portfolios of financial instruments. At 31 December 2021, these amounts were EUR 1,509 million in assets and 14 million in liabilities.

Regarding hedges of identified instruments, the cumulated amount of revaluation remaining to be amortised over the residual life of the hedged instruments amounts to EUR 111 million in assets at 31 December 2022. At 31 December 2021, this amount was EUR 117 million in assets.

The notional amount of cash flow hedge derivatives is EUR 213,866 million at 31 December 2022. Changes in assets and liabilities recognised directly in equity amount to EUR -245 million. At 31 December 2021, the notional amount of cash flow hedge derivatives was EUR 213,743 million and changes in assets and liabilities recognised directly in equity amounted to EUR 1,329 million.

The tables below present the notional amounts of hedging derivatives by maturity at 31 December 2022 and at 31 December 2021:

In millions of euros, at 31 December 2022	Maturity date			
	Less than 1 year	Between 1 and 5 years	Over 5 years	Total
Fair value hedges	382,063	430,968	290,424	1,103,455
Interest rate derivatives	378,055	426,364	290,270	1,094,689
Foreign exchange derivatives	4,008	4,604	154	8,766
Cash flow hedges	142,568	51,041	20,257	213,866
Interest rate derivatives	18,178	30,041	11,422	59,641
Foreign exchange derivatives	124,223	20,753	8,835	153,811
Other derivatives	167	247		414
Net foreign investment hedges	1,719	-	-	1,719
Foreign exchange derivatives	1,719	-		1,719

In millions of euros, at 31 December 2021	Maturity date			
	Less than 1 year	Between 1 and 5 years	Over 5 years	Total
Fair value hedges	149,613	340,799	265,577	755,989
Interest rate derivatives	146,649	334,411	265,193	746,253
Foreign exchange derivatives	2,964	6,388	384	9,736
Cash flow hedges	146,392	43,108	24,243	213,743
Interest rate derivatives	10,350	27,777	12,382	50,509
Foreign exchange derivatives	135,867	15,099	11,861	162,827
Other derivatives	175	232		407
Net foreign investment hedges	2,559	100	-	2,659
Foreign exchange derivatives	2,559	100		2,659

4.c FINANCIAL ASSETS AT FAIR VALUE THROUGH EQUITY

In millions of euros	31 December 2022		31 December 2021	
	Fair value	of which changes in value recognised directly to equity	Fair value	of which changes in value recognised directly to equity
Debt securities	35,878	(866)	38,906	(1)
Governments	18,682	(350)	19,980	117
Other public administrations	9,921	(197)	13,000	51
Credit institutions	3,816	(302)	4,138	(169)
Others	3,459	(17)	1,788	
Equity securities	2,188	623	2,558	933
Total financial assets at fair value through equity	38,066	(243)	41,464	932

Debt securities at fair value through equity include EUR 108 million classified as stage 3 at 31 December 2022 (EUR 105 million at 31 December 2021). For these securities, the credit impairment recognised in the profit and loss account has been charged to the negative changes in value recognised in equity for EUR 100 million at 31 December 2022 (EUR 104 million at 31 December 2021).

The option to recognise certain equity instruments at fair value through equity was retained in particular for shares held through strategic partnerships and shares that the Group is required to hold in order to carry out certain activities.

During the year ended 31 December 2022, the Group sold two of these investments and an unrealised gain of EUR 267 million was transferred to “retained earnings” (EUR 12 million at 31 December 2021).

4.d MEASUREMENT OF THE FAIR VALUE OF FINANCIAL INSTRUMENTS

VALUATION PROCESS

BNP Paribas has retained the fundamental principle that it should have a unique and integrated processing chain for producing and controlling the valuations of financial instruments that are used for the purpose of daily risk management and financial reporting. All these processes are based on a common economic valuation which is a core component of business decisions and risk management strategies.

Economic value is composed of mid-market value, to which add valuation adjustments.

Mid-market value is derived from external data or valuation techniques that maximise the use of observable and market-based data. Mid-market value is a theoretical additive value which does not take account of i) the direction of the transaction or its impact on the existing risks in the portfolio, ii) the nature of the counterparties, and iii) the aversion of a market participant to particular risks inherent in the instrument, the market in which it is traded, or the risk management strategy.

Valuation adjustments take into account valuation uncertainty and include market and credit risk premiums to reflect costs that could be incurred in case of an exit transaction in the principal market.

Fair value generally equals the economic value, subject to limited adjustments, such as own credit adjustments, which are specifically required by IFRS standards.

The main valuation adjustments are presented in the section below.

VALUATION ADJUSTMENTS

Valuation adjustments retained by BNP Paribas for determining fair values are as follows:

Bid/offer adjustments: the bid/offer range reflects the additional exit cost for a price taker and symmetrically the compensation sought by dealers to bear the risk of holding the position or closing it out by accepting another dealer’s price.

BNP Paribas assumes that the best estimate of an exit price is the bid or offer price, unless there is evidence that another point in the bid/offer range would provide a more representative exit price.

Input uncertainty adjustments: when the observation of prices or data inputs required by valuation techniques is difficult or irregular, an uncertainty exists on the exit price. There are several ways to gauge the degree of uncertainty on the exit price such as measuring the dispersion of the available price indications or estimating the possible ranges of the inputs to a valuation technique.

Model uncertainty adjustments: these relate to situations where valuation uncertainty is due to the valuation technique used, even though observable inputs might be available. This situation arises when the risks inherent in the instruments are different from those available in the observable data, and therefore the valuation technique involves assumptions that cannot be easily corroborated.

Future Hedging Costs adjustments (FHC): this adjustment applies to positions classified in Level 3 that require dynamic hedging throughout their lifetime leading to additional bid/offer costs. Calculation methods capture these expected costs in particular based on the optimal hedging frequency.

Credit valuation adjustment (CVA): the CVA adjustment applies to valuations and market quotations whereby the credit worthiness of the counterparty is not reflected. It aims to account for the possibility that the counterparty may default and that BNP Paribas may not receive the full fair value of the transactions.

In determining the cost of exiting or transferring counterparty risk exposures, the relevant market is deemed to be an inter-dealer market. However, the determination of CVA remains judgemental due to i) the possible absence or lack of price discovery in the inter-dealer market, ii) the influence of the regulatory landscape relating to counterparty risk on the market participants' pricing behaviour and iii) the absence of a dominant business model for managing counterparty risk.

The CVA model is grounded on the same exposures as those used for regulatory purposes. The model attempts to estimate the cost of an optimal risk management strategy based on i) implicit incentives and constraints inherent in the regulations in force and their evolutions, ii) market perception of the probability of default and iii) default parameters used for regulatory purposes.

Funding valuation adjustment (FVA): when valuation techniques are used for the purpose of deriving fair value, funding assumptions related to the future expected cash flows are an integral part of the mid-market valuation, notably through the use of appropriate discount rates. These assumptions reflect what the Bank anticipates as being the effective funding conditions of the instrument that a market participant would consider. This notably takes into account the existence and terms of any collateral agreement. In particular, for non- or imperfectly collateralised derivative instruments, they include an explicit adjustment to the interbank interest rate.

Own-credit valuation adjustment for debts (OCA) and for derivatives (debit valuation adjustment - DVA): OCA and DVA are adjustments reflecting the effect of credit worthiness of BNP Paribas, on respectively the value of debt securities designated as at fair value through profit or loss and derivatives. Both adjustments are based on the expected future liability profiles of such instruments. The own credit worthiness is inferred from the market-based observation of the relevant bond issuance levels. The DVA adjustment is determined after taking into account the Funding Valuation Adjustment (FVA).

Thus, the carrying value of debt securities designated as at fair value through profit or loss is decreased by EUR 160 million at 31 December 2022, compared with an increase in value of EUR 359 million at 31 December 2021, i.e. a - EUR 519 million variation recognised directly in equity that will not be reclassified to profit or loss.

INSTRUMENT CLASSES AND CLASSIFICATION WITHIN THE FAIR VALUE HIERARCHY FOR ASSETS AND LIABILITIES MEASURED AT FAIR VALUE

As explained in the summary of significant accounting policies (note 1.e.10), financial instruments measured at fair value are categorised into a fair value hierarchy consisting of three levels.

In millions of euros	31 December 2022											
	Financial instruments held for trading				Instruments at fair value through profit or loss not held for trading				Financial assets at fair value through equity			
	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
Securities	130,589	25,744	805	157,138	1,643	1,495	5,801	8,939	32,727	4,395	944	38,066
Governments	59,860	10,136	28	70,024	-	-	-	-	16,783	1,770	127	18,680
Other debt securities	16,454	14,695	630	31,779	1,152	500	333	1,985	14,497	2,412	288	17,197
Equities and other equity securities	54,275	913	147	55,335	491	995	5,468	6,954	1,447	213	529	2,189
Loans and repurchase agreements	-	186,170	798	186,968	-	1,274	2,883	4,157	-	-	-	-
Loans	-	6,428	5	6,433	-	1,274	2,883	4,157	-	-	-	-
Repurchase agreements	-	179,742	793	180,535	-	-	-	-	-	-	-	-
FINANCIAL ASSETS AT FAIR VALUE	130,589	211,914	1,603	344,106	1,643	2,769	8,684	13,096	32,727	4,395	944	38,066
Securities	97,367	1,716	72	99,155	-	-	-	-	-	-	-	-
Governments	57,949	92	16	58,057	-	-	-	-	-	-	-	-
Other debt securities	13,183	1,581	47	14,811	-	-	-	-	-	-	-	-
Equities and other equity securities	26,235	43	9	26,287	-	-	-	-	-	-	-	-
Borrowings and repurchase agreements	-	230,303	2,048	232,351	-	1,472	253	1,725	-	-	-	-
Borrowings	-	6,952	-	6,952	-	1,472	253	1,725	-	-	-	-
Repurchase agreements	-	223,351	2,048	225,399	-	-	-	-	-	-	-	-
Issued debt securities (note 4.h)	-	-	-	-	1,885	49,630	18,945	70,460	-	-	-	-
Subordinated debt (note 4.h)	-	-	-	-	-	675	-	675	-	-	-	-
Non subordinated debt (note 4.h)	-	-	-	-	4	45,161	18,945	64,110	-	-	-	-
Debt representative of shares of consolidated funds held by third parties	-	-	-	-	1,881	3,794	-	5,675	-	-	-	-
FINANCIAL LIABILITIES AT FAIR VALUE	97,367	232,019	2,120	331,506	1,885	51,102	19,198	72,185	-	-	-	-

In millions of euros	31 December 2021											
	Financial instruments held for trading				Instruments at fair value through profit or loss not held for trading				Financial assets at fair value through equity			
	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
Securities	152,215	28,234	630	181,079	3,520	1,865	5,043	10,428	33,356	6,987	1,121	41,464
Governments	82,556	10,962	36	93,554	-	-	-	-	16,263	3,717	-	19,980
Other debt securities	20,921	15,697	404	37,022	2,867	696	404	3,967	15,551	3,057	318	18,926
Equities and other equity securities	48,738	1,575	190	50,503	653	1,169	4,639	6,461	1,542	213	803	2,558
Loans and repurchase agreements	-	246,895	612	247,507	-	1,398	903	2,301	-	-	-	-
Loans	-	6,525	13	6,538	-	1,398	903	2,301	-	-	-	-
Repurchase agreements	-	240,370	599	240,969	-	-	-	-	-	-	-	-
FINANCIAL ASSETS AT FAIR VALUE	152,215	275,129	1,242	428,586	3,520	3,263	5,946	12,729	33,356	6,987	1,121	41,464
Securities	110,117	2,064	157	112,338	-	-	-	-	-	-	-	-
Governments	76,019	267	-	76,286	-	-	-	-	-	-	-	-
Other debt securities	14,382	1,683	117	16,182	-	-	-	-	-	-	-	-
Equities and other equity securities	19,716	114	40	19,870	-	-	-	-	-	-	-	-
Borrowings and repurchase agreements	-	290,659	918	291,577	-	1,556	323	1,879	-	-	-	-
Borrowings	-	1,758	-	1,758	-	1,556	323	1,879	-	-	-	-
Repurchase agreements	-	288,901	918	289,819	-	-	-	-	-	-	-	-
Issued debt securities (note 4.h)	-	-	-	-	2,716	47,409	20,258	70,383	-	-	-	-
Subordinated debt (note 4.h)	-	-	-	-	-	947	-	947	-	-	-	-
Non subordinated debt (note 4.h)	-	-	-	-	-	42,076	20,258	62,334	-	-	-	-
Debt representative of shares of consolidated funds held by third parties	-	-	-	-	2,716	4,386	-	7,102	-	-	-	-
FINANCIAL LIABILITIES AT FAIR VALUE	110,117	292,723	1,075	403,915	2,716	48,965	20,581	72,262	-	-	-	-

Fair values of derivatives are broken down by dominant risk factor, namely interest rate, foreign exchange, credit and equity. Derivatives used for hedging purposes are mainly interest rate derivatives.

31 December 2022								
In millions of euros	Positive market value				Negative market value			
	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
Interest rate derivatives	873	147,853	1,396	150,122	503	122,659	2,053	125,215
Foreign exchange derivatives	33	133,628	721	134,382	35	129,204	35	129,274
Credit derivatives		6,382	912	7,294		6,822	909	7,731
Equity derivatives	6,760	13,512	2,330	22,602	9,177	13,290	4,824	27,291
Other derivatives	1,295	12,158	79	13,532	843	9,629	138	10,610
Derivative financial instruments not used for hedging purposes	8,961	313,533	5,438	327,932	10,558	281,604	7,959	300,121
Derivative financial instruments used for hedging purposes	-	25,401	-	25,401	-	40,001	-	40,001

31 December 2021								
In millions of euros	Positive market value				Negative market value			
	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
Interest rate derivatives	331	117,854	1,034	119,219	318	105,988	1,184	107,490
Foreign exchange derivatives	40	74,827	447	75,314	36	75,388	270	75,694
Credit derivatives		7,532	839	8,371		7,562	889	8,451
Equity derivatives	9,770	12,741	1,706	24,217	12,593	15,795	6,683	35,071
Other derivatives	1,284	11,962	56	13,302	1,179	9,359	153	10,691
Derivative financial instruments not used for hedging purposes	11,425	224,916	4,082	240,423	14,126	214,092	9,179	237,397
Derivative financial instruments used for hedging purposes	-	8,680	-	8,680	-	10,076	-	10,076

Transfers between levels may occur when an instrument fulfils the criteria defined, which are generally market and product dependent. The main factors influencing transfers are changes in the observation capabilities, passage of time, and events during the transaction lifetime. The timing of recognising transfers is determined at the beginning of the reporting period.

During the year ended 2022, transfers between Level 1 and Level 2 were not significant.

DESCRIPTION OF MAIN INSTRUMENTS IN EACH LEVEL

The following section provides a description of the instruments in each level in the hierarchy. It describes notably instruments classified in Level 3 and the associated valuation methodologies.

For main trading book instruments and derivatives classified in Level 3, further quantitative information is provided about the inputs used to derive fair value.

Level 1

This level encompasses all derivatives and securities that are listed on exchanges or quoted continuously in other active markets.

Level 1 includes notably equity securities and liquid bonds, shortselling of these instruments, derivative instruments traded on organised markets (futures, options, etc.). It includes shares of funds and UCITS, for which the net asset value is calculated on a daily basis, as well as debt representative of shares of consolidated funds held by third parties.

Level 2

The Level 2 stock of securities is composed of securities which are less liquid than the Level 1 bonds. They are predominantly corporate debt securities, government bonds, mortgage backed securities, fund shares and short-term securities such as certificates of deposit. They are classified in Level 2 notably when external prices for the same security can be regularly observed from a reasonable number of market makers that are active in this security, but these prices do not represent directly tradable prices. This comprises amongst other, consensus pricing services with a reasonable number of contributors that are active market makers as well as indicative runs from active brokers and/or dealers. Other sources such as primary issuance market, may also be used where relevant.

Repurchase agreements are classified predominantly in Level 2. The classification is primarily based on the observability and liquidity of the repo market, depending on the underlying collateral and the maturity of the repo transaction.

Debts issued designated as at fair value through profit and loss, are classified in the same level as the one that would apply to the embedded derivative taken individually. The issuance spread is considered observable.

Derivatives classified in Level 2 comprise mainly the following instruments:

- vanilla instruments such as interest rate swaps, caps, floors and swaptions, credit default swaps, equity/foreign exchange (FX)/commodities forwards and options;
- structured derivatives for which model uncertainty is not significant such as exotic FX options, mono- and multi-underlying equity/funds derivatives, single curve exotic interest rate derivatives and derivatives based on structured rates.

The above derivatives are classified in Level 2 when there is a documented stream of evidence supporting one of the following:

- fair value is predominantly derived from prices or quotations of other Level 1 and Level 2 instruments, through standard market interpolation or stripping techniques whose results are regularly corroborated by real transactions;
- fair value is derived from other standard techniques such as replication or discounted cash flows that are calibrated to observable prices, that bear limited model risk and enable an effective offset of the risks of the instrument through trading Level 1 or Level 2 instruments;
- fair value is derived from more sophisticated or proprietary valuation techniques but is directly evidenced through regular back-testing using external market-based data.

Determining whether an over-the-counter (OTC) derivative is eligible for Level 2 classification involves judgement. Consideration is given to the origin, transparency and reliability of external data used, and the amount of uncertainty associated with the use of models. It follows that the Level 2 classification criteria involve multiple analysis axis within an “observability zone” whose limits are determined by i) a predetermined list of product categories and ii) the underlying and maturity bands. These criteria are regularly reviewed and updated, together with the applicable valuation adjustments, so that the classification by level remains consistent with the valuation adjustment policy.

Level 3

Level 3 securities of the trading book mainly comprise units of funds and unlisted equity shares measured at fair value through profit or loss or through equity.

Unlisted private equities are systematically classified as Level 3, with the exception of UCITS with a daily net asset value which are classified in the Level 1 of the fair value hierarchy.

Shares and other unlisted variable income securities in Level 3 are valued using one of the following methods: a share of revalued net book value, multiples of comparable companies, future cash flows method, multi-criteria approach.

Some repurchase agreements: mainly long-term or structured repurchase agreements on corporate bonds and ABSs when the valuation of these transactions requires proprietary methodologies given the bespoke nature of the transactions and the lack of activity and price discovery in the long-term repo market. The curves used in the valuation are corroborated using available data such as recent long-term repo trade data and price enquiry data. Valuation adjustments applicable to these exposures are commensurate with the degree of uncertainty inherent in the modelling choices and amount of data available.

Debts issued designated as at fair value through profit or loss, are classified in the same level as the one that would apply to the embedded derivative taken individually. The issuance spread is considered observable.

Derivatives

Vanilla derivatives are classified in Level 3 when the exposure is beyond the observation zone for rate curves or volatility surfaces, or relates to less liquid markets such as tranches on old credit index series or emerging markets interest rates markets. The main instruments are:

- **Interest rate derivatives:** exposures mainly comprise swap products in less liquid currencies. Classification is driven by the lower liquidity of some maturities, while observation capabilities through consensus may be available. The valuation technique is standard, and uses external market information and extrapolation techniques.
- **Credit derivatives (CDS):** exposures mainly comprise CDSs beyond the maximum observable maturity and, to a much lesser extent, CDSs on illiquid or distressed names and CDSs on loan indices. Classification is driven by the lack of liquidity while observation capabilities may be available notably through consensus. Level 3 exposures also comprise CDS and Total Return Swaps (TRS) positions on securitised assets. These are priced along the same modelling techniques as the underlying bonds, taking into consideration the funding basis and specific risk premium.
- **Equity derivatives:** exposures essentially comprise long dated forward or volatility products or exposures where there is a limited market for optional products. The marking of the forward curves and volatility surfaces beyond the maximum observable maturity relies on extrapolation techniques. However, when there is no market for model input, volatility or forward is generally determined on the basis of proxy or historical analysis.

Similarly, long-term transactions on equity baskets are also classified in Level 3, based on the absence of equity correlation observability on long maturities.

These vanilla derivatives are subject to valuation adjustments linked to uncertainty on liquidity, specialised by nature of underlying and liquidity bands.

Structured derivatives classified in Level 3 predominantly comprise structured derivatives of which hybrid products (FX/Interest Rates hybrids, Equity hybrids), credit correlation products, prepayment-sensitive products, some stock basket optional products and some interest rate optional instruments. The main exposures are described below, with insight into the related valuation techniques and on the source of uncertainty:

- **Structured interest rate options** are classified in Level 3 when they involve currencies where there is not sufficient observation or when they include a quanto feature where the pay-off is measured with a forex forward fixed rate (except for the main currencies). Long term structured derivatives are also classified in Level 3.
- **Hybrid FX/Interest rate products** essentially comprise a specific product family known as Power Reverse Dual Currency (PRDC) when there is material valuation uncertainty. When valuation of PRDCs requires sophisticated modelling of joint behaviour of FX and interest rate, and is notably sensitive to the unobservable FX/ interest rate correlations, such products are classified as Level 3. PRDCs valuations are corroborated with recent trade data and consensus data.
- **Securitisation swaps** mainly comprise fixed-rate swaps, cross-currency or basis swaps whose notional is indexed to the prepayment behaviour of some underlying portfolio. The estimation of the maturity profile of securitisation swaps is corroborated by statistical estimates using external historical data.
- **Forward volatility options** are generally products whose pay-off is indexed to the future variability of a rate index such as volatility swaps. These products involve material model risk as it is difficult to infer forward volatility information from the market-traded instruments. The valuation adjustment framework is calibrated to the uncertainty inherent in the product, and to the range of uncertainty from the existing external consensus data.
- **Inflation derivatives** classified in Level 3 mainly comprise swap products on inflation indices that are not associated with a liquid indexed bond market, optional products on inflation indices (such as caps and

floors) and other forms of inflation indices involving optionality on the inflation indices or on the inflation annual rate. Valuation techniques used for inflation derivatives are predominantly standard market models. Proxy techniques are used for a few limited exposures. Although the valuations are corroborated through monthly consensus data, these products are classified as Level 3 due to their lack of liquidity and some uncertainties inherent in the calibration.

- The valuation of **bespoke CDOs** requires correlation of default events when there is material valuation uncertainty. This information is inferred from the active index tranche market through a proprietary projection technique and involves proprietary extrapolation and interpolation techniques. Multi-geography CDOs further require an additional correlation assumption. Finally, the bespoke CDO model also involves proprietary assumptions and parameters related to the dynamic of the recovery factor. CDO modelling, is calibrated on the observable index tranche markets, and is regularly back-tested against consensus data on standardised pools. The uncertainty arises from the model risk associated with the projection and geography mixing technique, and the uncertainty of associated parameters, together with the recovery modelling.
- **N to Default baskets** are other forms of credit correlation products, modelled through standard copula techniques. The main inputs required are the pair-wise correlations between the basket components which can be observed in the consensus and the transactions. Linear baskets are considered observable.
- **Equity and equity-hybrid correlation products** are instruments whose pay-off is dependent on the joint behaviour of a basket of equities/indices leading to a sensitivity of the fair value measurement to the correlation amongst the basket components. Hybrid versions of these instruments involve baskets that mix equity and non-equity underlyings such as commodity indices, or foreign exchange rates. Only a subset of the Equity/index correlation matrix is regularly observable and traded, while most cross-asset correlations are not active. Therefore, classification in Level 3 depends on the composition of the basket, the maturity, and the hybrid nature of the product. The correlation input is derived from a proprietary model combining historical estimators, and other adjustment factors, that are corroborated by reference to recent trades or external data. The correlation matrix is essentially available from consensus services, and when a correlation between two underlying instruments is not available, it might be obtained from extrapolation or proxy techniques.

These structured derivatives are subject to specific valuation adjustments to cover uncertainties linked to liquidity, parameters and model risk.

Valuation adjustments (CVA, DVA and FVA)

The valuation adjustment for counterparty credit risk (CVA), own-credit risk for derivatives (DVA) and the explicit funding valuation adjustment (FVA) are deemed to be unobservable components of the valuation framework and therefore classified in Level 3. This does not impact, in general cases, the classification of individual transactions into the fair value hierarchy. However, a specific process allows to identify individual deals for which the marginal contribution of these adjustments and related uncertainty is significant and justifies classifying these transactions in Level 3.

The table below provides the range of values of main unobservable inputs for the valuation of Level 3 financial instruments. The ranges displayed correspond to a variety of different underlying instruments and are meaningful only in the context of the valuation technique implemented by BNP Paribas. The weighted averages, where relevant and available, are based on fair values, nominal amounts or sensitivities.

The main unobservable parameters used for the valuation of debt issued in Level 3 are equivalent to those of their economic hedge derivative. Information on those derivatives, displayed in the following table, is also applicable to these debts.

Risk classes	Balance Sheet valuation (in millions of euros)		Main product types composing the Level 3 stock within the risk class	Valuation technique used for the product types considered	Main unobservable inputs for the product types considered	Range of unobservable input across Level 3 population considered	Weighted average
	Asset	Liability					
Repurchase agreements	793	2,048	Long-term repo and reverse-repo agreements	Proxy techniques, based amongst other on the funding basis of a benchmark bond pool, that is actively traded and representative of the repo underlying	Long-term repo spread on private bonds (High Yield, High Grade) and on ABSs	0 bp to 80 bp	21 bp (a)
Interest rate derivatives	1,396	2,053	Hybrid Forex / Interest rates derivatives	Hybrid Forex interest rate option pricing model	Correlation between FX rate and interest rates. Main currency pairs are EUR/JPY, USD/JPY, AUD/JPY	-13% to 53%	17% (a)
			Hybrid inflation rates / Interest rates derivatives	Hybrid inflation interest rate option pricing model	Correlation between interest rates and inflation rates mainly in Europe.	3% to 14%	12%
			Floors and caps on inflation rate or on the cumulative inflation (such as redemption floors), predominantly on European and French inflation	Inflation pricing model	Volatility of cumulative inflation	1% to 11.7%	(b)
			Forward Volatility products such as volatility swaps, mainly in euro	Interest rates option pricing model	Volatility of the year on year inflation rate	0.4% to 3.3%	(b)
			Balance-guaranteed fixed rate, basis or cross currency swaps, predominantly on European collateral pools	Prepayment modelling Discounted cash flows	Forward volatility of interest rates	0.6% to 1.2%	(b)
Credit derivatives	912	909	Collateralised Debt Obligations and index tranches for inactive index series	Base correlation projection technique and recovery modelling	Base correlation curve for bespoke portfolios	17% to 85%	(b)
			N-to-default baskets	Credit default model	Recovery rate variance for single name underlyings	0 to 25 %	(b)
			Single name Credit Default Swaps (other than CDS on ABSs and loans indices)	Stripping, extrapolation and interpolation	Default correlation	48% to 73%	53% (a)
					Credit default spreads beyond observation limit (10 years)	45 bp to 535 bp (1)	435 bp (c)
Equity derivatives	2,330	4,824	Simple and complex derivatives on multi-underlying baskets on stocks	Various volatility option models	Illiquid credit default spread curves (across main tenors)	8 bp to 610 bp (2)	99 bp (c)
					Unobservable equity volatility	0% to 124% (3)	33% (d)
					Unobservable equity correlation	25% to 100%	73% (c)

(1) The upper part of the range relates to a significant balance sheet position on an issuer belonging to the European telecommunication sector. The remaining positions relate mainly to sovereign and financial issuers.

(2) The upper bound of the range relates to distribution, consumer and transportation sector issuers that represent an insignificant portion of the balance sheet (CDSs with illiquid underlying instruments).

(3) The upper part of the range relates to 6 equities representing a non-material portion of the balance sheet on options with equity underlying instruments. Including these inputs, the upper bound of the range would be around 289%.

(a) Weights based on relevant risk axis at portfolio level

(b) No weighting, since no explicit sensitivity is attributed to these inputs

(c) Weighting is not based on risks, but on an alternative methodology in relation with the Level 3 instruments (present value or notional)

(d) Simple averaging

TABLE OF MOVEMENTS IN LEVEL 3 FINANCIAL INSTRUMENTS

For Level 3 financial instruments, the following movements occurred during the year ended 2022:

	Financial assets				Financial liabilities		
	Financial instruments at fair value through profit or loss held for trading	Financial instruments at fair value through profit or loss not held for trading	Financial assets at fair value through equity	TOTAL	Financial instruments at fair value through profit or loss held for trading	Financial instruments designated as at fair value through profit or loss	TOTAL
In millions of euros							
At 31 December 2021	5,324	5,946	1,121	12,391	(10,254)	(20,581)	(30,835)
Purchases	1,507	1,497	257	3,261			-
Issues				-		(6,810)	(6,810)
Sales	(1,591)	(1,219)	(502)	(3,312)	(24)		(24)
Settlements ⁽¹⁾	2,682	1,824	135	4,641	2,905	7,904	10,809
Transfers to Level 3	1,657	26	36	1,719	(733)	(1,760)	(2,493)
Transfers from Level 3	(2,126)	(34)		(2,160)	1,391	1,007	2,398
Gains (or losses) recognised in profit or loss with respect to transactions expired or terminated during the period	(434)	651	(41)	176	(2,983)	2,800	(183)
Gains (or losses) recognised in profit or loss with respect to unexpired instruments at the end of the period	20	1		21	(383)	(1,758)	(2,141)
Changes in fair value of assets and liabilities recognised directly in equity				-			-
- Items related to exchange rate movements	2	(8)	(3)	(9)	2		2
- Changes in fair value of assets and liabilities recognised in equity			(59)	(59)			-
At 31 December 2022	7,041	8,684	944	16,669	(10,079)	(19,198)	(29,277)

⁽¹⁾For the assets, includes redemptions of principal, interest payments as well as cash inflows and outflows relating to derivatives. For the liabilities, includes principal redemptions, interest payments as well as cash inflows and outflows relating to derivatives the fair value of which is negative.

Transfers out of Level 3 of derivatives at fair value include mainly the update of the observability tenor of certain yield curves, and of market parameters related to repurchase agreements and credit transactions but also the effect of derivatives becoming only or mainly sensitive to observable inputs due to the shortening of their lifetime.

Transfers into Level 3 of instruments at fair value reflect the effect of the regular update of the observability zones.

Transfers have been reflected as if they had taken place at the beginning of the reporting period.

The Level 3 financial instruments may be hedged by other Level 1 and Level 2 instruments, the gains and losses of which are not shown in this table. Consequently, the gains and losses shown in this table are not representative of the gains and losses arising from management of the net risk on all these instruments.

SENSITIVITY OF FAIR VALUE TO REASONABLY POSSIBLE CHANGES IN LEVEL 3 ASSUMPTIONS

The following table summarises those financial assets and financial liabilities classified as Level 3 for which alternative assumptions in one or more of the unobservable inputs would change fair value significantly.

The amounts disclosed are intended to illustrate the range of possible uncertainty inherent to the judgement applied when estimating Level 3 parameters, or when selecting valuation techniques. These amounts reflect valuation uncertainties that prevail at the measurement date, and even though such uncertainties predominantly derive from the portfolio sensitivities that prevailed at that measurement date, they are not predictive or indicative of future movements in fair value, nor do they represent the effect of market stress on the portfolio value.

In estimating sensitivities, BNP Paribas either remeasured the financial instruments using reasonably possible inputs, or applied assumptions based on the valuation adjustment policy.

For the sake of simplicity, the sensitivity on cash instruments that are not relating to securitised instruments was based on a uniform 1% shift in the price. More specific shifts were however calibrated for each class of the Level 3 securitised exposures, based on the possible ranges of the unobservable inputs.

For derivative exposures, the sensitivity measurement is based on the credit valuation adjustment (CVA), the explicit funding valuation adjustment (FVA) and the parameter and model uncertainty adjustments related to Level 3.

Regarding the credit valuation adjustment (CVA) and the explicit funding valuation adjustment (FVA), the uncertainty was calibrated based on prudent valuation adjustments described in the technical standard “Prudent Valuation” published by the European Banking Authority. For other valuation adjustments, two scenarios were considered: a favourable scenario where all or portion of the valuation adjustment is not considered by market participants, and an unfavourable scenario where market participants would require twice the amount of valuation adjustments considered by BNP Paribas for entering into a transaction.

In millions of euros	31 December 2022		31 December 2021	
	Potential impact on income	Potential impact on equity	Potential impact on income	Potential impact on equity
Debt securities	+/-8	+/-3	+/-7	+/-3
Equities and other equity securities	+/-56	+/-5	+/-48	+/-8
Loans and repurchase agreements	+/-42		+/-12	
Derivative financial instruments	+/-576		+/-588	
<i>Interest rate and foreign exchange derivatives</i>	+/-227		+/-322	
<i>Credit derivatives</i>	+/-98		+/-35	
<i>Equity derivatives</i>	+/-245		+/-227	
<i>Other derivatives</i>	+/-6		+/-4	
Sensitivity of Level 3 financial instruments	+/-682	+/-8	+/-655	+/-11

DEFERRED MARGIN ON FINANCIAL INSTRUMENTS MEASURED USING TECHNIQUES DEVELOPED INTERNALLY AND BASED ON INPUTS PARTLY UNOBSERVABLE IN ACTIVE MARKETS

Deferred margin on financial instruments (“Day One Profit”) primarily concerns the scope of financial instruments eligible for Level 3 and to a lesser extent some financial instruments eligible for Level 2 where valuation adjustments for uncertainties regarding parameters or models are not negligible compared to the initial margin.

The Day One Profit is calculated after setting aside valuation adjustments for uncertainties as described previously and released to profit or loss over the expected period for which the inputs will be unobservable. The unamortised amount is included under “Financial instruments at fair value through profit or loss” as a reduction in the fair value of the relevant transactions.

In millions of euros	Deferred margin at 31 December 2021	Deferred margin on transactions during the period	Margin taken to the profit and loss account during the period	Deferred margin at 31 December 2022
Interest rate and foreign exchange derivatives	204	142	(152)	194
Credit derivatives	164	150	(140)	174
Equity derivatives	401	449	(424)	426
Other instruments	9	31	(30)	10
Financial instruments	778	772	(746)	804

4.e FINANCIAL ASSETS AT AMORTISED COST

- Detail of loans and advances by nature

In millions of euros	31 December 2022			31 December 2021		
	Gross value	Impairment (note 2.h)	Carrying amount	Gross value	Impairment (note 2.h)	Carrying amount
Loans and advances to credit institutions	32,716	(100)	32,616	21,844	(93)	21,751
On demand accounts	11,000	(8)	10,992	9,009	(8)	9,001
Loans ⁽¹⁾	15,767	(92)	15,675	10,635	(85)	10,550
Repurchase agreements	5,949		5,949	2,200		2,200
Loans and advances to customers	875,301	(18,281)	857,020	833,935	(19,935)	814,000
On demand accounts	42,963	(2,844)	40,119	52,488	(3,157)	49,331
Loans to customers	788,971	(14,354)	774,617	740,080	(15,658)	724,422
Finance leases	42,574	(1,083)	41,491	41,026	(1,120)	39,906
Repurchase agreements	793		793	341		341
Total loans and advances at amortised cost	908,017	(18,381)	889,636	855,779	(20,028)	835,751

⁽¹⁾ Loans and advances to credit institutions include term deposits made with central banks.

Contractual maturities of finance leases

In millions of euros	31 December 2022	31 December 2021
Gross investment	45,602	43,823
<i>Receivable within 1 year</i>	<i>13,278</i>	<i>12,276</i>
<i>Receivable after 1 year but within 5 years</i>	<i>28,068</i>	<i>27,399</i>
<i>Receivable beyond 5 years</i>	<i>4,256</i>	<i>4,148</i>
Unearned interest income	(3,028)	(2,797)
Net investment before impairment	42,574	41,026
<i>Receivable within 1 year</i>	<i>12,176</i>	<i>11,289</i>
<i>Receivable after 1 year but within 5 years</i>	<i>26,396</i>	<i>25,845</i>
<i>Receivable beyond 5 years</i>	<i>4,002</i>	<i>3,892</i>
Impairment provisions	(1,083)	(1,120)
Net investment after impairment	41,491	39,906

- **Detail of debt securities by type of issuer**

In millions of euros	31 December 2022			31 December 2021		
	Gross value	Impairment (note 2.h)	Carrying amount	Gross value	Impairment (note 2.h)	Carrying amount
Governments	59,961	(23)	59,938	57,221	(20)	57,201
Other public administration	15,686	(2)	15,684	17,317	(2)	17,315
Credit institutions	9,062	(2)	9,060	10,593	(2)	10,591
Others	29,435	(103)	29,332	23,547	(144)	23,403
Total debt securities at amortised cost	114,144	(130)	114,014	108,678	(168)	108,510

- **Detail of financial assets at amortised cost by stage**

In millions of euros	31 December 2022			31 December 2021		
	Gross Value	Impairment (note 2.h)	Carrying amount	Gross Value	Impairment (note 2.h)	Carrying amount
Loans and advances to credit institutions	32,716	(100)	32,616	21,844	(93)	21,751
Stage 1	32,439	(11)	32,428	21,516	(13)	21,503
Stage 2	191	(10)	181	242	(2)	240
Stage 3	86	(79)	7	86	(78)	8
Loans and advances to customers	875,301	(18,281)	857,020	833,935	(19,935)	814,000
Stage 1	761,930	(1,998)	759,932	701,259	(1,834)	699,425
Stage 2 ⁽¹⁾	88,095	(2,839)	85,256	104,857	(2,687)	102,170
Stage 3	25,276	(13,444)	11,832	27,819	(15,414)	12,405
Debt securities	114,144	(130)	114,014	108,678	(168)	108,510
Stage 1	113,602	(27)	113,575	108,006	(20)	107,986
Stage 2	387	(10)	377	412	(25)	387
Stage 3	155	(93)	62	260	(123)	137
Total financial assets at amortised cost	1,022,161	(18,511)	1,003,650	964,457	(20,196)	944,261

⁽¹⁾ The variation on loans classified as stage 2 is presented in note 2.h

4.f IMPAIRED FINANCIAL ASSETS (STAGE 3)

The following tables present the carrying amounts of impaired financial assets carried at amortised cost and of impaired financing and guarantee commitments, as well as related collateral and other guarantees. The amounts shown for collateral and other guarantees correspond to the lower of the value of the collateral or other guarantee and the value of the secured assets.

In millions of euros	31 December 2022			
	Impaired financial assets (Stage 3)			Collateral received
	Gross value	Impairment	Net	
Loans and advances to credit institutions (note 4.e)	86	(79)	7	1
Loans and advances to customers (note 4.e)	25,276	(13,444)	11,832	7,651
Debt securities at amortised cost (note 4.e)	155	(93)	62	14
Total amortised-cost impaired assets (stage 3)	25,517	(13,616)	11,901	7,666
Financing commitments given	898	(73)	825	198
Guarantee commitments given	820	(243)	577	135
Total off-balance sheet impaired commitments (stage 3)	1,718	(316)	1,402	333

In millions of euros	31 December 2021			
	Impaired financial assets (Stage 3)			Collateral received
	Gross value	Impairment	Net	
Loans and advances to credit institutions (note 4.e)	86	(78)	8	1
Loans and advances to customers (note 4.e)	27,819	(15,414)	12,405	8,068
Debt securities at amortised cost (note 4.e)	260	(123)	137	25
Total amortised-cost impaired assets (stage 3)	28,165	(15,615)	12,550	8,094
Financing commitments given	1,088	(89)	999	65
Guarantee commitments given	833	(265)	568	192
Total off-balance sheet impaired commitments (stage 3)	1,921	(354)	1,567	257

The following table presents the changes in gross exposures of stage 3 assets (EU CR2):

Gross value In millions of euros	Year to 31 Dec. 2022	Year to 31 Dec. 2021
Impaired exposures (Stage 3) at opening balance	28,165	30,420
Transfer to stage 3	6,125	6,432
Transfer to stage 1 or stage 2	(1,672)	(2,548)
Assets written off	(4,827)	(4,491)
Other changes	(2,274)	(1,648)
Impaired exposures (Stage 3) at closing balance	25,517	28,165

4.g FINANCIAL LIABILITIES AT AMORTISED COST DUE TO CREDIT INSTITUTIONS AND CUSTOMERS

In millions of euros	31 December 2022	31 December 2021
Deposits from credit institutions	124,718	165,699
On demand accounts	12,538	9,105
Interbank borrowings ⁽¹⁾	104,135	147,635
Repurchase agreements	8,045	8,959
Deposits from customers	1,008,054	957,684
On demand deposits	592,267	634,784
Savings accounts	162,354	158,932
Term accounts and short-term notes	253,210	163,429
Repurchase agreements	223	539

⁽¹⁾Interbank borrowings from credit institutions include term borrowings from central banks, of which EUR 67 billion of TLTRO III at 31 December 2022 compared to EUR 120.1 billion at 31 December 2021 (see Note 2.a Net Interest Income).

4.h DEBT SECURITIES AND SUBORDINATED DEBT

This note covers all issued debt securities and subordinated debt measured at amortised cost and designated as at fair value through profit or loss.

- **Debt securities designated at fair value through profit or loss (note 4.a)**

Issuer / Issue date	Currency	Original amount in foreign currency (millions)	Date of call or interest step-up	Interest rate	Interest step-up	Conditions precedent for coupon payment ⁽¹⁾	31 December 2022	31 December 2021
In millions of euros								
Debt securities							64,110	62,334
Subordinated debt							676	947
- Redeemable subordinated debt			⁽²⁾				16	41
- Perpetual subordinated debt							660	906
BNP Paribas Fortis Dec. 2007 ⁽³⁾	EUR	3,000	Dec.-14	3-month Euribor +200 bp		A	660	906

⁽¹⁾ Conditions precedent for coupon payment:

A Coupon payments are halted should the issuer have insufficient capital or the underwriters become insolvent or when the dividend declared for Ageas shares falls below a certain threshold.

⁽²⁾ After agreement from the banking supervisory authority and at the issuer's initiative, redeemable subordinated debt issues may contain a call provision authorising the Group to redeem the securities prior to maturity by repurchasing them in the stock market, via public tender offers, or in the case of private placements over the counter. Debt issued by BNP Paribas SA or foreign subsidiaries of the Group via placements in the international markets may be subject to early redemption of the capital and early payment of interest due at maturity at the issuer's discretion on or after a date stipulated in the issue particulars (call option), or in the event that changes in the applicable tax rules oblige the BNP Paribas Group issuer to compensate debt-holders for the consequences of such changes. Redemption may be subject to a notice period of between 15 and 60 days, and is in all cases subject to approval by the banking supervisory authorities.

⁽³⁾ Convertible And Subordinated Hybrid Equity-linked Securities (CASHES) issued by BNP Paribas Fortis (previously Fortis Banque) in December 2007.

The CASHES are perpetual securities but may be exchanged for Ageas (previously Fortis SA/NV) shares at the holder's sole discretion at a price of EUR 239.40. However, as of 19 December 2014, the CASHES will be automatically exchanged into Ageas shares if their price is equal to or higher than EUR 359.10 for twenty consecutive trading days. The principal amount will never be redeemed in cash. The rights of the CASHES holders are limited to the Ageas shares held by BNP Paribas Fortis and pledged to them.

Ageas and BNP Paribas Fortis have entered into a Relative Performance Note (RPN) contract, the value of which varies contractually so as to offset the impact on BNP Paribas Fortis of the relative difference between changes in the value of the CASHES and changes in the value of the Ageas shares.

Since the 1st of January 2022, the liability is no longer eligible to prudential own funds.

• Debt securities measured at amortised cost

Issuer / Issue date	Currency	Original amount in foreign currency (millions)	Date of call or interest step-up	Interest rate	Interest step-up	Conditions precedent for coupon payment ⁽¹⁾	31 December 2022	31 December 2021
In millions of euros								
Debt securities							154,143	149,723
- Debt securities in issue with an initial maturity of less than one year							58,042	47,293
Negotiable debt securities							58,042	47,293
- Debt securities in issue with an initial maturity of more than one year							96,101	102,430
Negotiable debt securities							17,587	27,256
Bonds							78,514	75,174
Subordinated debt							24,156	24,720
- Redeemable subordinated debt ⁽²⁾							22,419	23,000
- Undated subordinated notes							1,509	1,494
BNP Paribas SA Oct. 85	EUR	305	-	TMO - 0.25%	-	B	254	254
BNP Paribas SA Sept. 86	USD	500	-	6 month-Libor + 0.075%	-	C	255	240
BNP Paribas Cardif Nov. 14	EUR	1,000	Nov. - 25	4.032%	3-month Euribor + 393 bp	D	1,000	1,000
- Participating notes							222	222
BNP Paribas SA July 84 ⁽³⁾	EUR	337	-	⁽⁴⁾	-		215	215
Others							7	7
- Expenses and commission, related debt							6	4

⁽¹⁾ Conditions precedent for coupon payment

B Payment of the interest is mandatory, unless the Board of Directors decides to postpone these payments after the Shareholders' General Meeting has officially noted that there is no income available for distribution, where this occurs within the 12-month period preceding the due date for payment of the interest. Interest payments are cumulative and are payable in full once dividend payments resume.

C Payment of the interest is mandatory, unless the Board of Directors decides to postpone these payments after the Shareholders' General Meeting has validated the decision not to pay out a dividend, where this occurs within the 12-month period preceding the due date for payment of the interest. Interest payments are cumulative and are payable in full once dividend payments resume. The bank has the option of resuming payment of interest arrears, even where no dividend is paid out.

D Payment of the interest is mandatory, except for cases of regulatory deficiency, in agreement with the regulator, or of suspension of payments. Interest payments are cumulative and are payable in full, once coupon payments resume, or, if these events occur before, when the issuance is redeemed or when the issuer is liquidated.

⁽²⁾ See reference relating to "Debt securities at fair value through profit or loss".

⁽³⁾ The participating notes issued by BNP Paribas SA may be repurchased as provided for in the law of 3 January 1983. The number of notes in the market is 1,434,092.

⁽⁴⁾ Depending on net income subject to a minimum of 85% of the TMO rate and a maximum of 130% of the TMO rate.

4.i FINANCIAL INVESTMENTS AND OTHER ASSETS RELATED TO INSURANCE ACTIVITIES

	31 December 2022			31 December 2021		
	Assets not representative of unit-linked insurance contracts	Assets representative of unit-linked insurance contracts (financial risk supported by policyholders)	Total	Assets not representative of unit-linked insurance contracts	Assets representative of unit-linked insurance contracts (financial risk supported by policyholders)	Total
In millions of euros						
Financial instruments designated as at fair value through profit or loss	44,317	79,648	123,965	50,940	87,108	138,048
Derivative financial instruments	1,675		1,675	1,033		1,033
Available-for-sale financial assets	104,961		104,961	127,413		127,413
Held-to-maturity financial assets	970		970	981		981
Loans and receivables	3,074		3,074	3,145		3,145
Equity-method investments	342		342	349		349
Investment property	2,855	4,402	7,257	2,875	4,354	7,229
Total	158,194	84,050	242,244	186,736	91,462	278,198
Reinsurers' share of technical reserves	2,277		2,277	2,568		2,568
Policyholders' surplus reserve – assets	2,882		2,882			
Financial investments and other assets related to insurance activities	163,353	84,050	247,403	189,304	91,462	280,766

Investments in financial instruments of insurance activities are accounted for according to IAS 39 principles.

The fair value of financial assets with contractual cash-flows corresponding only to payments of principal and interest on principal amounts to EUR 91.9 billion at 31 December 2022. It amounted to EUR 108.6 billion at 31 December 2021, which represents a variation of - EUR 16.7 billion over the period.

The fair value of other financial assets amounts to EUR 150.4 billion and corresponds to all financial instruments that do not meet the previously mentioned criteria, derivatives and financial assets managed on a market value basis. It amounted to EUR 170 billion at 31 December 2021, which represents a variation of - EUR 19.6 billion over the period.

The fair value of investment properties which are not representative of unit-linked insurance contracts accounted for at amortised cost amounts to EUR 4.2 billion at 31 December 2022, compared with EUR 4.4 billion at 31 December 2021.

- **Measurement of the fair value of financial instruments**

The criteria for allocating instruments to the levels of the fair value hierarchy, the corresponding valuation methodologies and the principles of transfer between the levels of the hierarchy for insurance investments are similar to those applied for the Group's other financial instruments (note 4.d).

In millions of euros	31 December 2022				31 December 2021			
	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
Available-for-sale financial assets	91,640	12,720	601	104,961	110,750	16,196	467	127,413
Equity instruments	7,627	1,390	437	9,454	9,767	1,338	367	11,472
Debt securities	84,013	11,330	164	95,507	100,983	14,858	100	115,941
Financial instruments designated as at fair value through profit or loss	70,018	41,471	12,476	123,965	86,497	43,486	8,065	138,048
Equity instruments	69,439	32,669	12,452	114,560	85,749	34,660	8,037	128,446
Debt securities	579	8,802	24	9,405	748	8,826	28	9,602
Derivative financial instruments	10	1,622	43	1,675	1	909	123	1,033
Financial assets measured at fair value	161,668	55,813	13,120	230,601	197,248	60,591	8,655	266,494

Level 1: this level comprises equities and liquid bonds, derivative instruments traded on organised markets (futures, options, etc.), units of funds and UCITS for which the net asset value is calculated on a daily basis.

Level 2: this level comprises equities, certain government or corporate bonds, other fund units and UCITS and over-the-counter derivatives.

Level 3: this level consists mainly of fund units and shares which are not quoted on active markets, consisting mainly of units in venture capital companies and funds.

- **Table of movements in Level 3 financial instruments**

For Level 3 financial instruments, the following movements occurred during the period:

In millions of euros	Financial assets		
	Available-for-sale financial instruments	Financial instruments as at fair value through profit or loss	Total
At 31 December 2021	467	8,188	8,655
Purchases	290	3,701	3,991
Sales	(371)	(2,875)	(3,246)
Settlements	(16)	(393)	(409)
Transfers to Level 3	312	2,423	2,735
Transfers from Level 3	(80)	(41)	(121)
Gains recognised in profit or loss	5	1,509	1,514
Items related to exchange rate movements		8	8
Changes in fair value of assets and liabilities recognised in equity	(6)		(6)
At 31 December 2022	601	12,519	13,120

- **Details of available-for-sale financial assets**

In millions of euros	31 December 2022			31 December 2021		
	Balance sheet value	of which impairment	of which changes in value recognised directly in equity	Balance sheet value	of which impairment	of which changes in value recognised directly in equity
Debt securities	95,507		(11,744)	115,941		9,408
Equity instruments	9,454	(698)	2,041	11,472	(664)	3,257
Total available-for-sale financial assets	104,961	(698)	(9,703)	127,413	(664)	12,665

- **Fair value of financial instruments carried at amortised cost**

In millions of euros	31 December 2022					31 December 2021				
	Level 1	Level 2	Level 3	Total	Carrying value	Level 1	Level 2	Level 3	Total	Carrying value
Held-to-maturity financial assets	1,016			1,016	970	1,150			1,150	981
Loans and receivables		3,069	7	3,076	3,074		3,152	3	3,155	3,145

4.j TECHNICAL RESERVES AND OTHER INSURANCE LIABILITIES

In millions of euros	31 December 2022	31 December 2021
Technical reserves - Non-Life insurance contracts	4,147	4,212
Technical reserves - Life insurance contracts	162,909	168,910
- Insurance contracts	88,278	87,325
- Unit-linked contracts	74,631	81,585
Technical liabilities - investment contracts	47,984	50,723
- Investments contracts with discretionary participation feature	39,729	41,850
- Investment contracts without discretionary participation feature - Unit-linked contracts	8,255	8,873
Policyholders' surplus reserve - liability	6,527	27,011
Total technical reserves and liabilities related to insurance and investment contracts	221,567	250,856
Debts arising out of insurance and reinsurance operations	3,065	2,890
Derivative financial instruments	1,900	1,049
Total technical reserves and other insurance liabilities	226,532	254,795

The policyholders' surplus reserve arises from the application of shadow accounting. It represents the interest of policyholders, within life insurance subsidiaries in France, Luxembourg and Italy, in unrealised gains and losses and impairment losses on assets where the benefit paid under the policy is linked to the return on those assets. It is obtained from stochastic calculations modelling the unrealised gains and losses attributable to policyholders based on economic scenarios and assumptions as regards rates paid to customers and new business inflows. For France, this resulted in an average interest rate of 92% in 2022, unchanged from 2021.

The Liability Adequacy Test required by IFRS 4 and performed by contract portfolio consists of comparing reserves (net of deferred acquisition costs) with an evaluation of future discounted cash flows. At 31 December 2022, this test confirms the absence of deficiency.

The change in technical reserves and liabilities related to insurance contracts breaks down as follows:

In millions of euros	Year to 31 Dec. 2022	Year to 31 Dec. 2021
Liabilities related to insurance contracts at start of period	250,856	236,185
Additions to insurance contract technical reserves and deposits taken on financial contracts related to life insurance	1,384	24,687
Claims and benefits paid	(20,495)	(18,721)
Effect of changes in value of admissible investments related to unit-linked contracts	(9,725)	8,242
Effect of movements in exchange rates	(341)	811
Effect of changes in the scope of consolidation	(112)	(348)
Liabilities related to insurance contracts at end of period	221,567	250,856

See note 4.i for details of reinsurers' share of technical reserves.

4.k CURRENT AND DEFERRED TAXES

In millions of euros	31 December 2022	31 December 2021
Current taxes	1,685	1,862
Deferred taxes	4,208	4,004
Current and deferred tax assets	5,893	5,866
Current taxes	2,042	1,787
Deferred taxes	1,012	1,316
Current and deferred tax liabilities	3,054	3,103

Change in deferred tax by nature over the period:

In millions of euros	31 December 2021	Changes recognised in profit or loss	Changes recognised in equity that may be reclassified to profit or loss	Changes recognised in equity that will not be reclassified to profit or loss	Effects of exchange rates, consolidation scope and other movements	31 December 2022
Financial instruments	(857)	(278)	1,434	(135)	19	183
Provisions for employee benefit obligations	738	(13)		39	(11)	753
Unrealised finance lease reserve	(481)	(89)			(7)	(577)
Credit risk impairment	2,705	(93)			20	2,632
Tax loss carryforwards	774	(221)			10	563
Other items	(191)	(126)			(41)	(358)
Net deferred taxes	2,688	(820)	1,434	(96)	(10)	3,196
Deferred tax assets	4,004					4,208
Deferred tax liabilities	(1,316)					(1,012)

In order to determine the amount of the tax loss carryforwards recognised as assets, the Group conducts every year a specific review for each relevant entity based on the applicable tax regime, notably incorporating any time limit rules, and a realistic projection of their future revenue and charges in line with their business plan.

Deferred tax assets recognised on tax loss carryforwards are mainly related to BNP Paribas Fortis for EUR 254 million at 31 December 2022, with a 3-year expected recovery period (unlimited carryforward period).

Unrecognised deferred tax assets totalled EUR 1,530 million at 31 December 2022 (of which EUR 1,336 million of tax loss carryforwards) compared with EUR 1,408 million at 31 December 2021 (of which EUR 1,234 million of tax loss carryforwards).

4.1 ACCRUED INCOME/EXPENSE AND OTHER ASSETS/LIABILITIES

In millions of euros	31 December 2022	31 December 2021
Guarantee deposits and bank guarantees paid	155,199	136,142
Collection accounts	282	242
Accrued income and prepaid expenses	7,030	4,617
Other debtors and miscellaneous assets	46,581	38,122
Total accrued income and other assets	209,092	179,123
Guarantee deposits received	124,047	101,923
Collection accounts	2,907	2,870
Accrued expense and deferred income	10,874	7,739
Lease liabilities	3,075	3,248
Other creditors and miscellaneous liabilities	44,553	29,619
Total accrued expense and other liabilities	185,456	145,399

4.m EQUITY-METHOD INVESTMENTS

Cumulated financial information of associates and joint ventures is presented in the following table:

In millions of euros	Year to 31 Dec. 2022			31 December 2022	Year to 31 Dec. 2021			31 December 2021
	Share of net income	Share of changes in assets and liabilities recognised directly in equity	Share of net income and changes in assets and liabilities recognised directly in equity	Equity-method investments	Share of net income	Share of changes in assets and liabilities recognised directly in equity	Share of net income and changes in assets and liabilities recognised directly in equity	Equity-method investments
Joint ventures	34	130	164	1,447	5	128	133	1,022
Associates ⁽¹⁾	665	(990)	(325)	4,816	489	184	673	5,506
Total equity-method entities	699	(860)	(161)	6,263	494	312	806	6,528

⁽¹⁾ Including controlled but nonmaterial entities consolidated under the equity method.

Financing and guarantee commitments given by the Group to joint ventures are listed in the note 7.j Other related parties.

The carrying amount of the Group's investment in the main joint ventures and associates is presented in the following table:

In millions of euros	Country of registration	Activity	Interest (%)	31 December 2022	31 December 2021
Joint ventures					
bpost banque ⁽¹⁾	Belgium	Retail banking	100%	-	111
Union de Creditos Inmobiliarios	Spain	Retail mortgage	50%	327	203
BoB Cardif Life Insurance	China	Life Insurance	50%	232	231
BNPP Cardif TCB Life Insurance	Taiwan	Life Insurance	49%	161	214
Associates					
AG Insurance	Belgium	Insurance	25%	597	1,704
Bank of Nanjing	China	Retail banking	14%	2,757	2,306
Allfunds Group Plc	United Kingdom	Financial Services	12%	318	370

⁽¹⁾ On 3 January 2022, the Group BNP Paribas took exclusive control of bpost banque.

4.n PROPERTY, PLANT, EQUIPMENT AND INTANGIBLE ASSETS USED IN OPERATIONS, INVESTMENT PROPERTY

In millions of euros	31 December 2022			31 December 2021		
	Gross value	Accumulated depreciation, amortisation and impairment	Carrying amount	Gross value	Accumulated depreciation, amortisation and impairment	Carrying amount
Investment property	827	(298)	529	869	(294)	575
Land and buildings	11,507	(4,704)	6,803	12,023	(4,817)	7,206
Equipment, furniture and fixtures	7,177	(5,400)	1,777	7,172	(5,312)	1,860
Plant and equipment leased as lessor under operating leases	38,817	(10,658)	28,159	33,890	(9,285)	24,605
Other property, plant and equipment	2,318	(1,118)	1,200	1,932	(1,095)	837
Property, plant and equipment	59,819	(21,880)	37,939	55,017	(20,509)	34,508
<i>Of which right of use</i>	<i>6,000</i>	<i>(3,294)</i>	<i>2,706</i>	<i>6,117</i>	<i>(3,314)</i>	<i>2,803</i>
Property, plant and equipment and investment property	60,646	(22,178)	38,468	55,886	(20,803)	35,083
Purchased software	3,690	(3,035)	655	3,303	(2,651)	652
Internally developed software	6,345	(5,000)	1,345	5,995	(4,657)	1,338
Other intangible assets	2,367	(577)	1,790	2,157	(488)	1,669
Intangible assets	12,402	(8,612)	3,790	11,455	(7,796)	3,659

- **Investment property**

Land and buildings leased by the Group as lessor under operating leases are recorded in “Investment property”.

The estimated fair value of investment property accounted for at amortised cost at 31 December 2022 is EUR 680 million, compared with EUR 736 million at 31 December 2021.

- **Operating leases**

Operating leases and investment property transactions are in certain cases subject to agreements providing for the following minimum future payments:

In millions of euros	31 December 2022	31 December 2021
Future minimum lease payments receivable under non-cancellable leases	8,221	7,757
<i>Payments receivable within 1 year</i>	<i>3,613</i>	<i>3,364</i>
<i>Payments receivable after 1 year but within 5 years</i>	<i>4,582</i>	<i>4,341</i>
<i>Payments receivable beyond 5 years</i>	<i>26</i>	<i>52</i>

Future minimum lease payments receivable under non-cancellable leases are payments that the lessee is required to make during the lease term.

- **Intangible assets**

Other intangible assets include leasehold rights, goodwill and trademarks acquired by the Group.

- **Amortisation and provision**

Net depreciation and amortisation expense for the year ended 31 December 2022 was EUR 2,376 million, compared with EUR 2,336 million for the year ended 31 December 2021.

The net increase in impairment on property, plant, equipment and intangible assets taken to the profit and loss account for the year ended 31 December 2022 amounted to EUR 18 million, compared with EUR 8 million for the year ended 31 December 2021.

4.0 GOODWILL

In millions of euros	31 December 2022	31 December 2021
Carrying amount at start of period	5,121	7,493
Acquisitions	215	47
Divestments	(15)	(90)
Impairment recognised during the period	(28)	(26)
Transfer to assets held for sale (note 7.d)		(2,533)
Exchange rate adjustments	1	230
Carrying amount at end of period	5,294	5,121
Gross value	8,413	8,350
Accumulated impairment recognised at the end of period	(3,119)	(3,229)

Goodwill by cash-generating unit is as follows:

In millions of euros	Carrying amount		Recognised impairment		Acquisitions	
	31 December 2022	31 December 2021	Year to 31 Dec. 2022	Year to 31 Dec. 2021	31 December 2022	31 December 2021
Corporate & Institutional Banking	1,215	1,210				
<i>Global Banking</i>	279	276				
<i>Global Markets</i>	490	478				
<i>Securities Services</i>	446	456				
Commercial, Personal Banking & Services	2,894	2,704	(19)	(26)	215	32
<i>Arval</i>	608	523			96	1
<i>Leasing Solutions</i>	148	150				
<i>Personal Finance</i>	1,291	1,236	(19)		61	
<i>Personal Investors</i>	564	568		(26)		
<i>New Digital Businesses</i>	220	159			61	
<i>Autres</i>	63	68			(3)	31
Investment & Protection Services	1,182	1,204	(9)		-	15
<i>Asset Management</i>	190	186				
<i>Insurance</i>	281	296				
<i>Real Estate</i>	402	406				
<i>Wealth Management</i>	309	316	(9)			15
Other Activities	3	3				
Total goodwill	5,294	5,121	(28)	(26)	215	47
Negative goodwill			277	117		
Change in value of goodwill recognised in the profit and loss account			249	91		

The Group carried out a detailed analysis of goodwill to identify whether impairments were necessary in connection with the health crisis.

This analysis is based in particular on the assumptions of economic scenarios (see note 2.h).

The cash-generating units to which goodwill is allocated are:

Global Banking: Global Banking combines financing solutions to corporates, all transaction banking products, corporate finance advisory services in mergers and acquisitions and primary equity activities.

Global Markets: Global Markets provides investment, hedging, financing and research services across asset classes, to corporate and institutional clients – as well as private and retail banking networks. The sustainable, long-term business model of Global Markets connects clients to capital markets throughout EMEA (Europe, Middle East & Africa), Asia Pacific and the Americas, with innovative solutions and digital platforms. Global Markets includes activities of Fixed Income, Currencies & Commodities and Equity & Prime Services.

Securities Services: Securities Services provides integrated solutions for all actors involved in the investment cycle, sell side, buy side and issuers. BNP Paribas is one of the major global players in securities services.

Arval: Specialist in vehicle long-term leasing and mobility, Arval offers corporates (from multinational companies to small and medium companies), employees and individuals tailored solutions that optimise their mobility.

Leasing Solutions: BNP Paribas Leasing Solutions uses a multi-channel partnership approach (sales *via* referrals, partnerships, direct sales and banking networks) to offer corporate and small business clients an array of leasing and rental solutions, ranging from equipment financing to fleet outsourcing.

Personal Finance: BNP Paribas Personal Finance is the Group's consumer credit specialist. Through its brands and partnerships such as Cetelem, Cofinoga, Findomestic, AlphaCredit or Opel Vauxhall, Personal Finance provides a full range of consumer loans at point of sale (retail stores and car dealerships) or through its customer relation centres and websites and mobile applications. The business line, in some countries outside the domestic markets, is integrated into the BNP Paribas group's retail banking.

Personal Investors: BNP Paribas Personal Investors is a digital specialist of banking and investment services. Based in Germany and India, it provides a wide range of banking, savings and long and short-term investment services to individual clients via the internet, and also on the phone and face-to-face. In addition to its activities destined to private clients, Personal Investors offers its services and IT platform to independent financial consultants, asset managers and FinTechs.

New digital businesses: they include in particular the account management service "Nickel", open to all, without any conditions regarding income, deposits or personal wealth, and without any overdraft or credit facility. This service, which operates in real time using the latest technology, is available through over 9,000 points of sale in France, Spain, Belgium and Portugal.

BancWest: In the United States, the Retail Banking business is conducted through Bank of the West, which markets a very broad range of retail banking products and services to individuals, small businesses and corporate clients, through branches and offices in 24 States, mainly in western and mid-western America. It also has strong positions across the USA in several specialised lending activities, such as marine, recreational vehicles and agribusiness, and develops its commercial set up particularly in Corporate Banking, Wealth Management, and Small and Medium Enterprise businesses.

On 18 December 2021, the Group concluded an agreement with BMO Financial Group for the sale of its retail and commercial banking activities in the United States operated by BancWest for a total price of USD 16.3 billion to be paid in cash at the time of the transaction.

The Group applies the provisions of IFRS 5 on groups of assets and liabilities held for sale, leading to the reclassification of the goodwill into "Assets held for sale" (see note 7.d).

Asset Management: BNP Paribas Asset Management is the dedicated asset management business line of the BNP Paribas Group and offers services to individual investors (through internal distributors – BNP Paribas private and retail banking – and external distributors), to corporates and to institutional investors (insurance companies, retirement funds, official institutions, consultants). Its aim is to offer an added value based on a broad range of expertise throughout its active management of equities and bonds, its activity of private debt and real assets management and its multi-asset, quantitative and solutions division.

Insurance: BNP Paribas Cardif, a world leader in personal insurance, has designed, developed and marketed savings and protection products and services to protect individuals, their projects and their assets. BNP Paribas Cardif also offer products in damage insurance, health insurance, budget insurance, revenue and means of payment insurance, unexpected event protection (unemployment, accident, death, theft or breakage) or the protection of private digital data to meet the evolution of customers' needs.

Real Estate: BNP Paribas Real Estate serves the needs of its clients, whether institutional investors, corporates, public entities or individuals, at all stages of the life cycle of their property (from the conception of a construction project to its daily management).

Wealth Management: Wealth Management encompasses the private banking activities of BNP Paribas and serves a clientele of wealthy individuals, shareholder families and entrepreneurs seeking a one-stop shop for all their wealth management and financial needs.

Goodwill impairment tests are based on three different methods: observation of transactions related to comparable businesses, share price data for listed companies with comparable businesses, and discounted future cash flows (DCF).

If one of the two comparables-based methods indicates the need for impairment, the DCF method is used to validate the results and determine the amount of impairment required.

The DCF method is based on a number of assumptions in terms of future revenues, expenses and cost of risk (cash flows) based on medium-term business plans over a period of five years. Cash flow projections beyond the 5-year forecast period are based on a growth rate to perpetuity and are normalised when the short-term environment does not reflect the normal conditions of the economic cycle.

The key parameters which are sensitive to the assumptions made are the cost of capital, the cost/income ratio, the cost of risk and the growth rate to perpetuity.

Cost of capital is determined on the basis of a risk-free rate, an observed market risk premium weighted by a risk factor based on comparables specific to each cash-generating unit. The values of these parameters are obtained from external information sources.

Allocated capital is determined for each cash-generating unit based on the “Common Equity Tier One” regulatory requirements for the legal entity to which the cash-generating unit belongs, with a minimum of 7%.

The growth rate to perpetuity used is 2% for mature economies in Europe. For CGUs implemented in countries with high levels of inflation, a specific add-on is taken into account (calculated according to inflation rates disclosed by external sources).

The following table shows the sensitivity of the valuation of the Personal Finance cash generating unit to changes in the value of parameters used in the DCF calculation: the cost of capital, the cost/income ratio in terminal value, the cost of risk in terminal value and the growth rate to perpetuity.

- **Sensitivity of the main goodwill valuations to a 10-basis point change in the cost of capital, a 1% change in the cost/income ratio in terminal value, a 5% change of the cost of risk in terminal value and a 50-basis point change in the growth rate to perpetuity**

In millions of euros	Personal Finance
Cost of capital	10.8%
Adverse change (+10 basis points)	(159)
Positive change (- 10 basis points)	162
Cost/income ratio	47.8%
Adverse change (+ 1 %)	(351)
Positive change (-1 %)	351
Cost of risk	(1,503)
Adverse change (+ 5 %)	(408)
Positive change (- 5 %)	408
Growth rate to perpetuity	2.0%
Adverse change (-50 basis points)	(257)
Positive change (+50 basis points)	288

Concerning the homogeneous Personal Finance set, there would be no need to depreciate even by using, for the impairment test, the four most unfavourable variations in the table.

4.p PROVISIONS FOR CONTINGENCIES AND CHARGES

- Provisions for contingencies and charges by type

In millions of euros	31 December 2021	Net additions to provisions	Provisions used	Changes in value recognised directly in equity	Effect of movements in exchange rates and other movements	31 December 2022
Provisions for employee benefits	6,532	1,256	(1,254)	(640)	223	6,117
of which post-employment benefits (<i>note 6.b</i>)	3,727	235	(369)	(604)	171	3,160
of which post-employment healthcare benefits (<i>note 6.b</i>)	115	7	(2)	(37)		83
of which provision for other long-term benefits (<i>note 6.c</i>)	1,364	498	(345)		29	1,546
of which provision for voluntary departure, early retirement plans, and headcount adaptation plan (<i>note 6.d</i>)	355	18	(113)		10	270
of which provision for share-based payments (<i>note 6.e</i>)	970	498	(423)		14	1,059
Provisions for home savings accounts and plans	93	(46)				47
Provisions for credit commitments (<i>note 2.h</i>)	1,425	70	(71)		6	1,430
Provisions for litigations	992	369	(215)		26	1,172
Other provisions for contingencies and charges	1,145	228	(128)		29	1,274
Total provisions for contingencies and charges	10,187	1,877	(1,668)	(640)	284	10,040

- Provisions and discount for home savings accounts and plans

In millions of euros	31 December 2022	31 December 2021
Deposits collected under home savings accounts and plans	16,547	17,378
of which deposits collected under home savings plans	14,409	15,239
<i>Aged more than 10 years</i>	6,332	5,652
<i>Aged between 4 and 10 years</i>	7,227	8,108
<i>Aged less than 4 years</i>	850	1,479
Outstanding loans granted under home savings accounts and plans	10	23
of which loans granted under home savings plans	2	4
Provisions and discount recognised for home savings accounts and plans	47	93
provisions recognised for home savings plans	42	93
provisions recognised for home savings accounts	5	-
discount recognised for home savings accounts and plans	-	-

4.q OFFSETTING OF FINANCIAL ASSETS AND LIABILITIES

The following tables present the amounts of financial assets and liabilities before and after offsetting. This information, required by IFRS 7, aims to enable the comparability with the accounting treatment applicable in accordance with generally accepted accounting principles in the United States (US GAAP), which are less restrictive than IAS 32 as regards offsetting.

“Amounts set off on the balance sheet” have been determined according to IAS 32. Thus, a financial asset and a financial liability are offset and the net amount presented on the balance sheet when, and only when, the Group has a legally enforceable right to set off the recognised amounts and intends either to settle on a net basis, or to realise the asset and settle the liability simultaneously. Amounts set off derive mainly from repurchase agreements and derivative instruments traded with clearing houses.

The “impacts of master netting agreements and similar agreements” are relative to outstanding amounts of transactions within an enforceable agreement, which do not meet the offsetting criteria defined by IAS 32. This is the case of transactions for which offsetting can only be performed in case of default, insolvency or bankruptcy of one of the contracting parties.

“Financial instruments given or received as collateral” include guarantee deposits and securities collateral recognised at fair value. These guarantees can only be exercised in case of default, insolvency or bankruptcy of one of the contracting parties.

Regarding master netting agreements, the guarantee deposits received or given in compensation for the positive or negative fair values of financial instruments are recognised in the balance sheet in accrued income or expenses and other assets or liabilities.

In millions of euros, at 31 December 2022	Gross amounts of financial assets	Gross amounts set off on the balance sheet	Net amounts presented on the balance sheet	Impact of Master Netting Agreements (MNA) and similar agreements	Financial instruments received as collateral	Net amounts
Assets						
Financial instruments at fair value through profit or loss						
Securities	166,077		166,077			166,077
Loans and repurchase agreements	334,401	(143,276)	191,125	(27,377)	(147,368)	16,380
Derivative financial instruments (including derivatives used for hedging purposes)	980,161	(626,829)	353,333	(228,379)	(64,980)	59,974
Financial assets at amortised cost	1,003,650		1,003,650	(966)	(5,198)	997,486
<i>of which repurchase agreements</i>	6,742		6,742	(966)	(5,198)	578
Accrued income and other assets	209,092		209,092		(44,982)	164,110
<i>of which guarantee deposits paid</i>	155,199		155,199		(44,982)	110,217
Other assets not subject to offsetting	743,099		743,099			743,099
TOTAL ASSETS	3,436,480	(770,105)	2,666,376	(256,722)	(262,528)	2,147,126

In millions of euros, at 31 December 2022	Gross amounts of financial liabilities	Gross amounts set off on the balance sheet	Net amounts presented on the balance sheet	Impact of Master Netting Agreements (MNA) and similar agreements	Financial instruments given as collateral	Net amounts
Liabilities						
Financial instruments at fair value through profit or loss						
Securities	99,155		99,155			99,155
Deposits and repurchase agreements	377,352	(143,276)	234,076	(27,376)	(184,013)	22,687
Issued debt securities	70,460		70,460			70,460
Derivative financial instruments (including derivatives used for hedging purposes)	966,951	(626,829)	340,122	(228,379)	(44,335)	67,408
Financial liabilities at amortised cost	1,132,772		1,132,772	(967)	(6,500)	1,125,305
<i>of which repurchase agreements</i>	8,268		8,268	(967)	(6,500)	801
Accrued expense and other liabilities	185,456		185,456		(57,443)	128,013
<i>of which guarantee deposits received</i>	124,047		124,047		(57,443)	66,604
Other liabilities not subject to offsetting	477,780		477,780			477,780
TOTAL LIABILITIES	3,309,926	(770,105)	2,539,821	(256,722)	(292,291)	1,990,808

In millions of euros, at 31 December 2021	Gross amounts of financial assets	Gross amounts set off on the balance sheet	Net amounts presented on the balance sheet	Impact of Master Netting Agreements (MNA) and similar agreements	Financial instruments received as collateral	Net amounts
Assets						
Financial instruments at fair value through profit or loss						
Securities	191,507		191,507			191,507
Loans and repurchase agreements	398,413	(148,605)	249,808	(34,906)	(194,920)	19,982
Derivative financial instruments (including derivatives used for hedging purposes)	711,002	(461,899)	249,103	(159,997)	(32,435)	56,671
Financial assets at amortised cost	944,261		944,261	(355)	(1,983)	941,923
<i>of which repurchase agreements</i>	2,541		2,541	(355)	(1,983)	203
Accrued income and other assets	179,123		179,123		(31,945)	147,178
<i>of which guarantee deposits paid</i>	136,142		136,142		(31,945)	104,197
Other assets not subject to offsetting	820,642		820,642			820,642
TOTAL ASSETS	3,244,948	(610,504)	2,634,444	(195,258)	(261,283)	2,177,903

In millions of euros, at 31 December 2021	Gross amounts of financial liabilities	Gross amounts set off on the balance sheet	Net amounts presented on the balance sheet	Impact of Master Netting Agreements (MNA) and similar agreements	Financial instruments given as collateral	Net amounts
Liabilities						
Financial instruments at fair value through profit or loss						
Securities	112,338		112,338			112,338
Deposits and repurchase agreements	442,061	(148,605)	293,456	(34,156)	(241,481)	17,819
Issued debt securities	70,383		70,383			70,383
Derivative financial instruments (including derivatives used for hedging purposes)	709,373	(461,899)	247,474	(159,997)	(34,076)	53,401
Financial liabilities at amortised cost	1,123,383		1,123,383	(1,105)	(7,816)	1,114,462
<i>of which repurchase agreements</i>	9,498		9,498	(1,105)	(7,816)	577
Accrued expense and other liabilities	145,399		145,399		(30,655)	114,744
<i>of which guarantee deposits received</i>	101,923		101,923		(30,655)	71,268
Other liabilities not subject to offsetting	519,504		519,504			519,504
TOTAL LIABILITIES	3,122,441	(610,504)	2,511,937	(195,258)	(314,028)	2,002,651

4.r TRANSFERS OF FINANCIAL ASSETS

Financial assets that have been transferred but not derecognised by the Group are mainly composed of securities sold temporarily under repurchase agreements or securities lending transactions, as well as securitised assets. The liabilities associated to securities temporarily sold under repurchase agreements consist of debts recognised under the “repurchase agreements” heading. The liabilities associated to securitised assets consist of the securitisation notes purchased by third parties.

- **Securities lending, repurchase agreements and other transactions:**

In millions of euros, at	31 December 2022		31 December 2021	
	Carrying amount of transferred assets	Carrying amount of associated liabilities	Carrying amount of transferred assets	Carrying amount of associated liabilities
Securities lending operations				
Financial instruments at fair value through profit or loss	6,274		7,382	
Financial assets at amortised cost	1,410		1,613	
Financial assets at fair value through equity	75		317	
Repurchase agreements				
Financial instruments at fair value through profit or loss	33,550	33,547	28,413	28,413
Financial assets at amortised cost	6,311	6,287	6,437	6,437
Financial assets at fair value through equity	459	459	1,524	1,524
Financial investments of insurance activities	6,312	6,895	6,180	6,226
Total	54,391	47,188	51,866	42,600

- **Securitisation transactions partially refinanced by external investors, whose recourse is limited to the transferred assets:**

In millions of euros, at 31 December 2022	Carrying amount of transferred assets	Carrying amount of associated liabilities	Fair value of transferred assets	Fair value of associated liabilities	Net position
Securitisation					
Financial assets at amortised cost	24,126	23,326	24,164	22,112	2,052
Total	24,126	23,326	24,164	22,112	2,052

In millions of euros, at 31 December 2021	Carrying amount of transferred assets	Carrying amount of associated liabilities	Fair value of transferred assets	Fair value of associated liabilities	Net position
Securitisation					
Financial assets at amortised cost	19,129	17,747	19,134	17,748	1,386
Total	19,129	17,747	19,134	17,748	1,386

There have been no significant transfers leading to partial or full derecognition of the financial assets in which the Bank has a continuing involvement.

5. FINANCING AND GUARANTEE COMMITMENTS

5.a FINANCING COMMITMENTS GIVEN OR RECEIVED

Contractual value of financing commitments given and received by the Group:

In millions of euros, at	31 December 2022	31 December 2021
Financing commitments given		
- to credit institutions	4,235	3,501
- to customers	382,746	362,902
Confirmed financing commitments	347,650	328,741
Other commitments given to customers	35,096	34,161
Total financing commitments given	386,981	366,403
<i>of which stage 1</i>	<i>343,339</i>	<i>321,368</i>
<i>of which stage 2</i>	<i>18,745</i>	<i>22,529</i>
<i>of which stage 3</i>	<i>898</i>	<i>1,088</i>
<i>of which insurance activities</i>	<i>1,477</i>	<i>1,810</i>
<i>of which financing commitments given associated with assets held for sale</i>	<i>22,522</i>	<i>19,608</i>
Financing commitments received		
- from credit institutions	66,554	38,708
- from customers	2,221	6,729
Total financing commitments received	68,775	45,437
<i>of which financing commitments received associated with assets held for sale</i>	<i>9,272</i>	<i>8,711</i>

5.b GUARANTEE COMMITMENTS GIVEN BY SIGNATURE

In millions of euros, at	31 December 2022	31 December 2021
Guarantee commitments given		
- to credit institutions	60,357	30,221
- to customers	118,427	141,074
Property guarantees	2,285	2,474
Sureties provided to tax and other authorities, other sureties	65,294	64,571
Other guarantees	50,848	74,029
Total guarantee commitments given	178,784	171,295
<i>of which stage 1</i>	<i>165,549</i>	<i>159,247</i>
<i>of which stage 2</i>	<i>12,120</i>	<i>10,953</i>
<i>of which stage 3</i>	<i>820</i>	<i>833</i>
<i>of which insurance activities</i>	<i>295</i>	<i>262</i>
<i>of which guarantee commitments given associated with assets held for sale</i>	<i>-</i>	<i>-</i>

5.c SECURITIES COMMITMENTS

In connection with the settlement date accounting for securities, commitments representing securities to be delivered or securities to be received are the following:

In millions of euros	31 December 2022	31 December 2021
Securities to be delivered	17,325	11,608
Securities to be received	17,263	10,604

5.d OTHER GUARANTEE COMMITMENTS

- **Financial instruments given as collateral**

In millions of euros	31 December 2022	31 December 2021
Financial instruments (negotiable securities and private receivables) lodged with central banks and eligible for use at any time as collateral for refinancing transactions after haircut	132,938	158,111
- Used as collateral with central banks	67,792	120,777
- Available for refinancing transactions	65,146	37,334
Securities sold under repurchase agreements	371,552	457,168
Other financial assets pledged as collateral for transactions with credit institutions, financial customers or subscribers of covered bonds issued by the Group ⁽¹⁾	239,761	231,877

⁽¹⁾ Notably including "Société de Financement de l'Économie Française" and "Caisse de Refinancement de l'Habitat" financing.

The fair value of financial instruments given as collateral or transferred under repurchase agreements by the Group that the beneficiary is authorised to sell or reuse as collateral amounted to EUR 523,321 million at 31 December 2022 (EUR 610,170 million at 31 December 2021).

- **Financial instruments received as collateral**

In millions of euros	31 December 2022	31 December 2021
Financial instruments received as collateral (excluding repurchase agreements)	326,198	212,910
<i>of which instruments that the Group is authorised to sell and reuse as collateral</i>	<i>192,274</i>	<i>99,407</i>
Securities received under repurchase agreements	336,799	418,435

The fair value of financial instruments received as collateral or under repurchase agreements that the Group effectively sold or reused as collateral amounted to EUR 307,886 million at 31 December 2022 (compared with EUR 328,084 million at 31 December 2021).

6. SALARIES AND EMPLOYEE BENEFITS

6.a SALARY AND EMPLOYEE BENEFIT EXPENSE

In millions of euros	Year to 31 Dec. 2022	Year to 31 Dec. 2021
Fixed and variable remuneration, incentive bonuses and profit-sharing	13,484	12,379
Employee benefit expense	3,627	3,508
Payroll taxes	494	530
Total salary and employee benefit expense	17,605	16,417

6.b POST-EMPLOYMENT BENEFITS

IAS 19 distinguishes between two categories of plans, each handled differently depending on the risk incurred by the entity. When the entity is only committed to paying a fixed amount, stated as a percentage of the beneficiary's annual salary, for example, to an external entity handling payment of the benefits based on the assets available for each plan member, it is described as a defined-contribution plan. Conversely, when the entity's obligation is to manage the financial assets funded through the collection of contributions from employees and to bear the cost of benefits itself or to guarantee the final amount subject to future events, it is described as a defined-benefit plan. The same applies, if the entity entrusts management of the collection of premiums and payment of benefits to a separate entity, but retains the risk arising from management of the assets and/or from future changes in the benefits.

- **Main Defined-contribution pension plans for Group entities**

The BNP Paribas Group has implemented over the past few years a wide campaign of converting defined-benefit plans into defined-contribution plans.

Thus, in France, the BNP Paribas Group pays contributions to various nationwide basic and top-up pension schemes. BNP Paribas SA and certain subsidiaries have set up a funded pension plan under a company-wide agreement. Under this plan, employees will receive an annuity on retirement in addition to the pension paid by nationwide schemes.

Since defined-benefit plans have been closed to new employees in most countries outside France, they are offered the benefit of joining defined-contribution pension plans.

The amount paid into defined-contribution post-employment plans for the year ended 31 December 2022 was EUR 720 million, compared with EUR 670 million for the year ended 31 December 2021.

The breakdown by major contributors is determined as follows:

Contribution amount In millions of euros	Year to 31 Dec. 2022	Year to 31 Dec. 2021
France	353	349
Italy	90	94
UK	64	56
Türkiye	26	25
Hong Kong	26	22
Luxembourg	28	22
USA	25	11
Others	108	91
TOTAL	720	670

In Italy, the plan introduced by BNL is funded by employer contributions (4.2% of salaries) and employee contributions (2% of salaries). Employees can also make additional voluntary contributions.

In the United Kingdom, the employer contributes 12% of salaries for the majority of employees; employees can make additional voluntary contributions.

In the US, the bank matches the voluntary contributions made by employees, within certain limits.

- **Main defined-benefit pension plans for Group entities and indemnities payable on retirement**

- Defined-benefit plans

In Belgium, BNP Paribas Fortis funds a defined-benefit plan, based on final salary and number of years of service, for its management and employees who joined the bank before its pension plans were harmonised on 1 January 2002. Actuarial liabilities under this scheme are pre-funded at 88% at 31 December 2022 (compared with 93% at 31 December 2021) through AG Insurance, in which the BNP Paribas Group owns a 25% equity interest.

BNP Paribas Fortis senior managers are covered by a top-up pension plan, paying a lump sum based on the number of years of service and final salary. This plan is pre-funded at 90% at 31 December 2022 (100% at 31 December 2021) through insurance companies.

In Belgium, employees benefit from a defined-contribution scheme with a legal obligation for the employer to guarantee a minimum return on financial assets invested. Thus, a provision was recognised for these schemes, as this guarantee is not entirely covered by the insurance company.

In France, BNP Paribas pays a top-up banking industry pension arising from rights acquired to 31 December 1993 by retired employees and active employees in service at that date. At 31 December 2022, the Group's residual obligations for these employees were recognised on the balance sheet in full.

The defined-benefit plans previously granted to some Group senior managers have all been closed to new employees and converted into top-up type schemes. The amounts allocated to residual beneficiaries, subject to their presence within the Group at retirement, were fixed when these schemes were closed. At 31 December 2022, these pension plans were funded at 221% through insurance companies (148% at 31 December 2021).

In the United Kingdom, defined-benefit pension plans (pension funds) still exist but are closed to new employees. Under these plans, the defined pension is generally based on final salary and number of years of service. Pension schemes are managed by independent management bodies (Trustees). At 31 December 2022, obligations for all UK entities were 125% covered by financial assets, compared with 127% at 31 December 2021.

In Switzerland, liabilities relate to top-up pension plans based on the principle of defined-contribution schemes with guaranteed returns, paying an annuity under pre-defined terms. These schemes are managed by a foundation. At 31 December 2022, obligations were 121% covered by financial assets, compared with 102% at 31 December 2021.

In the United States, defined-benefit pension plans are based on annual vesting rights to a lump sum comprising a pension expressed as a percentage of annual salary and paying interest at a pre-defined rate. These plans are closed to new entrants and have offered almost no new vesting rights. At 31 December 2022, the obligation was 85% covered by financial assets, (95% at 31 December 2021).

In Germany, liabilities are mainly related to defined-benefit pension plans, closed to new employees. Under these plans, the defined pension is generally based on the number of years of service and final salary. They offer the payment of an annuity under pre-defined terms. At 31 December 2022, the obligation was 70% covered by financial assets, (55% at 31 December 2021).

In Türkiye, the main pension plan replaces the national pension scheme and should eventually be transferred to the Turkish State. This plan offers guarantees exceeding the minimal legal requirements. At the end of 2022, obligations under this plan are fully funded by financial assets held with an external foundation; these financial assets exceeding the related obligations, this surplus is not recognised as an asset by the Group.

- Other post-employment benefits

Group employees also receive various other contractual post-employment benefits, such as indemnities payable on retirement, determined according to minimal legal requirements (Labour Code, collective agreements) or according to specific company-level agreements.

In France, the obligations for these benefits are funded through a contract held with a third-party insurer. At 31 December 2022, this obligation was 132% covered by financial assets, compared with 108% at 31 December 2021.

In May 2021, IFRIC issued its decision on the method of assessing the liability to be recognised under certain post-employment benefit plans.

This decision modifies the measurement of the obligations of the Group's French entities relating to indemnities payable on retirement, whose fee schedule is either capped in terms of total length of service, or composed of steps of incremental rights, or both, by specifying the timing of recording of the corresponding costs.

Its implementation led, at 1 January 2021, to a decrease in the present value of the gross obligation of EUR 96 million, recognised as an increase in reserves for an after-tax amount of EUR 74 million.

In other countries, the obligations of the Group related to other post-employment benefits are mainly concentrated in Italy, where vested rights up to 31 December 2006 were frozen.

- **Obligations under defined-benefit pension plans and indemnities payable on retirement**

- Assets and liabilities recognised on the balance sheet

In millions of euros, at 31 December 2022	Defined-benefit obligation arising from wholly or partially funded plans	Defined-benefit obligation arising from unfunded plans	Present value of defined-benefit obligation	Fair value of plan assets	Fair value of reimbursement rights ⁽¹⁾	Effect of asset ceiling	Net obligation	of which asset recognised in the balance sheet for defined-benefit plans	of which net assets of defined-benefit plans	of which fair value of reimbursement rights	of which obligation recognised in the balance sheet for defined-benefit plans
Belgium	2,738		2,738	(124)	(2,395)		219	(2,395)		(2,395)	2,614
UK	1,067		1,067	(1,334)			(267)	(267)	(267)		
Switzerland	979		979	(1,185)		208	2				2
France	845	62	907	(1,157)			(250)	(346)	(346)		96
USA	467	64	531	(458)			73	(24)	(24)		97
Türkiye	139	63	202	(295)		157	64				64
Italy		182	182				182				182
Germany	93	45	138	(98)			40	(7)	(7)		47
Others	379	51	430	(313)	(2)	2	117	(13)	(11)	(2)	130
TOTAL	6,707	467	7,174	(4,964)	(2,397)	367	180	(3,052)	(655)	(2,397)	3,232
of which continuing activities	6,391	404	6,795	(4,635)	(2,397)	367	130	(3,030)	(633)	(2,397)	3,160
of which discontinued activities	316	63	379	(329)	-	-	50	(22)	(22)	-	72

In millions of euros, at 31 December 2021	Defined-benefit obligation arising from wholly or partially funded plans	Defined-benefit obligation arising from unfunded plans	Present value of defined-benefit obligation	Fair value of plan assets	Fair value of reimbursement rights ⁽¹⁾	Effect of asset ceiling	Net obligation	of which asset recognised in the balance sheet for defined-benefit plans	of which net assets of defined-benefit plans	of which fair value of reimbursement rights	of which obligation recognised in the balance sheet for defined-benefit plans
Belgium	3,189		3,189	(157)	(2,930)		102	(2,930)		(2,930)	3,032
UK	1,769		1,769	(2,248)			(479)	(481)	(481)		2
Switzerland	1,146		1,146	(1,172)		29	3				3
France	1,058	81	1,139	(1,175)			(36)	(191)	(191)		155
USA	572	79	651	(579)			72	(16)	(16)		88
Türkiye	134	32	166	(238)		104	32				32
Italy		238	238				238				238
Germany	132	71	203	(112)			91				91
Others	504	55	559	(401)	(2)		156	(8)	(6)	(2)	164
TOTAL	8,504	556	9,060	(6,082)	(2,932)	133	179	(3,626)	(694)	(2,932)	3,805
of which continuing activities	8,129	479	8,608	(5,691)	(2,932)	133	118	(3,609)	(677)	(2,932)	3,727
of which discontinued activities	375	77	452	(391)	-	-	61	(17)	(17)	-	78

⁽¹⁾ The reimbursement rights are principally found on the balance sheet of the Group's insurance subsidiaries and associated companies - notably AG Insurance with respect to BNP Paribas Fortis' defined-benefit plan - to hedge their commitments to other Group entities that were transferred to them to cover the post-employment benefits of certain employee categories.

- Change in the present value of the defined-benefit obligation including discontinued activities

In millions of euros	Year to 31 Dec. 2022	Year to 31 Dec. 2021
Present value of defined-benefit obligation at start of period	9,060	9,428
Current service cost	215	222
Interest cost	100	61
Past service cost	(5)	(1)
Settlements	(11)	(25)
Actuarial (gains)/losses on change in demographic assumptions	10	(24)
Actuarial (gains)/losses on change in financial assumptions	(1,985)	(327)
Actuarial (gains)/losses on experience gaps	341	195
Actual employee contributions	23	22
Benefits paid directly by the employer	(101)	(105)
Benefits paid from assets/reimbursement rights	(489)	(419)
Exchange rate (gains)/losses on obligation	(25)	108
(Gains)/losses on obligation related to changes in the consolidation scope	41	21
Others ⁽¹⁾	-	(96)
Present value of defined-benefit obligation at end of period	7,174	9,060

⁽¹⁾ Impact of the May 2021 IFRIC decision.

- Change in the fair value of plan assets and reimbursement rights including discontinued activities

In millions of euros	Plan assets		Reimbursement rights	
	Year to 31 Dec. 2022	Year to 31 Dec. 2021	Year to 31 Dec. 2022	Year to 31 Dec. 2021
Fair value of assets at start of period	6,082	5,870	2,932	3,050
Expected return on assets	99	73	13	2
Settlements	(21)	(26)		
Actuarial gains/(losses) on assets	(938)	216	(548)	(29)
Actual employee contributions	13	13	10	9
Employer contributions	54	65	198	98
Benefits paid from assets	(257)	(220)	(232)	(199)
Exchange rate gains/(losses) on assets	(64)	70		
Gains/(losses) on assets related to changes in the consolidation scope	(4)	21	24	1
Fair value of assets at end of period	4,964	6,082	2,397	2,932

- Components of the cost of defined-benefit plans

In millions of euros	Year to 31 Dec. 2022	Year to 31 Dec. 2021
Service costs	220	222
Current service cost	215	222
Past service cost	(5)	(1)
Settlements	10	1
Net financial expense	6	9
Interest cost	100	61
Interest income on plan asset	18	23
Interest income on reimbursement rights	(99)	(73)
Expected return on asset ceiling	(13)	(2)
Total recognised in salary and employee benefit expense	226	231
of which continuing activities	222	228
of which discontinued activities	4	3

- Other items recognised directly in equity

In millions of euros	Year to 31 Dec. 2022	Year to 31 Dec. 2021
Actuarial (losses)/gains on plan assets or reimbursement rights	(1,486)	187
Actuarial (losses)/gains of demographic assumptions on the present value of obligations	(10)	24
Actuarial (losses)/gains of financial assumptions on the present value of obligations	1,985	327
Experience (losses)/gains on obligations	(341)	(195)
Variation of the effect of assets limitation	(263)	27
Total of other items recognised directly in equity	(115)	370
of which continuing activities	(127)	350
of which discontinued activities	12	20

- Main actuarial assumptions used to calculate obligations

In the eurozone, United Kingdom and United States, the Group discounts its obligations using the yields of high quality corporate bonds, with a term consistent with the duration of the obligations.

The ranges of rates used are as follows:

In %	31 December 2022		31 December 2021	
	Discount rate	Compensation increase rate ⁽¹⁾	Discount rate	Compensation increase rate ⁽¹⁾
Belgium	1.90% / 3.80%	3.30% / 5.00%	0.00% / 1.10%	2.90% / 3.60%
UK	3.50% / 4.90%	2.00% / 3.30%	1.30% / 1.90%	2.00% / 3.50%
France	3.30% / 3.80%	2.10% / 3.65%	0.10% / 1.10%	1.40% / 3.25%
Switzerland	2.00% / 2.15%	1.75% / 2.00%	0.20% / 0.30%	1.50%
USA	4.90% / 5.00%	2.50%	2.60% / 2.90%	2.50%
Italy	1.90% / 3.60%	2.10% / 3.20%	0.30% / 1.00%	1.80% / 2.50%
Germany	2.30% / 3.80%	2.00% / 2.90%	0.60% / 1.10%	1.80% / 2.50%
Türkiye	10.60%	8.50%	20.01%	17.03%

⁽¹⁾ Including price increases (inflation)

Average discount rates weighted by obligation amounts are as follows:

- In the eurozone: 3.54% at 31 December 2022 (0.60% at 31 December 2021);
- In the United Kingdom: 4.78% at 31 December 2022 (1.88% at 31 December 2021);
- In Switzerland: 2.15% at 31 December 2022 (0.30% at 31 December 2021).

The impact of a 100-bps change in discount rates on the present value of post-employment benefit obligations is as follows:

Change in the present value of obligations In millions of euros	31 December 2022		31 December 2021	
	Discount rate -100bps	Discount rate +100bps	Discount rate -100bps	Discount rate +100bps
Belgium	201	(175)	327	(266)
UK	187	(147)	403	(302)
France	92	(78)	129	(107)
Switzerland	133	(107)	177	(140)
USA	18	(15)	30	(24)
Italy	12	(11)	18	(16)
Germany	26	(20)	41	(32)
Türkiye	13	(10)	15	(12)

Inflation assumptions used for the valuations of the Group obligations are determined locally depending on the monetary area, except for the eurozone for which the assumption is determined centrally.

Average discount rates weighted by obligation amounts are as follows:

- In the eurozone: 2.43% at 31 December 2022 (1.76% at 31 December 2021);
- In the United Kingdom: 3.03% at 31 December 2022 (2.90% at 31 December 2021);
- In Switzerland: 1.25% at 31 December 2022 (1.00% at 31 December 2021).

The impact of a +100-bps increase in inflation rates on the present value of post-employment benefit obligations is as follows:

Change in the present value of obligations In millions of euros	31 December 2022	31 December 2021
	Inflation rate +100bps	Inflation rate +100bps
Belgium	148	188
UK	126	256
France	92	125
Switzerland	8	11
USA	-	-
Italy	8	12
Germany	14	7
Türkiye	12	18

Variation effects of discount and inflation rates presented above are not cumulative.

- Actual rate of return on plan assets and reimbursement rights over the period

In %	Year to 31 Dec. 2022		Year to 31 Dec. 2021	
	Range of value (reflecting the existence of several plans in the same country)	Weighted average rates	Range of value (reflecting the existence of several plans in the same country)	Weighted average rates
Belgium	-18.75% / 6.30%	-12.65%	-5.65% / 13.35%	0.45%
UK	-38.30% / 0%	-34.60%	6.60% / 14.80%	7.70%
France	2.60%	2.60%	2.00%	2.00%
Switzerland	-15.85% / 1%	0.50%	1.00% / 9.45%	7.85%
USA	-29.75% / -16.75%	-28.90%	2.00%	2.00%
Germany	-26.15% / 1.30%	-11.20%	-6.65% / 5.25%	4.60%
Türkiye	40.80%	40.80%	20.60%	20.60%

- Breakdown of plan assets

In %	31 December 2022						31 December 2021					
	Shares	Governmental bonds	Non-Governmental bonds	Real-estate	Deposit account	Others	Shares	Governmental bonds	Non-Governmental bonds	Real-estate	Deposit account	Others
Belgium	8%	48%	20%	1%	0%	23%	7%	53%	14%	1%	0%	25%
UK	7%	65%	13%	0%	2%	13%	8%	72%	8%	0%	2%	10%
France ⁽¹⁾	8%	60%	18%	13%	1%	0%	7%	69%	16%	8%	0%	0%
Switzerland	32%	0%	23%	21%	3%	20%	36%	0%	26%	20%	4%	14%
USA	19%	18%	58%	0%	1%	4%	18%	0%	73%	1%	6%	2%
Germany	25%	64%	0%	0%	3%	9%	23%	66%	0%	0%	2%	9%
Türkiye	0%	59%	0%	3%	30%	7%	0%	0%	0%	4%	93%	3%
Others	10%	18%	12%	2%	2%	57%	9%	17%	10%	2%	2%	60%
GROUP	12%	44%	18%	6%	2%	18%	11%	49%	15%	4%	4%	17%

⁽¹⁾In France, the breakdown of plan assets reflects the breakdown of the general fund of the insurance company through which the Group's obligations are funded.

The Group introduced an asset management governance for assets backing defined-benefit pension plan commitments, the main objectives of which are the management and control of the risks in terms of investment.

It sets out investment principles, in particular, by defining an investment strategy for plan assets, based on financial objectives and financial risk management, to specify the way in which plan assets have to be managed, via financial management servicing contracts.

The investment strategy is based on an assets and liabilities management analysis that should be realised at least every three years for plans with assets in excess of EUR 100 million.

- **Post-employment healthcare benefits**

The Group offers some healthcare benefit plans for retired employees, mainly in Belgium.

The present value of post-employment healthcare benefit obligations stood at EUR 83 million at 31 December 2022, compared with EUR 115 million at 31 December 2021.

6.c OTHER LONG-TERM BENEFITS

BNP Paribas offers its employees various long-term benefits, mainly long-service awards, the ability to save up paid annual leave in time savings accounts, and certain guarantees protecting them in the event they become incapacitated. The net provision amounted to EUR 453 million at 31 December 2022 (EUR 457 million at 31 December 2021).

As part of the Group's variable compensation policy, annual deferred compensation plans are set up for certain high-performing employees or pursuant to special regulatory frameworks. Under these plans, payment is deferred over time and is subject to the performance achieved by the business lines, divisions and Group.

Since 2013, BNP Paribas has introduced a Group loyalty scheme with a cash payment, at the end of a three-year to four-year vesting period, which fluctuates according to the Group's intrinsic performance. The aim of this loyalty scheme is to make different categories of managerial staff partners in the Group's development and profitability objectives. These personnels are representative of the Group's talent and the breadth of its managerial framework i.e., senior managers, managers in key positions, line managers and experts, high-potential managers, high-performing young executives with good career development prospects and key contributors to the Group's results.

The amounts allocated under this plan are linked to changes in the Group's operational performance over the duration of the plan (for 80%) and to the achievement of the Group's Corporate Social Responsibility (CSR) targets (for 20%). These ten targets are in line with the four pillars on which the Group's CSR policy is based. In addition, the final payment is subject to continuous service within the Group between the grant date and the payment date, provided that the Group's operating income and pre-tax income for the year prior to payment are strictly positive. For employees subject to special regulatory frameworks, this loyalty scheme is adjusted in accordance with the CRD European Directive.

The net obligation related to deferred compensation plans and loyalty schemes amounts to EUR 1017 million at 31 December 2022 (EUR 817 million at 31 December 2021).

In millions of euros	31 December 2022	31 December 2021
Net provisions for other long-term benefits	1,470	1,274
Asset recognised in the balance sheet under the other long-term benefits	(76)	(90)
Obligation recognised in the balance sheet under the other long-term benefits	1,546	1,364

6.d TERMINATION BENEFITS

BNP Paribas has implemented a number of voluntary redundancy plans and headcount adaptation plans for employees who meet certain eligibility criteria. The obligations to eligible active employees under such plans are provided for as soon as a bilateral agreement or a bilateral agreement proposal for a particular plan is made.

In millions of euros	31 December 2022	31 December 2021
Provision for voluntary departure, early retirement plans, and headcount adaptation plans	270	355

6.e SHARE-BASED PAYMENTS

As part of the Group's variable remuneration policy, deferred annual compensation plans offered to certain high-performing employees or set up pursuant to special regulatory frameworks may entitle beneficiaries to variable compensation settled in cash but linked to the share price, payable over several years.

- Variable compensation for employees, subject to special regulatory frameworks

Since the publication of the Decree by the French Ministry of Finance on 13 December 2010, and following the provisions of the European Directive CRD4 of 26 July 2013, modified by the CRD5 Directive of 20 May 2019, transposed into the French law in the Monetary and Financial Code by the Ordinance of 20 February 2014, and the Ordinance of 21 December 2020, as well as the Decrees and Orders of 3 November 2014 and 22 December 2020 and the delegated European regulation of 25 March 2021, the variable compensation plans apply to Group employees performing activities that may have a material impact on the Group's risk profile.

Under these plans, payment is deferred over time and is contingent on the performance achieved by the business lines, core businesses and Group.

Sums will mostly be paid in cash linked to the increase or decrease in the BNP Paribas share price.

- Deferred variable compensation for other Group employees

Sums due under the annual deferred compensation plans for high-performing employees are partly paid in cash linked to the increase or decrease in the BNP Paribas share price.

- **Expense of share-based payments**

Expense / (revenue) in millions of euros	Year to 31 Dec. 2022	Year to 31 Dec. 2021
Prior deferred compensation plans	(116)	67
Deferred compensation plans for the year	614	530
Total	498	597

7. ADDITIONAL INFORMATION

7.a CHANGES IN SHARE CAPITAL AND EARNINGS PER SHARE

At 31 December 2022, the share capital of BNP Paribas SA amounts to EUR 2,468,663,292 and was divided into 1,234,331,646 shares. The nominal value of each share is EUR 2 (unchanged from 31 December 2021).

- **Ordinary shares issued by BNP Paribas and held by the Group**

	Proprietary transactions		Trading transactions ⁽¹⁾		Total	
	Number of shares	Carrying amount (in millions of euros)	Number of shares	Carrying amount (in millions of euros)	Number of shares	Carrying amount (in millions of euros)
Shares held at 31 December 2020	721,971	38	979,314	42	1,701,285	80
Acquisitions	15,466,915	900			15,466,915	900
Disposals						
Shares delivered to employees						
Capital decrease	(15,466,915)	(900)			(15,466,915)	(900)
Net movements			(979,314)	(42)	(979,314)	(42)
Shares held at 31 December 2021	721,971	38			721,971	38
Net movements			159,670	8	159,670	8
Shares held at 31 December 2022	721,971	38	159,670	8	881,641	46

⁽¹⁾ Transactions realised in the framework of an activity of trading and arbitrage transactions on equity indices.

At 31 December 2022, the Group holds 881,641 BNP Paribas shares representing an amount of EUR 46 million, which was recognised as a decrease in equity.

- **Preferred shares and Undated Super Subordinated Notes eligible as Tier 1 regulatory capital**

- Preferred shares issued by the Group's foreign subsidiaries

BNP Paribas Personal Finance made in 2004 two issues of undated non-voting preferred shares through a structured entity governed by UK law and which is exclusively controlled.

On 15 April 2021, BNP Paribas Personal Finance redeemed the issues, for an amount of EUR 80 million. These notes paid a TEC 10 rate coupon.

- Undated Super Subordinated Notes issued by BNP Paribas SA

BNP Paribas SA has issued Undated Super Subordinated Notes which pay a fixed, fixed adjustable or floating-rate coupon and are redeemable at the end of a fixed period and thereafter at each coupon date or every five years. If the notes are not redeemed at the end of this period, some of these issues will pay a coupon indexed to Euribor, Libor or a swap rate or a fixed-rate coupon.

On 19 February 2021, BNP Paribas SA issued Undated Super Subordinated Notes for an amount of USD 1,250 million which pay a 4.625% fixed-rate coupon. These notes could be redeemed at the end of a period of 10 years. If the notes are not redeemed in 2031, a US 5-year Constant Maturity Treasury rate coupon will be paid half-yearly. This issue is eligible to Additional Tier 1 capital.

On 8 March 2021, BNP Paribas SA redeemed the June 2007 issue, for an amount of USD 600 million. These notes paid a 6.5% fixed-rate coupon.

On 30 March 2021, BNP Paribas SA redeemed the March 2016 issue, for an amount of USD 1,500 million, before the first call date. These notes paid a 7.625% fixed-rate coupon.

On 3 January 2022, BNP Paribas SA redeemed the July 2006 and June 2007 issues, for EUR 150 million and USD 1,100 million respectively. These notes paid some 5.45% and 7.195% fixed-rate coupon.

On 12 January 2022, BNP Paribas SA issued Undated Super Subordinated Notes for an amount of USD 1,250 million which pay a 4.625% fixed-rate coupon. These notes could be redeemed at the end of a period of 5 years. If the notes are not redeemed in 2027, a US 5-year Constant Maturity Treasury rate coupon will be paid half-yearly. This issue is eligible to Additional Tier 1 capital.

On 19 February 2022, BNP Paribas SA redeemed the June 2007 issue, for an amount of USD 1 100 million. These notes paid a 7.195% fixed-rate coupon.

On 14 March 2022, BNP Paribas SA redeemed the December 2016 issue, for an amount of USD 750 million. These notes paid a 6.75% fixed-rate coupon.

On 17 June 2022, BNP Paribas SA redeemed the June 2015 issue, for an amount of EUR 750 million, at the first call date. These notes paid a 6.125% fixed-rate coupon.

On 16 August 2022, BNP Paribas SA issued Undated Super Subordinated Notes for an amount of USD 2,000 million which pay a 7.75% fixed-rate coupon. These notes could be redeemed at the end of a period of 7 years. If the notes are not redeemed in 2029, a US 5-year Constant Maturity Treasury rate coupon will be paid half-yearly. This issue is eligible to Additional Tier 1 capital.

On 6 September 2022, BNP Paribas SA issued Undated Super Subordinated Notes for an amount of EUR 1,000 million which pay a 6.875% fixed-rate coupon. These notes could be redeemed at the end of a period of 7 years and 3 months. If the notes are not redeemed in 2029, a mid-swap rate EUR 5-year coupon will be paid half-yearly. This issue is eligible to Additional Tier 1 capital.

On 17 November 2022, BNP Paribas SA issued Undated Super Subordinated Notes for an amount of USD 1,000 million which pay a 9.25% fixed-rate coupon. These notes could be redeemed at the end of a period of 5 years. If the notes are not redeemed in 2027, a US 5-year Constant Maturity Treasury rate coupon will be paid half-yearly. This issue is eligible to Additional Tier 1 capital.

- The following table summarises the characteristics of these various issues:

Date of issue	Currency	Amount (in millions of currency units)	Coupon payment date	Rate and term before 1st call date		Rate after 1st call date
August 2015	USD	1,500	semi-annual	7.375%	10 years	USD 5-year swap + 5.150%
November 2017	USD	750	semi-annual	5.125%	10 years	USD 5-year swap + 2.838%
August 2018	USD	750	semi-annual	7.000%	10 years	USD 5-year swap + 3.980%
March 2019	USD	1,500	semi-annual	6.625%	5 years	USD 5-year swap + 4.149%
July 2019	AUD	300	semi-annual	4.500%	5.5 years	AUD 5-year swap + 3.372%
February 2020	USD	1,750	semi-annual	4.500%	10 years	US 5 years CMT + 2.944%
February 2021	USD	1,250	semi-annual	4.625%	10 years	US 5 years CMT + 3.340%
January 2022	USD	1,250	semi-annual	4.625%	5 years	US 5 years CMT + 3.196%
August 2022	USD	2,000	semi-annual	7.75%	7 years	US 5 years CMT + 4.899%
September 2022	EUR	1,000	semi-annual	6.875%	7.25 years	EUR 5 years swap + 4.645%
November 2022	USD	1,000	semi-annual	9.25%	5 years	US 5 years CMT + 4.969%
Total euro-equivalent historical value at 31 December 2022		11,800 ⁽¹⁾				

⁽¹⁾ Net of shares held in treasury by Group entities

BNP Paribas has the option of not paying interest due on these Undated Super Subordinated Notes. Unpaid interest is not carried forward.

For notes issued before 2015, the absence of coupon payment is conditional on the absence of dividend payment on BNP Paribas SA ordinary shares or on Undated Super Subordinated Note equivalents during the previous year. Interest due is payable once dividend payment on BNP Paribas SA ordinary shares resumes.

The contracts relating to these Undated Super Subordinated Notes contain a loss absorption clause. Under the terms of this clause, in the event of insufficient regulatory capital, the nominal value of the notes may be reduced in order to serve as a new basis for the calculation of the related coupons until the capital deficiency is made up and the nominal value of the notes is increased to its original amount.

The proceeds from these issues are recorded in equity under "Capital and retained earnings". In accordance with IAS 21, issues denominated in foreign currencies are recognised at their historical value based on their translation into euros at the issue date. Interest on the instruments is treated in the same way as dividends.

At 31 December 2022, the BNP Paribas Group held EUR 14 million of Undated Super Subordinated Notes which were deducted from shareholders' equity.

- **Earnings per share**

Basic earnings per share are calculated by dividing the net income for the period attributable to holders of ordinary shares by the weighted average number of ordinary shares outstanding during the period. The net income attributable to ordinary shareholders is determined by deducting the net income attributable to holders of preferred shares.

Diluted earnings per share correspond to the net income for the period attributable to holders of ordinary shares, divided by the weighted average number of shares outstanding as adjusted for the maximum effect of the conversion of dilutive equity instruments into ordinary shares. In-the-money stock subscription options are taken into account in the diluted earnings per share calculation, as are performance shares granted under the Global Share-based Incentive Plan. Conversion of these instruments would have no effect on the net income figure used in this calculation. All stock option and performance share plans are expired.

	Year to 31 Dec. 2022	Year to 31 Dec. 2021
Net profit used to calculate basic and diluted earnings per ordinary share (in millions of euros) ⁽¹⁾	9,621	9,052
Weighted average number of ordinary shares outstanding during the year	1,232,991,607	1,247,014,704
Effect of potentially dilutive ordinary shares	-	-
Weighted average number of ordinary shares used to calculate diluted earnings per share	1,232,991,607	1,247,014,704
Basic earnings per share (in euros)	7.80	7.26
of which continuing activities (in euros)	7.24	6.68
of which discontinued activities (in euros)	0.56	0.58
Diluted earnings per share (in euros)	7.80	7.26
of which continuing activities (in euros)	7.24	6.68
of which discontinued activities (in euros)	0.56	0.58

⁽¹⁾ The net profit used to calculate basic and diluted earnings per share is the net profit attributable to equity shareholders, adjusted for the remuneration on the Undated Super Subordinated Notes issued by BNP Paribas SA (treated as preferred share equivalents), which for accounting purposes is handled as dividends, as well as the related foreign exchange gain or loss impact recognised directly in shareholders' equity in case of repurchase.

The Board of Directors will propose to the Annual General Meeting on 16 May 2023, a dividend per share of EUR 3.90 out of the 2022 net income (against EUR 3.67 out of the 2021 net income).

The proposed distribution amounted to EUR 4,811 million, against EUR 4,527 million paid in 2022.

This distribution will be raised to 60% of the 2022 net income with a share buyback programme of EUR 962 million, subject to the customary condition precedents, including European Central Bank authorisations.

7.b LEGAL PROCEEDINGS AND ARBITRATION

BNP Paribas (the “Bank”) is party as a defendant in various claims, disputes and legal proceedings (including investigations by judicial or supervisory authorities) in a number of jurisdictions arising in the ordinary course of its business, including inter alia in connection with its activities as market counterparty, lender, employer, investor and taxpayer.

The related risks have been assessed by the Bank and are subject, where appropriate, to provisions disclosed in note 4.p “Provisions for liabilities and charges” of the consolidated Financial Statements at 31 December 2022; a provision is recognised when it is probable that an outflow of resources embodying economic benefits will be required to settle an obligation arising from a past event and a reliable estimate can be made of the amount of the obligation.

The main contingent liabilities related to pending legal, governmental, or arbitral proceedings as of 31 December 2022 are described below. The Bank currently considers that none of these proceedings is likely to have a material adverse effect on its financial position or profitability; however, the outcome of legal or governmental proceedings is by definition unpredictable.

The Bank and certain of its subsidiaries are defendants in several actions pending before the United States Bankruptcy Court for the Southern District of New York brought by the Trustee appointed for the liquidation of Bernard L. Madoff Investment Securities LLC (“BLMIS”). These actions, known generally as “clawback claims”, are similar to those brought by the BLMIS Trustee under the U.S. Bankruptcy Code and New York state law against numerous institutions, and seek recovery of approximately USD 1.3 billion allegedly received by BNP Paribas entities from BLMIS or indirectly through BLMIS-related “feeder funds” in which BNP Paribas entities held interests.

As a result of certain decisions of the Bankruptcy Court and the United States District Court between 2016 and 2018, the majority of the BLMIS Trustee’s actions were either dismissed or substantially narrowed. However, those decisions were either reversed or effectively overruled by subsequent decisions of the United States Court of Appeals for the Second Circuit issued on 25 February 2019 and 30 August 2021. As a result, the BLMIS Trustee may seek to re-file certain claims that were previously dismissed. BNP Paribas has substantial and credible defenses to these actions and is defending against them vigorously.

Litigation was brought in Belgium by minority shareholders of the previous Fortis Group against the Société fédérale de Participations et d’Investissement, Ageas and BNP Paribas seeking (amongst other things) damages from BNP Paribas as restitution for part of the BNP Paribas Fortis shares that were contributed to BNP Paribas in 2009, on the ground that the transfer of these shares was null and void. On 29 April 2016, the Brussels Commercial court decided to stay the proceedings until the resolution of the pending Fortis criminal proceeding in Belgium. The criminal proceeding, in which the Public Prosecutor had requested a dismissal, is definitively closed, as the Council Chamber of the Brussels Court of first instance issued on 4 September 2020 a ruling (which since became final) that the charges were time-barred. Certain minority shareholders are continuing the civil proceedings against BNP Paribas and the Société fédérale de Participations et d’Investissement before the Brussels Commercial court; BNP Paribas continues to defend itself vigorously against the allegations of these shareholders.

Like many other financial institutions in the banking, investment, mutual funds and brokerage sectors, the Bank has received or may receive requests for information from, or be subject to investigations by supervisory, governmental or self-regulatory agencies. The Bank responds to such requests and cooperates with the relevant authorities and regulators and seeks to address and remedy any issues that may arise.

On 26 February 2020, the Paris Criminal Court found BNP Paribas Personal Finance guilty of misleading commercial practice and concealment of this practice. BNP Paribas Personal Finance was ordered to pay a fine of EUR 187,500 and damages and legal fees to the civil plaintiffs. The damages award was of immediate effect. BNP Paribas Personal Finance filed an appeal on the merits on 6 March 2020. It also sought to suspend the immediate effectiveness of the judgment, which the court rejected by decision dated 25 September 2020. BNP Paribas Personal Finance paid to the civil plaintiffs the damages awarded, without prejudice to the pending appeal before the Court of Appeal of Paris and to the civil legal proceedings that are otherwise ongoing.

There are no other legal, governmental or arbitral proceedings (including any such proceedings which are pending or threatened) that could have, or during the last twelve months have had, significant effects on the Bank’s financial condition or profitability.

7.c BUSINESS COMBINATIONS AND LOSS OF CONTROL OR SIGNIFICANT INFLUENCE

- **Allfunds Group Plc**

At 31 December 2020, BNP Paribas held a stake of 22.5% in Allfunds Plc Ltd, European market leader in fund distribution platforms.

On 23 April 2021, the Group participated in the initial public offering of Allfunds, contributing 6.7% of the capital. The disposal led to the recognition of a result of EUR 300 million.

On 16 September 2021, the Group sold a stake of 2% of Allfunds and retained a significant influence with 13.8% of the capital of AFB Group Plc. The disposal led to the recognition of a result of EUR 144 million.

On 24 September 2022, the Group sold a stake of 2% of Allfunds and retained a significant influence with 12.2% of the capital of AFB Group Plc. The disposal led to the recognition of a result of EUR 31 million.

- **Verner Investissements**

On 13 July 2021, BNP Paribas SA purchased the residual 50% stake in Verner Investissements, the holding company of Exane entities.

The Group BNP Paribas took therefore exclusive control of this entity and fully consolidated it from the second half of 2021.

Consequently, this operation increased the Group's balance sheet by EUR 6 billion at acquisition date, in particular EUR 3.7 billion in financial assets at fair value through profit and loss and led to the recognition of a badwill of EUR 111 million in the profit and loss account.

Including the remeasurement of the previously held stake through profit or loss, the net impact on net income of the acquisition is - EUR 51 million.

- **bpost banque**

On 3 January 2022, BNP Paribas Fortis purchased the residual 50% stake in bpost banque.

The Group BNP Paribas took therefore exclusive control of this entity and fully consolidated it from the first quarter of 2022.

Consequently, this operation increased the Group's balance sheet by EUR 12 billion at acquisition date, in particular EUR 11 billion in financial assets at amortised cost and led to the recognition of a badwill of EUR 245 million in the profit and loss account.

- **Axepta SpA**

On 4 January 2022, Banca Nazionale del Lavoro sold 80% of its stake of Wordline Merchant Services Italia (ex-Axepta Spa).

The Group BNP Paribas lost exclusive control of this entity but kept a significant influence.

The disposal led to the recognition of a result of EUR 204 million on the line « Net gain on non-current assets ».

The residual stake of 20% was consolidated using the equity method for its remeasured value, including a goodwill of EUR 41 million.

- **Floa**

On 31 January 2022, BNP Paribas purchased 100% of Floa.

The Group BNP Paribas took exclusive control of this entity and fully consolidated it from the first quarter of 2022.

The Group's balance sheet increased by EUR 2 billion at acquisition date, in particular in financial assets at amortised cost.

The goodwill related to this operation was EUR 122 million.

- **UkrSibbank**

In the context of the conflict in Ukraine, the Group reassessed the nature of control on its subsidiary UkrSibbank and concluded to the loss of exclusive control, and the maintain of a significant influence. This situation led the Group to consolidate the entity using the equity method from 1 March 2022.

The loss of exclusive control involved the recognition of a loss on disposal of - EUR 159 million and the reclassification to the profit and loss account of cumulated changes in assets and liabilities for exchange differences of - EUR 274 million, in « Net gain on non-current assets ».

The Group's balance sheet decreased by EUR 2 billion at loss of exclusive control date, in particular in financial assets at amortised cost.

- **Terberg Leasing Group BV**

On 30 November 2022, Arval Service Lease purchased 100% of Terberg Leasing Group BV.

The Group BNP Paribas took exclusive control of these entities and fully consolidated them from the last quarter of 2022.

The Group's balance sheet increased by EUR 1 billion at acquisition date, in particular in tangible assets.

The goodwill related to this operation was EUR 96 million.

7.d DISCONTINUED ACTIVITIES

On 18 December 2021, BNP Paribas concluded an agreement with BMO Financial Group for the sale of 100% of its retail and commercial banking activities in the United States, operated by the BancWest cash-generating unit, for a total consideration of USD 16.3 billion in cash.

The transaction was closed on 1 February 2023 following receipt of all regulatory approvals by BMO Financial Group.

The group of assets covered by the agreement comprises most of the entities of the homogeneous BancWest set (see reference D2 in note 7.1 *Scope of consolidation*). BancWest is therefore classified as a discontinued activity (see note 1.i *Assets held for sale and discontinued operations*).

As required by IFRS 5 related to groups of assets and liabilities held for sale, the Group's consolidated financial statements are adapted to present BancWest separately in 2021 and in 2022:

- the assets are reclassified on a separate line of the balance sheet "Assets held for sale";
- the liabilities are also reclassified in a separate line "Liabilities associated with assets held for sale";
- amounts accounted for in equity for the revaluation of assets and liabilities are presented separately in the statement of net income and changes in assets and liabilities recognised directly in equity ;
- revenues and expenses are reclassified in a separate line "Net income from discontinued activities" in the profit and loss statement. This income includes revenues and expenses from internal transactions with BancWest, provided that, following the sale, the Group will no longer receive these revenues or incur these expenses ;
- The net change in cash and cash equivalents is isolated in the cash flow statement.

- **Net income from discontinued activities**

<i>In millions of euros</i>	First half 2022	First half 2021 <i>restated according to IFRS 5</i>
Revenues	2,788	2,473
Operating Expenses and Dep.	(2,007)	(1,645)
Gross Operating Income	781	828
Cost of Risk	39	46
Operating Income	820	874
Net gain on non-current assets	3	19
Pre-tax Income	823	893
Corporate income tax	(137)	(173)
Net income from discontinued activities	686	720

- **Statement of net income and changes in assets and liabilities recognised directly in equity of discontinued activities**

<i>In millions of euros</i>	Year to 31 Dec. 2022	Year to 31 Dec. 2021
Net income from discontinued activities	686	720
Changes in assets and liabilities recognised directly in equity of discontinued activities	(434)	580
Items that are or may be reclassified to profit or loss	(440)	571
- Changes in fair value through profit or loss	111	739
- Changes in fair value of financial assets through equity		
<i>Changes in fair value recognised in equity</i>	(730)	(173)
<i>Changes in fair value reported in profit or loss</i>	(18)	(30)
- Deferred value changes in hedging derivatives		
<i>Changes in fair value recognised in equity</i>	(256)	(61)
<i>Changes in fair value reported in profit or loss</i>		
- Income taxes	453	96
Items that will not be reclassified to profit or loss	6	9
- Revaluation effects on post-employment benefit plans	7	12
- Income taxes	(1)	(3)
Total	252	1,300

- **Balance sheet of discontinued activities**

<i>In millions of euros</i>	31 December 2022	31 December 2021
Cash and balances at central banks	2,750	14,654
Financial assets at fair value through equity	4,503	5,009
Financial assets at amortised cost	73,007	65,775
Property, plant and equipment	453	428
Intangible assets and goodwill	2,910	2,770
Other assets	3,216	2,631
Total assets held for sale	86,839	91,267
Financial liabilities at amortised cost	74,563	73,041
Other liabilities	2,439	1,325
Total liabilities associated with assets held for sale	77,002	74,366

- **Changes in assets and liabilities recognised directly in equity of discontinued activities at 31 December 2022**

<i>In millions of euros</i>	31 December 2022	31 December 2021
Items that are or may be reclassified to profit or loss	168	608
Exchange differences	799	687
Financial assets at fair value through equity	(405)	(41)
Derivatives used for hedging purposes	(226)	(38)
Items that will not be reclassified to profit or loss	(119)	(125)
Remeasurement gains (losses) related to postemployment benefit plans	(119)	(125)
Changes in assets and liabilities recognised directly in equity of discontinued activities	49	483

- **Financial assets at amortised cost classified as “Assets held for sale”**

In millions of euros	31 December 2022			31 December 2021		
	Gross Value	Impairment	Carrying amount	Gross Value	Impairment	Carrying amount
Loans and advances to credit institutions	143	-	143	52	-	52
Stage 1	143	-	143	52	-	52
Loans and advances to customers	56,414	(329)	56,085	50,530	(476)	50,054
Stage 1	52,711	(141)	52,570	45,751	(172)	45,579
Stage 2	3,150	(126)	3,024	4,370	(217)	4,153
Stage 3	553	(62)	491	409	(87)	322
Debt securities	16,779	-	16,779	15,669	-	15,669
Stage 1	16,779	-	16,779	15,669	-	15,669
Total financial assets at amortised cost	73,336	(329)	73,007	66,251	(476)	65,775

- **Cash flows from discontinued activities**

In millions of euros	Year to 31 Dec 2022	Year to 31 Dec 2021
Net decrease (increase) in cash and cash equivalents generated by operating activities	(10,175)	9,772
Net decrease in cash and cash equivalents related to investing activities	(141)	(111)
Decrease (increase) in cash and cash equivalents related to financing activities	(2,322)	406
Effect of movement in exchange rates on cash and cash equivalents	703	672
Net decrease (increase) in cash and cash equivalents from discontinued activities	(11,935)	10,739

7.e EVENT AFTER THE REPORTING PERIOD

- **Bank of the West**

On 18 December 2021, BNP Paribas concluded an agreement with BMO Financial Group for the sale of 100% of its retail and commercial banking activities in the United States, operated by the group BancWest.

The transaction was closed on 1 February 2023 following receipt of all regulatory approvals by BMO Financial Group.

The estimated impact on the Group's balance sheet at sale date is a decrease of approximately EUR 87 billion in assets held for sale.

The capital gain on the disposal amounts to EUR 2.9 billion, including the result related to the Group subscription commitment to the capital increase of BMO Financial Group. The gain will be recognised in the first quarter of 2023.

7.f MINORITY INTERESTS

	Capital and retained earnings	Changes in assets and liabilities recognised directly in equity that will not be reclassified to profit or loss	Changes in assets and liabilities recognised directly in equity that may be reclassified to profit or loss	Minority interests
In millions of euros				
Balance at 1 January 2021	4,640	9	(99)	4,550
Appropriation of net income for 2020	(221)			(221)
Increases in capital and issues	10			10
Reduction or redemption of capital	(73)			(73)
Movements in consolidation scope impacting minority shareholders	(139)			(139)
Acquisitions of additional interests or partial sales of interests	55			55
Change in commitments to repurchase minority shareholders' interests	38			38
Other movements	9			9
Realised gains or losses reclassified to retained earnings	1	(1)		-
Changes in assets and liabilities recognised directly in equity		7	(7)	-
Net income for 2021	392			392
Balance at 31 December 2021	4,712	15	(106)	4,621
IAS 29 Impact	(14)		62	48
Balance at 1 January 2022	4,698	15	(44)	4,669
Appropriation of net income for 2021	(133)			(133)
Increases in capital and issues	34			34
Impact of internal transactions on minority shareholders	2			2
Movements in consolidation scope impacting minority shareholders	(136)			(136)
Change in commitments to repurchase minority shareholders' interests	(157)			(157)
Other movements	(1)			(1)
Changes in assets and liabilities recognised directly in equity	-	6	78	84
Net income for 2022	401			401
Balance at 31 December 2022	4,708	21	34	4,763

- **Main minority interests**

The assessment of the material nature of minority interests is based on the contribution of the relevant subsidiaries to the Group balance sheet (before elimination of intra-group balances and transactions) and to the Group profit and loss account.

	31 December 2022	Year to 31 Dec. 2022						
	Total assets before elimination of intra-group transactions	Revenues	Net income	Net income and changes in assets and liabilities recognised directly in equity	Minority shareholders' interest (%)	Net income attributable to minority interests	Net income and changes in assets and liabilities recognised directly in equity - attributable to minority interests	Dividends paid to minority shareholders
In millions of euros								
Contribution of the entities belonging to the BGL BNP Paribas group	95,376	1,851	604	269	34%	189	121	81
Other minority interests						212	364	52
TOTAL						401	485	133

	31 December 2021	Year to 31 Dec. 2021						
	Total assets before elimination of intra-group transactions	Revenues	Net income	Net income and changes in assets and liabilities recognised directly in equity	Minority shareholders' interest (%)	Net income attributable to minority interests	Net income and changes in assets and liabilities recognised directly in equity - attributable to minority interests	Dividends paid to minority shareholders
In millions of euros								
Contribution of the entities belonging to the BGL BNP Paribas group	98,967	1,779	585	557	34%	179	167	163
Other minority interests						213	225	58
TOTAL						392	392	221

There are no particular contractual restrictions on the assets of BGL BNP Paribas related to the presence of the minority shareholder.

- **Internal restructuring that led to a change in minority shareholders' interest in the equity of subsidiaries**

No significant internal restructuring operation occurred during the year 2022, nor during the year 2021.

- **Acquisitions of additional interests and partial sales of interests leading to changes in minority interests in the equity of subsidiaries**

In millions of euros	Year to 31 Dec. 2022		Year to 31 Dec. 2021	
	Attributable to shareholders	Minority interests	Attributable to shareholders	Minority interests
Bank BGZ BNP Paribas Partial disposal of 1.26% of the total share, reducing the Group's share to 87.43%			(11)	37
Financit Spa Implementation of a partnership, reducing the Group's share to 60%			21	18
Other			(2)	
Total	-	-	8	55

- **Commitments to repurchase minority shareholders' interests**

In connection with the acquisition of certain entities, the Group granted minority shareholders put options on their holdings.

The total value of these commitments, which are recorded as a reduction in shareholders' equity, amounts to EUR 361 million at 31 December 2022, compared with EUR 322 million at 31 December 2021.

7.g SIGNIFICANT RESTRICTIONS IN SUBSIDIARIES, JOINT VENTURES AND ASSOCIATES

Significant restrictions related to the ability of entities to transfer cash to the Group

The ability of entities to pay dividends or to repay loans and advances depends, *inter alia*, on local regulatory requirements for capitalisation and legal reserves, as well as the entities' financial and operating performance. During 2022, none of the BNP Paribas Group entities were subject to significant restrictions other than those related to regulatory requirements.

Significant restrictions relative to the Group's ability to use the assets lodged in consolidated structured entities

Access to the assets of consolidated structured entities in which third-party investors have invested is limited inasmuch as these entities' assets are reserved for the holders of units or securities. These assets total EUR 37 billion at 31 December 2022 (EUR 34 billion at 31 December 2021).

Significant restrictions related to the Group's ability to use assets pledged as collateral or under repurchase agreements

The financial instruments pledged by the BNP Paribas Group as collateral or under repurchase agreements are presented in notes 4.r and 5.d.

Significant restrictions related to liquidity reserves

Significant restrictions related to liquidity reserves correspond to the mandatory deposits placed with central banks presented in chapter 5 of the Universal Registration Document under *Liquidity risk*.

Assets representative of unit-linked insurance contracts

Financial assets representative of unit-linked insurance contracts designated as at fair value through profit or loss, which amount to EUR 80 billion at 31 December 2022 (compared with EUR 87 billion at 31 December 2021), are held for the benefit of the holders of these contracts.

7.h STRUCTURED ENTITIES

The BNP Paribas Group is engaged in transactions with sponsored structured entities mainly through its activities of securitisation of financial assets - as either originator or sponsor -, fund management and specialised asset financing.

In addition, the BNP Paribas Group is also engaged in transactions with structured entities that it has not sponsored, notably in the form of investments in funds or securitisation vehicles.

The method for assessing control for structured entities is detailed in note 1.b.2. Consolidation methods.

- **Consolidated structured entities**

The main categories of consolidated structured entities are:

ABCP (Asset-Backed Commercial Paper) conduits: the ABCP securitisation conduits Starbird, Matchpoint and Scaldis fund securitisation transactions managed by the BNP Paribas Group on behalf of its customers. Details on how these are financed and the Group's risk exposure are presented in Chapter 5 of the Universal Registration Document under *Securitisation as sponsor on behalf of clients / Short-term refinancing*.

Proprietary securitisation: proprietary securitisation positions originated and held by the BNP Paribas Group are detailed in Chapter 5 of the Universal Registration Document under *Proprietary securitisation activities (originator)*.

Funds managed by the Group: the BNP Paribas Group structures different types of funds for which it may act as fund manager, investor, custodian or guarantor. These funds are consolidated when the Group is both the manager and a significant investor and is therefore exposed to variable returns.

- **Unconsolidated structured entities**

The BNP Paribas Group has entered into relations with unconsolidated structured entities in the course of its business activities to meet the needs of its customers.

Information relative to interests in sponsored structured entities

The main categories of unconsolidated sponsored structured entities are as follows:

Securitisation: the BNP Paribas Group structures securitisation vehicles for the purposes of offering customers financing solutions for their assets, either directly or through consolidated ABCP conduits. Each vehicle finances the purchase of customers' assets (receivables, bonds, *etc.*) primarily by issuing bonds backed by these assets and whose redemption is linked to their performance.

Funds: the Group structures and manages funds to offer investment opportunities to its customers. Dedicated or public funds are offered to institutional and individual customers and are distributed and commercially monitored by the BNP Paribas Group. The entities of the BNP Paribas Group responsible for managing these funds may receive management fees and performance commission. The BNP Paribas Group may hold units in these funds, as well as units in funds dedicated to the insurance activity not managed by the BNP Paribas Group.

Asset financing: the BNP Paribas Group establishes and finances structured entities that acquire assets (aircraft, ships, *etc.*) intended for lease, and the lease payments received by the structured entity are used to repay the financing, which is guaranteed by the asset held by the structured entity.

Other: on behalf of its customers, the Group may also structure entities which invest in assets or are involved in debt restructuring.

An interest in an unconsolidated structured entity is a contractual or non-contractual link that exposes the BNP Paribas Group to variable returns from the performance of the entity.

The Group's assets and liabilities related to the interests held in sponsored structured entities are as follows:

In millions of euros, at 31 December 2022	Securitisation	Funds	Asset Financing	Others	Total
INTERESTS ON THE GROUP BALANCE SHEET					
ASSETS					
Financial instruments at fair value through profit or loss	7	1,468		449	1,924
Derivatives used for hedging purposes	9	1,067	13	19	1,108
Financial instruments at fair value through equity	147				147
Financial assets at amortised cost	21,058	278	2,150	228	23,714
Other assets	2	110	26		138
Financial investments of insurance activities		34,933			34,933
TOTAL ASSETS	21,223	37,856	2,189	696	61,964
LIABILITIES					
Financial instruments at fair value through profit or loss	14	597	53	230	894
Derivatives used for hedging purposes					
Financial liabilities at amortised cost	553	10,907	181	27	11,668
Other liabilities	4	296	117		417
TOTAL LIABILITIES	571	11,800	351	257	12,979
MAXIMUM EXPOSURE TO LOSS	29,679	38,505	3,527	753	72,464
SIZE OF STRUCTURED ENTITIES ⁽¹⁾	163,455	308,773	5,755	4,365	482,348

In millions of euros, at 31 December 2021	Securitisation	Funds	Asset Financing	Others	Total
INTERESTS ON THE GROUP BALANCE SHEET					
ASSETS					
Financial instruments at fair value through profit or loss	5	1,009	4	95	1,113
Derivatives used for hedging purposes	11	1,404	23	18	1,456
Financial instruments at fair value through equity	190				190
Financial assets at amortised cost	14,230	117	1,709	9	16,065
Other assets	3	93			96
Financial investments of insurance activities		24,114			24,114
TOTAL ASSETS	14,439	26,737	1,736	122	43,034
LIABILITIES					
Financial instruments at fair value through profit or loss	18	542	3	54	617
Derivatives used for hedging purposes					
Financial liabilities at amortised cost	1,058	12,809	140	27	14,034
Other liabilities	5	140	118		263
TOTAL LIABILITIES	1,081	13,491	261	81	14,914
MAXIMUM EXPOSURE TO LOSS	21,888	27,061	3,047	212	52,208
SIZE OF STRUCTURED ENTITIES ⁽¹⁾	121,665	332,150	4,933	5,263	464,011

- (1) The size of sponsored structured entities equals the total assets of the structured entity for securitisation vehicles, the net asset value for funds (excluding management mandates) and the structured entity's total assets or the amount of the BNP Paribas Group's commitment for asset financing and other structures.

The BNP Paribas Group's maximum exposure to losses on sponsored structured entities is the carrying amount of the assets, excluding, for financial assets at fair value through equity, changes in value taken directly to equity, as well as the nominal amount of the financing commitments and guarantee commitments given and the notional amount of credit default swaps (CDS) sold.

Information relative to interests in non-sponsored structured entities

The main interests held by the BNP Paribas Group when it acts solely as an investor in non-sponsored structured entities are detailed below:

- **Units in funds that are not managed by the Group, which are held by the Insurance business line:** as part of the asset allocation strategy corresponding to investments related to the premiums for unit-linked contracts or for the general fund, the Insurance business line subscribes to units of structured entities. These short- or medium-term investments are held for their financial performance and meet the risk diversification criteria inherent to the business. They amounted to EUR 30 billion at 31 December 2022 (EUR 39 billion at 31 December 2021). Changes in value and the majority of the risks associated with these investments are borne by policyholders in the case of assets representative of unit-linked contracts, and by the insurer in the case of assets representative of the general fund;
- **Other investments in funds not managed by the Group:** as part of its trading business, the BNP Paribas Group invests in structured entities without any involvement in either managing or structuring these entities (investments in mutual funds, securities funds or alternative funds), particularly as economic hedge for structured products sold to customers. The Group also invests in minority holdings in investment funds, in support of companies, as part of its venture capital business. These investments amounted to EUR 8 billion at 31 December 2022 (10 billion as at 31 December 2021);
- **Investments in securitisation vehicles:** the breakdown of the Group's exposure and the nature of the securities held are presented in Chapter 5 of the Universal Registration Document in the section *Securitisation as investor*.

Besides, in the framework of its asset financing activity, the BNP Paribas Group provides financing to structured entities that are established by and for its clients and whose purpose is to acquire assets (aircraft, ships, *etc.*) intended for lease to those same clients. These financings amount to EUR 4 billion at 31 December 2022 (EUR 5 billion as at 31 December 2021).

7.i COMPENSATION AND BENEFITS AWARDED TO THE GROUP'S CORPORATE OFFICERS

The Group's corporate officers, their spouse and their dependent children are considered related parties.

The remuneration and benefits policy relating to the Group's corporate officers, as well as the detailed information on an individual basis, are presented in chapter 2 Corporate Governance of the Universal Registration Document.

- **Remuneration and benefits awarded to the Group's corporate officers**

	Year to 31 Dec. 2022	Year to 31 Dec. 2021
Gross remuneration, including remuneration linked to the term of directorship and benefits in kind		
- payable for the year	€ 9,845,772	€ 8,486,731
- paid during the year	€ 8,779,813	€ 6,526,149
Post-employment benefits		
Retirement bonuses: present value of the benefit obligation (payroll taxes excluded)	€ 840,720	€ 788,884
Defined contribution pension plan : contributions paid by BNP Paribas during the year	€ 7,075	€ 6,400
Welfare benefits: premiums paid by BNP Paribas during the year	€ 20,343	€ 18,836
Share-based payments		
Stock subscription options	Nil	Nil
Performance shares	Nil	Nil
Long-term compensation		
- fair value at grant date (*)	€ 1,748,965	€ 1,327,391

(*) Valuation according to the method described in note 6.e.

At 31 December 2022, no corporate officer is eligible to a contingent collective defined-benefit top-up pension plan.

- **Remuneration linked to the term of directorship paid to members of the board of directors**

Remuneration linked to the term of directorship paid to all members of the Board of Directors in 2022 amounts to EUR 1,540,000. This amount was EUR 1,362,000 in 2021 (excluding the remuneration of EUR 40,804 linked to the censor role of M. Noyer for the period between January 1st and May 17th 2021). The amount paid in 2022 to members other than corporate officers was EUR 1,413,560 compared with EUR 1,233,136 in 2021.

- **Remuneration and benefits awarded to directors representing the employees**

In euros	Year to 31 December 2022	Year to 31 December 2021
Gross remuneration paid during the year	125,832	120,963
Remuneration linked to the term of directorship (paid to the trade unions)	200,547	190,887
Premiums paid by BNP Paribas during the year into schemes related to Garantie Vie Professionnelle Accidents benefits and healthcare expense coverage	2,140	2,092
Contributions paid by BNP Paribas during the year into the defined-contribution plan	1,452	1,423

- **Loans, advances and guarantees granted to the Group's corporate officers**

At 31 December 2022, the total outstanding loans granted directly or indirectly to the Group's corporate officers and their spouse and dependent children amounted to EUR 5,179,096 (EUR 6,392,970 at 31 December 2021). These loans representing normal transactions were carried out on an arm's length basis.

7.j OTHER RELATED PARTIES

Other related parties of the BNP Paribas Group comprise consolidated companies (including entities consolidated under the equity method) and entities managing post-employment benefit plans offered to Group employees (except for multi-employer and multi-industry schemes).

Transactions between the BNP Paribas Group and related parties are carried out on an arm's length basis.

RELATIONS BETWEEN CONSOLIDATED COMPANIES

A list of companies consolidated by the BNP Paribas Group is provided in note 7.I *Scope of consolidation*. Transactions and outstanding balances between fully-consolidated entities are eliminated. The tables below show transactions with entities accounted for under the equity method.

- **Outstanding balances of related-party transactions:**

In millions of euros	31 December 2022		31 December 2021	
	Joint ventures	Associates	Joint ventures	Associates
ASSETS				
On demand accounts	-	4		118
Loans	3,436	91	3,923	116
Securities	440	-	516	268
Other assets	3	72	1	74
Financial investments of insurance activities	1	-	1	2
Total	3,880	167	4,441	578
LIABILITIES				
On demand accounts	166	1,243	137	525
Other borrowings	73	826	48	1,034
Other liabilities	2	30	7	26
Technical reserves and other insurance liabilities	1	190	1	159
Total	242	2,289	193	1,744
FINANCING COMMITMENTS AND GUARANTEE COMMITMENTS				
Financing commitments given	24	143	23	553
Guarantee commitments given	65	120	1,469	41
Total	89	263	1,492	594

The Group also carries out trading transactions with related parties involving derivatives (swaps, options and forwards, etc.) and financial instruments purchased or underwritten and issued by them (equities, bonds, etc.).

- **Related-party profit and loss items:**

In millions of euros	Year to 31 Dec. 2022		Year to 31 Dec. 2021	
	Joint ventures	Associates	Joint ventures	Associates
Interest income	43	9	26	7
Interest expense	(2)	(15)	(5)	(2)
Commission income	1	288	5	305
Commission expense	(1)	(78)		(76)
Services provided		29		47
Services received				(7)
Lease income				
Net income from insurance activities	(2)	(2)	(2)	(3)
Total	39	231	24	271

GROUP ENTITIES INVOLVED IN CERTAIN POST-EMPLOYMENT BENEFIT PLANS OFFERED TO GROUP EMPLOYEES

In Belgium, BNP Paribas Fortis funds a number of pension schemes managed by AG Insurance in which the BNP Paribas Group has a 25% equity interest.

In other countries, post-employment benefit plans are generally managed by independent fund managers or independent insurance companies, and occasionally by Group companies, in particular BNP Paribas Asset Management.

At 31 December 2022, the value of plan assets managed by Group companies or by companies over which the Group exercises significant influence was EUR 3,689 million (EUR 4,048 million at 31 December 2021). Amounts received by Group companies in the year to 31 December 2022 totalled EUR 5 million and were mainly composed of management and custody fees (EUR 4 million at 31 December 2021).

7.k FAIR VALUE OF FINANCIAL INSTRUMENTS CARRIED AT AMORTISED COST

The information supplied in this note must be used and interpreted with the greatest caution for the following reasons:

- these fair values are an estimate of the value of the relevant instruments at 31 December 2022. They are liable to fluctuate from day to day as a result of changes in various parameters, such as interest rates and credit quality of the counterparty. In particular, they may differ significantly from the amounts actually received or paid on maturity of the instrument. In most cases, the fair value is not intended to be realised immediately, and in practice might not be realised immediately. Consequently, this fair value does not reflect the actual value of the instrument to BNP Paribas as a going concern;
- most of these fair values are not meaningful, and hence are not taken into account in the management of the commercial banking activities which use these instruments;
- estimating a fair value for financial instruments carried at historical cost often requires the use of modelling techniques, hypotheses and assumptions that may vary from bank to bank. This means that comparisons between the fair values of financial instruments carried at historical cost as disclosed by different banks may not be meaningful;
- the fair values shown below do not include the fair values of finance lease transactions, non-financial instruments such as property, plant and equipment, goodwill and other intangible assets such as the value attributed to demand deposit portfolios or customer relationships. Consequently, these fair values should not

be regarded as the actual contribution of the instruments concerned to the overall valuation of the BNP Paribas Group.

In millions of euros, at 31 December 2022	Estimated fair value				Carrying value
	Level 1	Level 2	Level 3	Total	
FINANCIAL ASSETS					
Loans and advances to credit institutions and customers ⁽¹⁾		92,635	731,555	824,190	848,145
Debt securities at amortised cost (note 4.e)	85,758	26,235	771	112,764	114,014
Assets held for sale	4,440	9,980	53,325	67,746	72,176
FINANCIAL LIABILITIES					
Deposits from credit institutions and customers		1,132,280		1,132,280	1,132,772
Debt securities (note 4.h)	64,889	88,999		153,888	154,143
Subordinated debt (note 4.h)	17,193	6,624		23,817	24,156
Liabilities associated with assets held for sale		74,567		74,567	74,563

⁽¹⁾ Finance leases excluded

In millions of euros, at 31 December 2021	Estimated fair value				Carrying value
	Level 1	Level 2	Level 3	Total	
FINANCIAL ASSETS					
Loans and advances to credit institutions and customers ⁽¹⁾		88,058	716,147	804,205	795,845
Debt securities at amortised cost (note 4.e)	89,374	17,203	3,172	109,749	108,510
Assets held for sale	4,587	11,081	49,838	65,507	64,847
FINANCIAL LIABILITIES					
Deposits from credit institutions and customers		1,123,937		1,123,937	1,123,383
Debt securities (note 4.h)	64,660	86,854		151,514	149,723
Subordinated debt (note 4.h)	18,211	7,360		25,571	24,720
Liabilities associated with assets held for sale		73,077		73,077	73,041

⁽¹⁾ Finance leases excluded

The valuation techniques and assumptions used by BNP Paribas ensure that the fair value of financial assets and liabilities carried at amortised cost is measured on a consistent basis throughout the Group. Fair value is based on prices quoted in an active market when these are available. In other cases, fair value is determined using valuation techniques such as discounting of estimated future cash flows for loans, liabilities and debt securities at amortised cost, or specific valuation models for other financial instruments as described in note 1, *Summary of significant accounting policies applied by the BNP Paribas Group*. The description of the fair value hierarchy levels is also presented in the accounting principles (see note 1.e.10). In the case of loans, liabilities and debt securities at amortised cost that have an initial maturity of less than one year (including demand deposits) or of most regulated savings products, fair value equates to carrying amount. These instruments have been classified in Level 2, except for loans to customers, which are classified in Level 3.

7.1 SCOPE OF CONSOLIDATION

BNP Paribas, a *société anonyme* (Public Limited Company), registered in France, is the Group's lead company, which holds key positions in its three operating divisions: Corporate & Institutional Banking (CIB), Commercial, Personal Banking & Services (CPBS) and Investment & Protection Services (IPS).

During the year, the parent company did not change its name. BNP Paribas has its principal place of business in France and its head office is located at 16 boulevard des Italiens 75009 Paris, France.

Business	Name	Country	31 December 2022				31 December 2021			
			Method	Voting (%)	Interest (%)	Ref.	Method	Voting (%)	Interest (%)	Ref.
	BNP Paribas SA	France	Full ⁽¹⁾	100.0%	100.0%		(1)			
	BNPP SA (Argentina branch)	Argentina	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP SA (Australia branch)	Australia	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP SA (Austria branch)	Austria	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP SA (Bahrain branch)	Bahrain	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP SA (Belgium branch)	Belgium	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP SA (Bulgaria branch)	Bulgaria	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP SA (Canada branch)	Canada	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP SA (Czech republic branch)	Czech Rep.	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP SA (Denmark branch)	Denmark	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP SA (Finland branch)	Finland	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP SA (Germany branch)	Germany	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP SA (Greece branch)	Greece	Full	100.0%	100.0%	E2				
	BNPP SA (Guernsey branch)	Guernsey	Full	100.0%	100.0%	E2				
	BNPP SA (Hong kong branch)	Hong Kong	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP SA (Hungary branch)	Hungary	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP SA (India branch)	India	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP SA (Ireland branch)	Ireland	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP SA (Italy branch)	Italy	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP SA (Japan branch)	Japan	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP SA (Jersey branch)	Jersey	Full	100.0%	100.0%	E2				S1
	BNPP SA (Kuwait branch)	Kuwait	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP SA (Luxembourg branch)	Luxembourg	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP SA (Malaysia branch)	Malaysia	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP SA (Monaco branch)	Monaco	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP SA (Netherlands branch)	Netherlands	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP SA (Norway branch)	Norway	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP SA (Panama branch)	Panama				S1	Full	100.0%	100.0%	
	BNPP SA (Philippines branch)	Philippines	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP SA (Poland branch)	Poland	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP SA (Portugal branch)	Portugal	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP SA (Qatar branch)	Qatar	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP SA (Republic of Korea branch)	Rep. of Korea	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP SA (Romania branch)	Romania	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP SA (Saudi arabia branch)	Saudi Arabia	Full	100.0%	100.0%		Full	100.0%	100.0%	

Business	Name	Country	31 December 2022				31 December 2021			
			Method	Voting (%)	Interest (%)	Ref.	Method	Voting (%)	Interest (%)	Ref.
	BNPP SA (Singapore branch)	Singapore	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP SA (South africa branch)	South Africa	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP SA (Spain branch)	Spain	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP SA (Sweden branch)	Sweden	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP SA (Switzerland branch)	Switzerland	Full	100.0%	100.0%	E2				
	BNPP SA (Taiwan branch)	Taiwan	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP SA (Thailand branch)	Thailand	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP SA (United arab emirates branch)	United Arab Emirates	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP SA (United kingdom branch)	UK	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP SA (United states branch)	USA	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP SA (Viet nam branch)	Viet Nam	Full	100.0%	100.0%		Full	100.0%	100.0%	
CORPORATE & INSTITUTIONAL BANKING										
EMEA (Europe, Moyen Orient, Afrique)										
France										
	Atargatis ⁵	France				S4	Full	-	-	
	Austin Finance ⁵	France	Full	-	-		Full	-	-	
	BNPP Arbitrage	France	Full ⁽¹⁾	100.0%	100.0%		Full ⁽¹⁾	100.0%	100.0%	
	BNPP Securities Services	France				S4	Full ⁽¹⁾	100.0%	100.0%	
	BNPP Securities Services (Australia branch)	Australia				S4	Full ⁽¹⁾	100.0%	100.0%	
	BNPP Securities Services (Belgium branch)	Belgium				S4	Full ⁽¹⁾	100.0%	100.0%	
	BNPP Securities Services (Germany branch)	Germany				S4	Full ⁽¹⁾	100.0%	100.0%	
	BNPP Securities Services (Greece branch)	Greece				S4	Full ⁽¹⁾	100.0%	100.0%	
	BNPP Securities Services (Guernsey branch)	Guernsey				S4	Full ⁽¹⁾	100.0%	100.0%	
	BNPP Securities Services (Hong kong branch)	Hong Kong				S4	Full ⁽¹⁾	100.0%	100.0%	
	BNPP Securities Services (Hungary branch)	Hungary				S4	Full ⁽¹⁾	100.0%	100.0%	
	BNPP Securities Services (Ireland branch)	Ireland				S4	Full ⁽¹⁾	100.0%	100.0%	
	BNPP Securities Services (Italy branch)	Italy				S4	Full ⁽¹⁾	100.0%	100.0%	
	BNPP Securities Services (Jersey branch)	Jersey				S4	Full ⁽¹⁾	100.0%	100.0%	
	BNPP Securities Services (Luxembourg branch)	Luxembourg				S4	Full ⁽¹⁾	100.0%	100.0%	
	BNPP Securities Services (Netherlands branch)	Netherlands				S4	Full ⁽¹⁾	100.0%	100.0%	
	BNPP Securities Services (Poland branch)	Poland				S4	Full ⁽¹⁾	100.0%	100.0%	
	BNPP Securities Services (Portugal branch)	Portugal				S4	Full ⁽¹⁾	100.0%	100.0%	
	BNPP Securities Services (Singapore branch)	Singapore				S4	Full ⁽¹⁾	100.0%	100.0%	
	BNPP Securities Services (Spain branch)	Spain				S4	Full ⁽¹⁾	100.0%	100.0%	
	BNPP Securities Services (Switzerland branch)	Switzerland				S4	Full ⁽¹⁾	100.0%	100.0%	
	BNPP Securities Services (United kingdom branch)	UK				S4	Full ⁽¹⁾	100.0%	100.0%	
	Compagnie d'Investissement Italiens ⁵	France				S4	Full	-	-	
	Compagnie d'Investissement Opéra ⁵	France				S4	Full	-	-	
	Ellipsis Asset Management	France				S2	Full	100.0%	100.0%	V1/D3
	Eurolitrisation	France	Equity	21.7%	21.7%		Equity	21.7%	21.7%	V3
	Exane	France	Full	100.0%	100.0%		Full	100.0%	100.0%	V1/D3
	Exane (Germany branch)	Germany	Full	100.0%	100.0%		Full	100.0%	100.0%	V1/D3
	Exane (Italy branch)	Italy	Full	100.0%	100.0%		Full	100.0%	100.0%	V1/D3
	Exane (Spain branch)	Spain	Full	100.0%	100.0%		Full	100.0%	100.0%	V1/D3

Business	Name	Country	31 December 2022				31 December 2021			
			Method	Voting (%)	Interest (%)	Ref.	Method	Voting (%)	Interest (%)	Ref.
	Exane (Sweden branch)	Sweden	Full	100.0%	100.0%		Full	100.0%	100.0%	V1/D3
	Exane (Switzerland branch)	Switzerland	Full	100.0%	100.0%		Full	100.0%	100.0%	V1/D3
	Exane (United kingdom branch)	UK	Full	100.0%	100.0%		Full	100.0%	100.0%	V1/D3
	Exane Asset Management	France	Equity	51.0%	51.0%	V1	Equity	50.0%	50.0%	V1/D3
	Exane Derivatives	France	Full	100.0%	100.0%		Full	100.0%	100.0%	V1/D3
	Exane Derivatives (Italy branch)	Italy				S1	Full	100.0%	100.0%	V1/D3
	Exane Derivatives (Switzerland branch)	Switzerland	Full	100.0%	100.0%		Full	100.0%	100.0%	V1/D3
	Exane Derivatives (United kingdom branch)	UK	Full	100.0%	100.0%		Full	100.0%	100.0%	V1/D3
	Exane Derivatives Gerance	France	Full	100.0%	100.0%		Full	100.0%	100.0%	V1/D3
	Exane Finance	France	Full	100.0%	100.0%		Full	100.0%	100.0%	V1/D3
	Exane Participations	France				S4	Full	99.0%	99.0%	V1/D3
	FCT Juice ¹	France	Full	-	-		Full	-	-	
	Financière des Italiens ⁵	France	Full	-	-		Full	-	-	
	Financière du Marché Saint Honoré	France	Full	100.0%	100.0%		Full	100.0%	100.0%	
	Financière Paris Haussmann ⁵	France				S4	Full	-	-	
	Financière Taitbout ⁵	France				S4	Full	-	-	
	Mediterranea ⁵	France				S4	Full	-	-	
	Optichamps ⁵	France	Full	-	-		Full	-	-	
	Parlease	France	Full ⁽¹⁾	100.0%	100.0%		Full ⁽¹⁾	100.0%	100.0%	
	Participations Opéra ⁵	France	Full	-	-		Full	-	-	
	Services Logiciels d'Intégration Boursière	France	Equity ⁽³⁾	66.6%	66.6%		Equity ⁽³⁾	66.6%	66.6%	
	SNC Taitbout Participation 3	France	Full	100.0%	100.0%		Full	100.0%	100.0%	
	Société Orbaisienne de Participations	France	Full	100.0%	100.0%		Full	100.0%	100.0%	
	Verner Investissements	France				S4	Full	100.0%	100.0%	V1/D3
	Verner Investissements NewCo1	France				S4	Full	100.0%	100.0%	E3
	Verner Investissements NewCo2	France				S4	Full	100.0%	100.0%	E3
Other European countries										
	Alectra Finance PLC ¹	Ireland								S3
	Allfunds Group PLC	UK	Equity	12.1%	12.0%	V2	Equity	13.8%	13.7%	V2
	Aquarius + Investments PLC ¹	Ireland				S3	Full	-	-	
	Aries Capital DAC ⁵	Ireland	Full	-	-		Full	-	-	
	AssetMetrix	Germany	Equity	20.8%	20.8%	V4	Equity	14.9%	14.9%	V4
	Ausester Real Estate Opportunities SARL ¹	Luxembourg				S2	Full	-	-	
	BNP PUK Holding Ltd	UK	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP Bank JSC	Russia	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP Emissions Und Handels GmbH ⁵	Germany	Full	-	-		Full	-	-	
	BNPP Fund Administration Services Ireland Ltd	Ireland	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP Invest Holdings BV	Netherlands				S1	Full	100.0%	100.0%	
	BNPP Ireland Unlimited Co	Ireland	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP Islamic Issuance BV ⁵	Netherlands	Full	-	-		Full	-	-	
	BNPP Issuance BV ⁵	Netherlands	Full	-	-		Full	-	-	
	BNPP Net Ltd	UK	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP Prime Brokerage International Ltd	Ireland	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP Suisse SA	Switzerland	Full	100.0%	100.0%		Full	100.0%	100.0%	

Business	Name	Country	31 December 2022				31 December 2021			
			Method	Voting (%)	Interest (%)	Ref.	Method	Voting (%)	Interest (%)	Ref.
	BNPP Suisse SA (Guernsey branch)	Guernsey	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP Technology LLC	Russia	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP Trust Corp UK Ltd	UK	Full	100.0%	100.0%	E1				
	BNPP Vartry Reinsurance DAC	Ireland	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	Diamante Re SRL	Italy	Full	100.0%	100.0%		Full	100.0%	100.0%	
	Ejesur SA	Spain	Full	100.0%	100.0%		Full	100.0%	100.0%	
	Ellipsis AM Suisse SARL	Switzerland				S2	Full	100.0%	100.0%	V1/D3
	Exane Solutions Luxembourg SA	Luxembourg	Full	100.0%	100.0%		Full	100.0%	100.0%	V1/D3
	Expo Atlantico EAll Investimentos Imobiliarios SA ⁵	Portugal	Full	-	-	E2				
	Expo Indico EIII Investimentos Imobiliarios SA ⁵	Portugal	Full	-	-	E2				
	FScholen	Belgium	Equity ⁽³⁾	50.0%	50.0%		Equity ⁽³⁾	50.0%	50.0%	
	Greenstars BNPP	Luxembourg	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	Kantox Holding Ltd (Ex- Kantox Ltd)	UK	Equity	9.5%	9.5%		Equity	9.5%	9.5%	V4
	Madison Arbor Ltd ¹	Ireland	Full	-	-		Full	-	-	
	Matchpoint Finance PLC ¹	Ireland	Full	-	-		Full	-	-	
	Ribera Del Loira Arbitrage	Spain	Full	100.0%	100.0%		Full	100.0%	100.0%	
	Securasset SA ⁵	Luxembourg	Full	-	-		Full	-	-	E1
	Single Platform Investment Repackaging Entity SA ⁵	Luxembourg	Full	-	-		Full	-	-	
	Ulexam Logistics Ltd	Ireland	Full	100.0%	100.0%		Full	100.0%	100.0%	
	Ulexam Solutions Ltd	Ireland	Full	100.0%	100.0%		Full	100.0%	100.0%	
Middle East										
	BNPP Investment Co KSA	Saudi Arabia	Full	100.0%	100.0%		Full	100.0%	100.0%	
AMERICAS										
	Banco BNPP Brasil SA	Brazil	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP Canada Corp	Canada	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP Capital Services Inc	USA	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP Colombia Corporacion Financiera SA	Colombia	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP EQD Brazil Fundo de Investimento Multimercado ⁵	Brazil	Full	-	-		Full	-	-	
	BNPP Financial Services LLC	USA	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP FS LLC	USA	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP IT Solutions Canada Inc	Canada	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP Mexico Holding	Mexico	Full	100.0%	100.0%		Full	100.0%	100.0%	E1
	BNPP Mexico SA Institucion de Banca Multiple	Mexico	Full	100.0%	100.0%		Full	100.0%	100.0%	E1
	BNPP Proprietario Fundo de Investimento Multimercado ⁵	Brazil	Full	-	-		Full	-	-	
	BNPP RCC Inc	USA	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP Securities Corp	USA	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP US Investments Inc	USA	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP US Wholesale Holdings Corp	USA	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP USA Inc	USA	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP VPG Brookline Cre LLC ⁵	USA	Full	-	-		Full	-	-	
	BNPP VPG EDMC Holdings LLC ⁵	USA	Full	-	-		Full	-	-	
	BNPP VPG Express LLC ⁵	USA	Full	-	-		Full	-	-	
	BNPP VPG I LLC ⁵	USA	Full	-	-		Full	-	-	

Business	Name	Country	31 December 2022				31 December 2021			
			Method	Voting (%)	Interest (%)	Ref.	Method	Voting (%)	Interest (%)	Ref.
	BNPP VPG II LLC ⁵	USA	Full	-	-		Full	-	-	
	BNPP VPG III LLC ⁵	USA	Full	-	-		Full	-	-	
	BNPP VPG Master LLC ⁵	USA	Full	-	-		Full	-	-	
	Dale Bakken Partners 2012 LLC	USA	FV	4.9%	23.8%	V3	FV	23.8%	23.8%	
	Decart Re Ltd ⁵	Bermuda	Full ⁽²⁾	-	-		Full ⁽²⁾	-	-	
	Exane Inc	USA				S1	Full	100.0%	100.0%	V1/D3
	FSI Holdings Inc	USA	Full	100.0%	100.0%		Full	100.0%	100.0%	
	Starbird Funding Corp ¹	USA	Full	-	-		Full	-	-	
PACIFIC ASIA										
	Bank BNPP Indonesia PT	Indonesia	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP Arbitrage Hong Kong Ltd	Hong Kong	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP China Ltd	China	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP Finance Hong Kong Ltd	Hong Kong	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP Fund Services Australasia Pty Ltd	Australia	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP Fund Services Australasia Pty Ltd (New Zealand branch)	New Zealand	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP Global Securities Operations Private Ltd	India	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP India Holding Private Ltd	India	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP India Solutions Private Ltd	India	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP Malaysia Berhad	Malaysia	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP Securities Asia Ltd	Hong Kong	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP Securities India Private Ltd	India	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP Securities Japan Ltd	Japan	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP Securities Korea Co Ltd	Rep. of Korea	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP Securities Taiwan Co Ltd	Taiwan	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP Sekuritas Indonesia PT	Indonesia	Full	100.0%	100.0%	V4	Full	99.0%	99.0%	
	BPP Holdings Pte Ltd	Singapore	Full	100.0%	100.0%		Full	100.0%	100.0%	
	Contour Pte Ltd	Singapore								S2
	PT Andalan Multi Guna	Indonesia	Full	100.0%	100.0%	D1				
COMMERCIAL, PERSONAL BANKING & SERVICES										
COMMERCIAL, PERSONAL BANKING IN THE EURO ZONE										
Commercial, Personal Banking in France										
	2SF - Société des Services Fiduciaires	France	Equity	33.33%	33.33%	E2				
	Banque de Wallis et Futuna	France	Full ⁽¹⁾	51.0%	51.0%		Full ⁽¹⁾	51.0%	51.0%	
	BNPP Antilles Guyane	France	Full ⁽¹⁾	100.0%	100.0%		Full ⁽¹⁾	100.0%	100.0%	
	BNPP Développement	France	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP Développement Oblig	France	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP Factor	France	Full ⁽¹⁾	100.0%	100.0%		Full ⁽¹⁾	100.0%	100.0%	
	BNPP Factor (Spain branch)	Spain	Full ⁽¹⁾	100.0%	100.0%		Full ⁽¹⁾	100.0%	100.0%	
	BNPP Factor Sociedade Financeira de Credito SA	Portugal	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP Nouvelle Calédonie	France	Full ⁽¹⁾	100.0%	100.0%		Full ⁽¹⁾	100.0%	100.0%	
	BNPP Réunion	France	Full ⁽¹⁾	100.0%	100.0%		Full ⁽¹⁾	100.0%	100.0%	
	Compagnie pour le Financement des Loisirs	France	Full	100.0%	100.0%	V1/D5	Equity	46.0%	46.0%	
	Copartis	France	Full	100.0%	100.0%		Full	100.0%	100.0%	

Business	Name	Country	31 December 2022				31 December 2021			
			Method	Voting (%)	Interest (%)	Ref.	Method	Voting (%)	Interest (%)	Ref.
	Euro Securities Partners	France	Equity ⁽³⁾	50.0%	50.0%		Equity ⁽³⁾	50.0%	50.0%	
	GIE Ocean	France	Full	100.0%	100.0%		Full	100.0%	100.0%	
	Jivago Holding	France	Full	100.0%	100.0%		Full	100.0%	100.0%	E3
	Partecis	France	Equity ⁽³⁾	50.0%	50.0%		Equity ⁽³⁾	50.0%	50.0%	
	Paylib Services	France	Equity	14.3%	14.3%		Equity	14.3%	14.3%	
	Portzamparc	France	Full ⁽¹⁾	100.0%	100.0%		Full ⁽¹⁾	100.0%	100.0%	
	Protection 24	France								S2
	Société Lainoise de Participations	France				S4	Full	100.0%	100.0%	
BNL banca commerciale										
	Artigiancassa SPA	Italy	Full	73.9%	73.9%		Full	73.9%	73.9%	
	Banca Nazionale Del Lavoro SPA	Italy	Full	100.0%	100.0%		Full	100.0%	100.0%	
	EMF IT 2008 1 SRL ¹	Italy	Full	-	-		Full	-	-	
	Era Uno SRL ¹	Italy	Full	-	-		Full	-	-	E2
	Eutimm SRL	Italy	Full	100.0%	100.0%		Full	100.0%	100.0%	
	Finacit SPA	Italy	Full	60.0%	60.0%		Full	60.0%	60.0%	V2
	Immera SRL ¹	Italy	Full	-	-		Full	-	-	E1
	International Factors Italia SPA	Italy	Full	99.7%	99.7%		Full	99.7%	99.7%	
	Permico SPA	Italy	Equity	21.9%	21.9%	V4	Equity	21.6%	21.6%	
	Serfactoring SPA	Italy								S2
	Servizio Italia SPA	Italy	Full	100.0%	100.0%		Full	100.0%	100.0%	
	Sviluppo HQ Tiburtina SRL	Italy	Full	100.0%	100.0%		Full	100.0%	100.0%	
	Tierre Securitisation SRL ¹	Italy	Full	-	-		Full	-	-	
	Vela Consumer 2 SRL ¹	Italy								S1
	Vela Home SRL ¹	Italy				S3	Full	-	-	
	Vela Mortgages SRL ¹	Italy				S3	Full	-	-	
	Vela OBG SRL ¹	Italy	Full	-	-		Full	-	-	
	Vela RMBS SRL ¹	Italy	Full	-	-		Full	-	-	
	Worldline Merchant Services Italia SPA (Ex- Acepta SPA)	Italy	Equity	20.0%	20.0%	V2/D6	Full	100.0%	100.0%	
Commercial, Personal Banking in Belgium										
	Acepta BNPP Benelux	Belgium	Full	100.0%	99.9%		Full	100.0%	99.9%	
	Bancontact Paytoniq Company	Belgium	Equity	22.5%	22.5%		Equity	22.5%	22.5%	
	Banking Funding Company SA	Belgium				S3	Equity	33.5%	33.5%	
	BASS Master Issuer NV ¹	Belgium	Full	-	-		Full	-	-	
	Batopin	Belgium	Equity	25.0%	25.0%		Equity	25.0%	25.0%	E1
	Belgian Mobile ID	Belgium	Equity	12.2%	12.2%		Equity	12.2%	12.2%	V3
	BNPP Commercial Finance Ltd	UK	Full	100.0%	99.9%		Full	100.0%	99.9%	
	BNPP Factor AB	Sweden								S1
	BNPP Factor AS	Denmark	Full	100.0%	99.9%		Full	100.0%	99.9%	
	BNPP Factor GmbH	Germany	Full	100.0%	99.9%		Full	100.0%	99.9%	
	BNPP Factor NV	Netherlands								S1
	BNPP Factoring Support	Netherlands	Full	100.0%	99.9%		Full	100.0%	99.9%	
	BNPP Fortis	Belgium	Full	99.9%	99.9%		Full	99.9%	99.9%	
	BNPP Fortis (Spain branch)	Spain	Full	99.9%	99.9%		Full	99.9%	99.9%	

Business	Name	Country	31 December 2022				31 December 2021			
			Method	Voting (%)	Interest (%)	Ref.	Method	Voting (%)	Interest (%)	Ref.
	BNPP Fortis (United states branch)	USA	Full	99.9%	99.9%		Full	99.9%	99.9%	
	BNPP Fortis Factor NV	Belgium	Full	100.0%	99.9%		Full	100.0%	99.9%	
	BNPP Fortis Film Finance	Belgium	Full	100.0%	99.9%		Full	100.0%	99.9%	V4
	BNPP Fortis Funding SA	Luxembourg	Full	100.0%	99.9%		Full	100.0%	99.9%	
	BNPP FPE Belgium	Belgium	Full	100.0%	99.9%		Full	100.0%	99.9%	
	BNPP FPE Expansion	Belgium	Full	100.0%	99.9%		Full	100.0%	99.9%	
	BNPP FPE Management	Belgium	Full	100.0%	99.9%		Full	100.0%	99.9%	
	Bpost Banque	Belgium	Full	100.0%	99.9%	V1/D7	Equity ⁽³⁾	50.0%	50.0%	
	Credissimo	Belgium	Full	100.0%	99.9%		Full	100.0%	99.9%	
	Credissimo Hainaut SA	Belgium	Full	99.7%	99.7%		Full	99.7%	99.7%	
	Crédit pour Habitations Sociales	Belgium	Full	81.7%	81.6%		Full	81.7%	81.6%	
	Demetris NV	Belgium	Full	100.0%	99.9%	E1				
	Epimede ⁵	Belgium	Equity	-	-		Equity	-	-	
	Esmee Master Issuer ¹	Belgium	Full	-	-		Full	-	-	
	Immobilière Sauveniere SA	Belgium	Full	100.0%	99.9%		Full	100.0%	99.9%	
	Isabel SA NV	Belgium	Equity	25.3%	25.3%		Equity	25.3%	25.3%	
	Microstart	Belgium	Full	42.3%	76.8%		Full	42.3%	76.8%	V4
	Private Equity Investments (a)	BE/FR/LU	FV	-	-		FV	-	-	
	Sagip	Belgium	Full	100.0%	100.0%		Full	100.0%	100.0%	
	Sowo Invest SA NV	Belgium	Full	87.5%	87.5%		Full	87.5%	87.5%	
Commercial, Personal Banking in Luxembourg										
	BGL BNPP	Luxembourg	Full	66.0%	65.9%		Full	66.0%	65.9%	
	BGL BNPP (Germany branch)	Germany	Full	66.0%	65.9%		Full	66.0%	65.9%	
	BNPP Lease Group Luxembourg SA	Luxembourg	Full	100.0%	65.9%		Full	100.0%	65.9%	
	BNPP SB Re	Luxembourg	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	Cofhylux SA	Luxembourg	Full	100.0%	65.9%		Full	100.0%	65.9%	
	Compagnie Financière Ottomane SA	Luxembourg	Full	97.3%	97.3%		Full	97.3%	97.3%	
	Le Sphinx Assurances Luxembourg SA	Luxembourg	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	Lion International Investments SA	Luxembourg				S4	Full	100.0%	100.0%	
	Luxhub SA	Luxembourg	Equity	28.0%	18.5%		Equity	28.0%	18.5%	
	Visalux	Luxembourg	Equity	25.3%	16.7%		Equity	25.3%	16.7%	
COMMERCIAL, PERSONAL BANKING OUTSIDE THE EURO ZONE										
Europe-Mediterranean										
	Bank of Nanjing	China	Equity	13.9%	13.9%	V3	Equity	15.0%	15.0%	V1
	Banque Internationale pour le Commerce et l'Industrie de la Côte d'Ivoire	Ivory Coast	Full	59.8%	59.8%		Full	59.8%	59.8%	
	Banque Internationale pour le Commerce et l'Industrie de la Guinée	Guinea								S2
	Banque Internationale pour le Commerce et l'Industrie du Burkina Faso	Burkina Faso								S2
	Banque Internationale pour le Commerce et l'Industrie du Sénégal	Senegal	Full	54.1%	54.1%		Full	54.1%	54.1%	
	Banque Marocaine pour le Commerce et l'Industrie	Morocco	Full	67.0%	67.0%		Full	67.0%	67.0%	
	Banque Marocaine pour le Commerce et l'Industrie Banque Offshore	Morocco	Full	100.0%	67.0%		Full	100.0%	67.0%	
	Bantas Nakit AS	Türkiye	Equity ⁽³⁾	33.3%	16.7%		Equity ⁽³⁾	33.3%	16.7%	
	BDSI	Morocco	Full	100.0%	96.4%		Full	100.0%	96.4%	
	BGZ Poland ABS1 DAC ¹	Ireland	Full	-	-		Full	-	-	

Business	Name	Country	31 December 2022				31 December 2021			
			Method	Voting (%)	Interest (%)	Ref.	Method	Voting (%)	Interest (%)	Ref.
	BICI Bourse	Ivory Coast	Full	90.0%	52.0%		Full	90.0%	52.0%	V4
	BMCI Leasing	Morocco	Full	86.9%	58.2%		Full	86.9%	58.2%	
	BNPP Bank Polska SA	Poland	Full	87.4%	87.4%		Full	87.4%	87.4%	V3
	BNPP El Djazair	Algeria	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP Faktoring Spolka ZOO	Poland	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP Fortis Yatirimlar Holding AS	Türkiye	Full	100.0%	99.9%		Full	100.0%	99.9%	
	BNPP Group Service Center SA	Poland	Full	100.0%	87.4%	E1				
	BNPP IRB Participations	France	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP Solutions Spolka ZOO	Poland				S3	Full	100.0%	87.4%	V3
	BNPP Yatirimlar Holding AS	Türkiye	Full	100.0%	100.0%		Full	100.0%	100.0%	
	Dreams Sustainable AB	Sweden	Full	57.5%	57.5%	E3				
	Joint Stock Company UkrSibbank	Ukraine	Equity	60.0%	60.0%	D1	Full	60.0%	60.0%	
	TEB ARF Teknoloji Anonim Sirketi	Türkiye	Full	100.0%	72.5%		Full	100.0%	72.5%	E2
	TEB Faktoring AS	Türkiye	Full	100.0%	72.5%		Full	100.0%	72.5%	
	TEB Holding AS	Türkiye	Full	50.0%	50.0%		Full	50.0%	50.0%	
	TEB SH A	Serbia	Full	100.0%	50.0%		Full	100.0%	50.0%	
	TEB Yatirim Menkul Degerler AS	Türkiye	Full	100.0%	72.5%		Full	100.0%	72.5%	
	Türk Ekonomi Bankasi AS	Türkiye	Full	100.0%	72.5%		Full	100.0%	72.5%	
	Union Bancaire pour le Commerce et l'Industrie	Tunisia								S2
BancWest										
	BancWest Holding Inc	USA	Full	100.0%	100.0%	D2	Full	100.0%	100.0%	D2
	BancWest Holding Inc Grantor Trust ERC Subaccount ³	USA	Full	-	-	D2	Full	-	-	D2
	Bancwest Holding Inc Umbrella Trust ⁴	USA	Full	-	-	D2	Full	-	-	D2
	BancWest Investment Services Inc	USA	Full	100.0%	100.0%	D2	Full	100.0%	100.0%	D2
	Bank of the West	USA	Full	100.0%	100.0%	D2	Full	100.0%	100.0%	D2
	Bank of the West Auto Trust 2018-1 ¹	USA				S1	Full	-	-	D2
	Bank of the West Auto Trust 2019-1 ¹	USA	Full	-	-	D2	Full	-	-	D2
	Bank of the West Auto Trust 2019-2 ¹	USA	Full	-	-	D2	Full	-	-	D2
	BNPP Leasing Solutions Canada Inc	Canada	Full	100.0%	100.0%	D2	Full	100.0%	100.0%	
	BOW Auto Receivables LLC ¹	USA	Full	-	-	D2	Full	-	-	D2
	BWC Opportunity Fund 2 Inc ¹	USA	Full	-	-	D2	Full	-	-	D2
	BWC Opportunity Fund Inc ¹	USA	Full	-	-	D2	Full	-	-	D2
	CFB Community Development Corp	USA	Full	100.0%	100.0%	D2	Full	100.0%	100.0%	D2
	Claas Financial Services LLC	USA	Full	51.0%	51.0%	D2	Full	51.0%	51.0%	D2
	Commercial Federal Affordable Housing Inc	USA	Full	100.0%	100.0%	D2	Full	100.0%	100.0%	D2
	Commercial Federal Community Development Corp	USA								S1
	Commercial Federal Insurance Corp	USA								S1
	Commercial Federal Investment Service Inc	USA								S1
	First Santa Clara Corp ⁵	USA	Full	-	-	D2	Full	-	-	D2
	Liberty Leasing Co	USA								S1
	United California Bank Deferred Compensation Plan Trust ⁶	USA	Full	-	-	D2	Full	-	-	D2
	Ursus Real Estate Inc	USA	Full	100.0%	100.0%	D2	Full	100.0%	100.0%	D2
SPECIALISED BUSINESSES										
Personal Finance										

Business	Name	Country	31 December 2022				31 December 2021			
			Method	Voting (%)	Interest (%)	Ref.	Method	Voting (%)	Interest (%)	Ref.
	Alpha Crédit SA	Belgium	Full	100.0%	99.9%		Full	100.0%	99.9%	
	AutoFlorence 1 SRL ¹	Italy	Full	-	-		Full	-	-	
	AutoFlorence 2 SRL ¹	Italy	Full	-	-		Full	-	-	E2
	Autonoría 2019 ¹	France	Full	-	-		Full	-	-	
	Autonoría Spain 2019 ¹	Spain	Full	-	-		Full	-	-	
	Autonoría Spain 2021 FT ¹	Spain	Full	-	-		Full	-	-	E2
	Autonoría Spain 2022 FT ¹	Spain	Full	-	-	E2				
	Autop Ocean Indien	France				S4	Full	100.0%	97.8%	
	Axa Banque Financement	France	Equity	35.0%	35.0%		Equity	35.0%	35.0%	
	Banco Cetelem SA	Spain	Full	100.0%	100.0%		Full	100.0%	100.0%	
	Banco Cetelem SA	Brazil	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BGN Mercantii E Servicos Ltda	Brazil	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP Personal Finance	France	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP Personal Finance (Austria branch)	Austria	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP Personal Finance (Bulgaria branch)	Bulgaria	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP Personal Finance (Czech republic branch)	Czech Rep.	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP Personal Finance (Portugal branch)	Portugal	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP Personal Finance (Romania branch)	Romania	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP Personal Finance (Slovakia branch)	Slovakia	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP Personal Finance BV	Netherlands	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP Personal Finance South Africa Ltd	South Africa	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BON BNPP Consumer Finance Co Ltd (Ex- Suning Consumer Finance Co Ltd)	China	Equity	18.0%	18.0%	V1	Equity	15.0%	15.0%	
	Cafineo	France	Full ⁽¹⁾	51.0%	50.8%		Full ⁽¹⁾	51.0%	50.8%	
	Carrefour Banque	France	Equity	40.0%	40.0%		Equity	40.0%	40.0%	
	Central Europe Technologies SRL	Romania	Full	100.0%	100.0%		Full	100.0%	100.0%	E1
	Cetelem Algérie	Algeria								S1
	Cetelem America Ltda	Brazil	Full	100.0%	100.0%		Full	100.0%	100.0%	
	Cetelem Business Consulting Shanghai Co Ltd	China	Full	100.0%	100.0%	E1				
	Cetelem Gestion AIE	Spain	Full	100.0%	96.0%		Full	100.0%	96.0%	
	Cetelem SA de CV	Mexico	Full	100.0%	100.0%		Full	100.0%	100.0%	
	Cetelem Servicios Informaticos AIE	Spain	Full	100.0%	81.0%		Full	100.0%	81.0%	
	Cetelem Servicios SA de CV	Mexico				S4	Full	100.0%	100.0%	
	Cetelem Servicos Ltda	Brazil	Full	100.0%	100.0%		Full	100.0%	100.0%	
	Cofica Bail	France	Full ⁽¹⁾	100.0%	100.0%		Full ⁽¹⁾	100.0%	100.0%	
	Cofinoga Funding Two LP ⁵	UK								S1
	Cofiplan	France	Full ⁽¹⁾	100.0%	100.0%		Full ⁽¹⁾	100.0%	100.0%	
	Creation Consumer Finance Ltd	UK	Full	100.0%	100.0%		Full	100.0%	100.0%	
	Creation Financial Services Ltd	UK	Full	100.0%	100.0%		Full	100.0%	100.0%	
	Crédit Moderne Antilles Guyane	France	Full ⁽¹⁾	100.0%	100.0%		Full ⁽¹⁾	100.0%	100.0%	
	Crédit Moderne Océan Indien	France	Full ⁽¹⁾	97.8%	97.8%		Full ⁽¹⁾	97.8%	97.8%	
	Domofinance	France	Full ⁽¹⁾	55.0%	55.0%		Full ⁽¹⁾	55.0%	55.0%	
	Domos 2017 ¹	France				S1	Full	-	-	
	E Carat 10 ¹	France	Full	-	-		Full	-	-	

Business	Name	Country	31 December 2022				31 December 2021			
			Method	Voting (%)	Interest (%)	Ref.	Method	Voting (%)	Interest (%)	Ref.
	E Carat 7 PLC ¹	UK								S3
	E Carat 8 PLC ¹	UK								S3
	E Carat 9 PLC ¹	UK								S3
	E Carat 10 PLC ¹	UK				S3	Full	-	-	
	E Carat 11 PLC ¹	UK	Full	-	-		Full	-	-	
	E Carat 12 PLC ¹	UK	Full	-	-		Full	-	-	E2
	E Carat SA ¹	Luxembourg								S3
	Ekspres Bank AS	Denmark	Full	100.0%	100.0%		Full	100.0%	100.0%	
	Ekspres Bank AS (Norway branch)	Norway	Full	100.0%	100.0%		Full	100.0%	100.0%	
	Ekspres Bank AS (Sweden branch)	Sweden	Full	100.0%	100.0%		Full	100.0%	100.0%	
	Eos Arenas Belgium SA NV	Belgium	Equity	50.0%	49.9%		Equity	50.0%	49.9%	
	Evollis	France	Equity	41.0%	41.0%		Equity	41.0%	41.0%	E3
	Findomestic Banca SPA	Italy	Full	100.0%	100.0%		Full	100.0%	100.0%	
	Florence Real Estate Developments SPA	Italy	Full	100.0%	100.0%		Full	100.0%	100.0%	E1
	Florence SPV SRL ¹	Italy	Full	-	-		Full	-	-	
	GCC Consumo Establecimiento Financiero de Credito SA	Spain	Full	51.0%	51.0%		Full	51.0%	51.0%	
	Genius Auto Finance Co Ltd	China	Equity ⁽³⁾	20.0%	20.0%		Equity ⁽³⁾	20.0%	20.0%	
	International Development Resources AS Services SA	Spain	Full	100.0%	100.0%		Full	100.0%	100.0%	E1
	Iqera Services	France	Equity	24.5%	24.5%		Equity	24.5%	24.5%	
	Loisirs Finance	France	Full ⁽¹⁾	51.0%	51.0%		Full ⁽¹⁾	51.0%	51.0%	
	Magyar Cetelem Bank ZRT	Hungary	Full	100.0%	100.0%		Full	100.0%	100.0%	
	Neully Contentieux	France	Full	95.9%	95.6%		Full	95.9%	95.6%	
	Noria 2018-1 ¹	France	Full	-	-		Full	-	-	
	Noria 2020 ¹	France	Full	-	-		Full	-	-	
	Noria 2021 ¹	France	Full	-	-		Full	-	-	E2
	Noria Spain 2020 FT ¹	Spain	Full	-	-		Full	-	-	
	Olympia SAS	France								S3
	Opel Bank	France	Full	50.0%	50.0%		Full	50.0%	50.0%	
	Opel Bank (Austria branch)	Austria	Full	50.0%	50.0%		Full	50.0%	50.0%	
	Opel Bank (Germany branch)	Germany	Full	50.0%	50.0%		Full	50.0%	50.0%	
	Opel Bank (Greece branch)	Greece								S1
	Opel Bank (Italy branch)	Italy	Full	50.0%	50.0%		Full	50.0%	50.0%	
	Opel Bank (Spain branch)	Spain	Full	50.0%	50.0%		Full	50.0%	50.0%	
	Opel Finance BV	Belgium				S3	Full	100.0%	50.0%	
	Opel Finance NV	Netherlands	Full	100.0%	50.0%		Full	100.0%	50.0%	
	Opel Finance SA	Switzerland	Full	100.0%	50.0%		Full	100.0%	50.0%	
	Personal Finance Location	France	Full	100.0%	100.0%		Full	100.0%	100.0%	E1
	PF Services GmbH	Germany	Full	100.0%	100.0%		Full	100.0%	100.0%	E1
	Phedina Hypotheken 2010 BV ¹	Netherlands	Full	-	-		Full	-	-	
	RCS Botswana Pty Ltd	Botswana	Full	100.0%	100.0%		Full	100.0%	100.0%	
	RCS Cards Pty Ltd	South Africa	Full	100.0%	100.0%		Full	100.0%	100.0%	
	RCS Investment Holdings Namibia Pty Ltd	Namibia	Full	100.0%	100.0%		Full	100.0%	100.0%	
	Securitisation funds UCI and RMBS Prado (b) ¹	Spain	Equity ⁽³⁾	-	-		Equity ⁽³⁾	-	-	

Business	Name	Country	31 December 2022				31 December 2021			
			Method	Voting (%)	Interest (%)	Ref.	Method	Voting (%)	Interest (%)	Ref.
	Servicios Financieros Carrefour EFC SA	Spain	Equity	37.3%	40.0%		Equity	37.3%	40.0%	
	Soffin�a	France								S3
	Syigma Fundings Two Ltd	UK								S3
	Symag	France								S2
	TEB Finansman AS	T�rkiye	Full	100.0%	92.8%		Full	100.0%	92.8%	
	Union de Creditos Inmobiliarios SA	Spain	Equity ⁽³⁾	50.0%	50.0%		Equity ⁽³⁾	50.0%	50.0%	
	United Partnership	France	Equity ⁽³⁾	50.0%	50.0%		Equity ⁽³⁾	50.0%	50.0%	
	Vauxhall Finance PLC	UK	Full	100.0%	50.0%		Full	100.0%	50.0%	
	XFERA Consumer Finance EFC SA	Spain	Full	51.0%	51.0%		Full	51.0%	51.0%	
	Zhejiang Wisdom Puhua Financial Leasing Co Ltd	China	Equity ⁽³⁾	20.0%	20.0%		Equity ⁽³⁾	20.0%	20.0%	E3
Arval										
	Artel	France	Full ⁽²⁾	100.0%	99.9%		Full ⁽²⁾	100.0%	99.9%	
	Arval AB	Sweden	Full ⁽²⁾	100.0%	99.9%		Full ⁽²⁾	100.0%	99.9%	
	Arval AS	Denmark	Full ⁽²⁾	100.0%	99.9%		Full ⁽²⁾	100.0%	99.9%	
	Arval AS Norway	Norway	Full ⁽²⁾	100.0%	99.9%		Full ⁽²⁾	100.0%	99.9%	
	Arval Austria GmbH	Austria	Full ⁽²⁾	100.0%	99.9%		Full ⁽²⁾	100.0%	99.9%	
	Arval Belgium NV SA	Belgium	Full ⁽²⁾	100.0%	99.9%		Full ⁽²⁾	100.0%	99.9%	
	Arval Benelux BV	Netherlands				S4	Full ⁽²⁾	100.0%	99.9%	
	Arval Brasil Ltda	Brazil	Full ⁽²⁾	100.0%	99.9%		Full ⁽²⁾	100.0%	99.9%	
	Arval BV	Netherlands	Full ⁽²⁾	100.0%	99.9%		Full ⁽²⁾	100.0%	99.9%	
	Arval CZ SRO	Czech Rep.	Full ⁽²⁾	100.0%	99.9%		Full ⁽²⁾	100.0%	99.9%	
	Arval Deutschland GmbH	Germany	Full ⁽²⁾	100.0%	99.9%		Full ⁽²⁾	100.0%	99.9%	
	Arval Fleet Services	France	Full ⁽²⁾	100.0%	99.9%		Full ⁽²⁾	100.0%	99.9%	
	Arval Fuhrparkmanagement GmbH	Austria								S4
	Arval Hellas Car Rental SA	Greece	Full ⁽²⁾	100.0%	99.9%		Full ⁽²⁾	100.0%	99.9%	
	Arval India Private Ltd	India								S3
	Arval LLC	Russia	Full ⁽²⁾	100.0%	99.9%		Full ⁽²⁾	100.0%	99.9%	
	Arval Luxembourg SA	Luxembourg	Full ⁽²⁾	100.0%	99.9%		Full ⁽²⁾	100.0%	99.9%	
	Arval Magyarorszag KFT	Hungary	Full ⁽²⁾	100.0%	99.9%		Full ⁽²⁾	100.0%	99.9%	
	Arval Maroc SA	Morocco	Full ⁽²⁾	100.0%	89.0%		Full ⁽²⁾	100.0%	89.0%	
	Arval OY	Finland	Full ⁽²⁾	100.0%	99.9%		Full ⁽²⁾	100.0%	99.9%	
	Arval Reisa SPA	Chile	Equity	50.0%	50.0%		Equity	50.0%	50.0%	
	Arval Schweiz AG	Switzerland	Full ⁽²⁾	100.0%	99.9%		Full ⁽²⁾	100.0%	99.9%	
	Arval Service Lease	France	Full ⁽²⁾	100.0%	99.9%		Full ⁽²⁾	100.0%	99.9%	
	Arval Service Lease Aluger Operational Automoveis SA	Portugal	Full ⁽²⁾	100.0%	99.9%		Full ⁽²⁾	100.0%	99.9%	
	Arval Service Lease Italia SPA	Italy	Full ⁽²⁾	100.0%	99.9%		Full ⁽²⁾	100.0%	99.9%	
	Arval Service Lease Polska SP ZOO	Poland	Full ⁽²⁾	100.0%	99.9%		Full ⁽²⁾	100.0%	99.9%	
	Arval Service Lease Romania SRL	Romania	Full ⁽²⁾	100.0%	99.9%		Full ⁽²⁾	100.0%	99.9%	
	Arval Service Lease SA	Spain	Full ⁽²⁾	100.0%	99.9%		Full ⁽²⁾	100.0%	99.9%	
	Arval Slovakia SRO	Slovakia	Full ⁽²⁾	100.0%	99.9%		Full ⁽²⁾	100.0%	99.9%	
	Arval Trading	France	Full ⁽²⁾	100.0%	99.9%		Full ⁽²⁾	100.0%	99.9%	
	Arval UK Group Ltd	UK	Full ⁽²⁾	100.0%	99.9%		Full ⁽²⁾	100.0%	99.9%	
	Arval UK Leasing Services Ltd	UK	Full ⁽²⁾	100.0%	99.9%		Full ⁽²⁾	100.0%	99.9%	
	Arval UK Ltd	UK	Full ⁽²⁾	100.0%	99.9%		Full ⁽²⁾	100.0%	99.9%	

Business	Name	Country	31 December 2022				31 December 2021			
			Method	Voting (%)	Interest (%)	Ref.	Method	Voting (%)	Interest (%)	Ref.
	BNPP Fleet Holdings Ltd	UK	Full ⁽²⁾	100.0%	99.9%		Full ⁽²⁾	100.0%	99.9%	
	Cent ASL	France	Full ⁽²⁾	100.0%	99.9%		Full ⁽²⁾	100.0%	99.9%	E2
	Cofiparc	France	Full ⁽²⁾	100.0%	99.9%		Full ⁽²⁾	100.0%	99.9%	
	FCT Pulse France 2022 ^s	France	Full ⁽²⁾	-	-	E2				
	Greenval Insurance DAC	Ireland	Full ⁽²⁾	100.0%	99.9%		Full ⁽²⁾	100.0%	99.9%	
	Locadif	Belgium	Full ⁽²⁾	100.0%	99.9%		Full ⁽²⁾	100.0%	99.9%	
	Louveo	France	Full ⁽²⁾	100.0%	99.9%		Full ⁽²⁾	100.0%	99.9%	
	Personal Car Lease BV	Netherlands	Full ⁽²⁾	100.0%	99.9%	E3				
	Public Location Longue Durée	France	Full ⁽²⁾	100.0%	99.9%		Full ⁽²⁾	100.0%	99.9%	
	TEB Arval Arac Filo Kiralama AS	Türkiye	Full ⁽²⁾	100.0%	75.0%		Full ⁽²⁾	100.0%	75.0%	
	Terberg Busines Lease Group BV	Netherlands	Full ⁽²⁾	100.0%	99.9%	E3				
	Terberg Leasing Justlease Belgium BV	Belgium	Full ⁽²⁾	100.0%	99.9%	E3				
Leasing Solutions										
	All In One Vermietung GmbH	Austria	Full	100.0%	83.0%		Full	100.0%	83.0%	
	Aprolis Finance	France	Full	51.0%	42.3%		Full	51.0%	42.3%	
	Artegy	France	Full	100.0%	83.0%		Full	100.0%	83.0%	
	BNL Leasing SPA	Italy	Full	100.0%	95.5%		Full	100.0%	95.5%	
	BNPP 3 Step IT	France	Full	51.0%	42.3%		Full	51.0%	42.3%	
	BNPP 3 Step IT (Belgium branch)	Belgium	Full	51.0%	42.3%		Full	51.0%	42.3%	
	BNPP 3 Step IT (Germany branch)	Germany	Full	51.0%	42.3%		Full	51.0%	42.3%	
	BNPP 3 Step IT (Italy branch)	Italy	Full	51.0%	42.3%		Full	51.0%	42.3%	
	BNPP 3 Step IT (Netherlands branch)	Netherlands	Full	51.0%	42.3%		Full	51.0%	42.3%	
	BNPP 3 Step IT (United kingdom branch)	UK	Full	51.0%	42.3%		Full	51.0%	42.3%	
	BNPP Finansal Kiralama AS	Türkiye	Full	100.0%	82.5%		Full	100.0%	82.5%	
	BNPP Lease Group	France	Full ⁽¹⁾	100.0%	83.0%		Full ⁽¹⁾	100.0%	83.0%	
	BNPP Lease Group (Germany branch)	Germany	Full ⁽¹⁾	100.0%	83.0%		Full ⁽¹⁾	100.0%	83.0%	
	BNPP Lease Group (Italy branch)	Italy	Full ⁽¹⁾	100.0%	83.0%		Full ⁽¹⁾	100.0%	83.0%	
	BNPP Lease Group (Portugal branch)	Portugal	Full ⁽¹⁾	100.0%	83.0%		Full ⁽¹⁾	100.0%	83.0%	
	BNPP Lease Group (Spain branch)	Spain	Full ⁽¹⁾	100.0%	83.0%		Full ⁽¹⁾	100.0%	83.0%	
	BNPP Lease Group Belgium	Belgium	Full	100.0%	83.0%		Full	100.0%	83.0%	
	BNPP Lease Group GmbH & Co KG	Austria								S4
	BNPP Lease Group Leasing Solutions SPA	Italy	Full	100.0%	95.5%		Full	100.0%	95.5%	
	BNPP Lease Group PLC	UK	Full	100.0%	83.0%		Full	100.0%	83.0%	
	BNPP Lease Group Rentals Ltd	UK								S1
	BNPP Lease Group SP ZOO	Poland	Full	100.0%	83.0%		Full	100.0%	83.0%	
	BNPP Leasing Services	Poland	Full	100.0%	87.4%		Full	100.0%	87.4%	V3
	BNPP Leasing Solution AS	Norway	Full	100.0%	83.0%		Full	100.0%	83.0%	
	BNPP Leasing Solutions	Luxembourg	Full	100.0%	83.0%		Full	100.0%	83.0%	
	BNPP Leasing Solutions AB	Sweden	Full	100.0%	83.0%		Full	100.0%	83.0%	E1
	BNPP Leasing Solutions AS	Denmark	Full	100.0%	83.0%	E1				
	BNPP Leasing Solutions IFN SA	Romania	Full	100.0%	83.0%		Full	100.0%	83.0%	
	BNPP Leasing Solutions Ltd	UK	Full	100.0%	83.0%		Full	100.0%	83.0%	
	BNPP Leasing Solutions NV	Netherlands	Full	100.0%	83.0%		Full	100.0%	83.0%	

Business	Name	Country	31 December 2022				31 December 2021			
			Method	Voting (%)	Interest (%)	Ref.	Method	Voting (%)	Interest (%)	Ref.
	BNPP Leasing Solutions Suisse SA	Switzerland	Full	100.0%	83.0%		Full	100.0%	83.0%	
	BNPP Rental Solutions Ltd	UK	Full	100.0%	83.0%		Full	100.0%	83.0%	
	BNPP Rental Solutions SPA	Italy	Full	100.0%	83.0%		Full	100.0%	83.0%	
	Claas Financial Services	France	Full ⁽¹⁾	51.0%	42.3%		Full ⁽¹⁾	51.0%	42.3%	
	Claas Financial Services (Germany branch)	Germany	Full ⁽¹⁾	51.0%	42.3%		Full ⁽¹⁾	51.0%	42.3%	
	Claas Financial Services (Italy branch)	Italy	Full ⁽¹⁾	51.0%	42.3%		Full ⁽¹⁾	51.0%	42.3%	
	Claas Financial Services (Poland branch)	Poland	Full ⁽¹⁾	51.0%	42.3%		Full ⁽¹⁾	51.0%	42.3%	
	Claas Financial Services (Spain branch)	Spain	Full ⁽¹⁾	51.0%	42.3%		Full ⁽¹⁾	51.0%	42.3%	
	Claas Financial Services Ltd	UK	Full	51.0%	42.3%		Full	51.0%	42.3%	
	CNH Industrial Capital Europe	France	Full ⁽¹⁾	50.1%	41.6%		Full ⁽¹⁾	50.1%	41.6%	
	CNH Industrial Capital Europe (Belgium branch)	Belgium	Full ⁽¹⁾	50.1%	41.6%		Full ⁽¹⁾	50.1%	41.6%	
	CNH Industrial Capital Europe (Germany branch)	Germany	Full ⁽¹⁾	50.1%	41.6%		Full ⁽¹⁾	50.1%	41.6%	
	CNH Industrial Capital Europe (Italy branch)	Italy	Full ⁽¹⁾	50.1%	41.6%		Full ⁽¹⁾	50.1%	41.6%	
	CNH Industrial Capital Europe (Poland branch)	Poland	Full ⁽¹⁾	50.1%	41.6%		Full ⁽¹⁾	50.1%	41.6%	
	CNH Industrial Capital Europe (Spain branch)	Spain	Full ⁽¹⁾	50.1%	41.6%		Full ⁽¹⁾	50.1%	41.6%	
	CNH Industrial Capital Europe BV	Netherlands	Full	100.0%	41.6%		Full	100.0%	41.6%	
	CNH Industrial Capital Europe GmbH	Austria	Full	100.0%	41.6%		Full	100.0%	41.6%	
	CNH Industrial Capital Europe Ltd	UK	Full	100.0%	41.6%		Full	100.0%	41.6%	
	ES Finance	Belgium	Full	100.0%	99.9%		Full	100.0%	99.9%	
	FL Zeebrugge ⁵	Belgium	Full	-	-		Full	-	-	
	Folea Grundstücksverwaltungs und Vermietungs GmbH & Co ⁵	Germany				S1	Full	-	-	
	Fortis Lease	France	Full ⁽¹⁾	100.0%	83.0%		Full ⁽¹⁾	100.0%	83.0%	
	Fortis Lease Belgium	Belgium	Full	100.0%	83.0%		Full	100.0%	83.0%	
	Fortis Lease Deutschland GmbH	Germany	Full	100.0%	83.0%		Full	100.0%	83.0%	
	Fortis Lease Iberia SA	Spain	Full	100.0%	86.6%		Full	100.0%	86.6%	
	Fortis Lease Portugal	Portugal	Full	100.0%	83.0%		Full	100.0%	83.0%	
	Fortis Lease UK Ltd	UK	Full	100.0%	83.0%		Full	100.0%	83.0%	
	Fortis Vastgoedlease BV	Netherlands	Full	100.0%	83.0%		Full	100.0%	83.0%	
	Hefliq Heftruck Verhuur BV	Netherlands	Full	50.1%	41.5%		Full	50.1%	41.5%	
	JCB Finance	France	Full ⁽¹⁾	100.0%	41.6%		Full ⁽¹⁾	100.0%	41.6%	
	JCB Finance (Germany branch)	Germany	Full ⁽¹⁾	100.0%	41.6%		Full ⁽¹⁾	100.0%	41.6%	
	JCB Finance (Italy branch)	Italy	Full ⁽¹⁾	100.0%	41.6%		Full ⁽¹⁾	100.0%	41.6%	
	JCB Finance Holdings Ltd	UK	Full	50.1%	41.6%		Full	50.1%	41.6%	
	Manitou Finance Ltd	UK	Full	51.0%	42.3%		Full	51.0%	42.3%	
	MGF	France	Full ⁽¹⁾	51.0%	42.3%		Full ⁽¹⁾	51.0%	42.3%	
	MGF (Germany branch)	Germany	Full ⁽¹⁾	51.0%	42.3%		Full ⁽¹⁾	51.0%	42.3%	
	MGF (Italy branch)	Italy	Full ⁽¹⁾	51.0%	42.3%		Full ⁽¹⁾	51.0%	42.3%	
	Natio Energie 2	France	Full	100.0%	100.0%		Full	100.0%	100.0%	
	Natiocredibail	France	Full ⁽¹⁾	100.0%	100.0%		Full ⁽¹⁾	100.0%	100.0%	
	Pixel 2021 ¹	France	Full	-	-		Full	-	-	E2
	RD Leasing IFN SA	Romania								S4
	Same Deutz Fahr Finance	France	Full ⁽¹⁾	100.0%	83.0%		Full ⁽¹⁾	100.0%	83.0%	
	SNC Natiocredimurs	France	Full ⁽¹⁾	100.0%	100.0%		Full ⁽¹⁾	100.0%	100.0%	

Business	Name	Country	31 December 2022				31 December 2021			
			Method	Voting (%)	Interest (%)	Ref.	Method	Voting (%)	Interest (%)	Ref.
New Digital Businesses										
	Financière des Paiements Electroniques	France	Full	95.0%	95.0%		Full	95.0%	95.0%	
	Financière des Paiements Electroniques (Belgium branch)	Belgium	Full	95.0%	95.0%		Full	95.0%	95.0%	E2
	Financière des Paiements Electroniques (German branch)	Germany	Full	95.0%	95.0%	E2				
	Financière des Paiements Electroniques (Portugal branch)	Portugal	Full	95.0%	95.0%		Full	95.0%	95.0%	E2
	Financière des Paiements Electroniques (Spain branch)	Spain	Full	95.0%	95.0%		Full	95.0%	95.0%	
	Floa	France	Full	100.0%	100.0%	E3				
	Lyf SA	France	Equity ⁽³⁾	43.8%	43.8%		Equity ⁽³⁾	43.8%	43.8%	
	Lyf SAS	France	Equity ⁽³⁾	49.9%	49.9%	V4	Equity ⁽³⁾	49.1%	49.1%	
Personal Investors										
	Espresso Financial Services Private Ltd	India	Full	100.0%	100.0%		Full	100.0%	100.0%	
	Geojit Technologies Private Ltd	India	Equity	35.0%	35.0%		Equity	35.0%	35.0%	
	Human Value Developers Private Ltd	India	Full	100.0%	100.0%		Full	100.0%	100.0%	
	Sharekhan BNPP Financial Services Ltd	India	Full	100.0%	100.0%		Full	100.0%	100.0%	
	Sharekhan Ltd	India	Full	100.0%	100.0%		Full	100.0%	100.0%	
INVESTMENT & PROTECTION SERVICES										
Insurance										
	AEW Immocommercial ⁶	France	FV	-	-		FV	-	-	
	AG Insurance	Belgium	Equity	25.0%	25.0%		Equity	25.0%	25.0%	
	Agathe Retail France	France	FV	33.3%	33.3%		FV	33.3%	33.3%	
	Ambrosia Avril 2025 ⁵	France								S1
	Ambrosia Mars 2026 ⁵	France								S1
	Astridplaza	Belgium	Full ⁽²⁾	100.0%	98.5%		Full ⁽²⁾	100.0%	98.5%	V4
	Batipart Participations SAS	Luxembourg	FV	29.7%	29.7%		FV	29.7%	29.7%	
	Becquere ⁵	France	Full ⁽⁴⁾	-	-		Full ⁽⁴⁾	-	-	
	BNPP Actions Croissance ⁵	France	Full ⁽⁴⁾	-	-		Full ⁽⁴⁾	-	-	
	BNPP Actions Entrepreneurs ⁵	France				S3	Full ⁽⁴⁾	-	-	
	BNPP Actions Euro ⁵	France	Full ⁽⁴⁾	-	-		Full ⁽⁴⁾	-	-	
	BNPP Actions Monde ⁵	France	Full ⁽⁴⁾	-	-		Full ⁽⁴⁾	-	-	
	BNPP Actions PME ⁵	France				S3	Full ⁽⁴⁾	-	-	
	BNPP Actions PME ETI ⁶	France	Full ⁽⁴⁾	-	-		Full ⁽⁴⁾	-	-	E1
	BNPP Aqua ⁵	France	Full ⁽⁴⁾	-	-		Full ⁽⁴⁾	-	-	
	BNPP Best Selection Actions Euro ⁵	France	Full ⁽⁴⁾	-	-		Full ⁽⁴⁾	-	-	
	BNPP Cardif	France	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	BNPP Cardif BV	Netherlands	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	BNPP Cardif Compania de Seguros y Reaseguros SA	Peru	Equity *	100.0%	100.0%		Equity *	100.0%	100.0%	
	BNPP Cardif Emeklilik AS	Türkiye	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	BNPP Cardif General Insurance Co Ltd	Rep. of Korea				S2	Equity *	94.5%	94.5%	V4
	BNPP Cardif Hayat Sigorta AS	Türkiye	Equity *	100.0%	100.0%		Equity *	100.0%	100.0%	
	BNPP Cardif Levensverzekeringen NV	Netherlands								S4
	BNPP Cardif Livforsakring AB	Sweden	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	D1
	BNPP Cardif Livforsakring AB (Denmark branch)	Denmark	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	D1
	BNPP Cardif Livforsakring AB (Norway branch)	Norway	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	D1
	BNPP Cardif Pojistovna AS	Czech Rep.	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	

Business	Name	Country	31 December 2022				31 December 2021			
			Method	Voting (%)	Interest (%)	Ref.	Method	Voting (%)	Interest (%)	Ref.
	BNPP Cardif Schadeverzekeringen NV	Netherlands								S4
	BNPP Cardif Seguros de Vida SA	Chile	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	BNPP Cardif Seguros Generales SA	Chile	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	BNPP Cardif Services SRO	Czech Rep.	Equity *	100.0%	100.0%		Equity *	100.0%	100.0%	
	BNPP Cardif Servicios y Asistencia Ltda	Chile	Equity *	100.0%	100.0%		Equity *	100.0%	100.0%	
	BNPP Cardif Sigorta AS	Turkiye	Equity *	100.0%	100.0%		Equity *	100.0%	100.0%	
	BNPP Cardif TCB Life Insurance Co Ltd	Taiwan	Equity	49.0%	49.0%		Equity	49.0%	49.0%	
	BNPP Cardif Vita Compagnia di Assicurazione E Riassicurazione SPA	Italy	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	BNPP Convictions ⁵	France	Full ⁽⁴⁾	-	-		Full ⁽⁴⁾	-	-	
	BNPP CP Cardif Alternative ⁵	France				S3	Full ⁽²⁾	-	-	
	BNPP CP Cardif Private Debt ⁵	France	Full ⁽⁴⁾	-	-		Full ⁽⁴⁾	-	-	
	BNPP CP Infrastructure Investments Fund ⁵	France	Full ⁽⁴⁾	-	-		Full ⁽⁴⁾	-	-	
	BNPP Deep Value ⁵	France	Full ⁽⁴⁾	-	-		Full ⁽⁴⁾	-	-	
	BNPP Développement Humain ⁵	France	Full ⁽⁴⁾	-	-		Full ⁽⁴⁾	-	-	
	BNPP Diversipierre ⁵	France	Full ⁽²⁾	-	-		Full ⁽²⁾	-	-	
	BNPP Europe High Conviction Bond ⁵	France								S1
	BNPP France Crédit ⁵	France	Full ⁽²⁾	-	-		Full ⁽²⁾	-	-	
	BNPP Global Senior Corporate Loans ⁵	France	Full ⁽⁴⁾	-	-		Full ⁽⁴⁾	-	-	
	BNPP Indice Amerique du Nord ⁵	France	Full ⁽⁴⁾	-	-		Full ⁽⁴⁾	-	-	
	BNPP Indice Euro ⁵	France								S3
	BNPP Midcap France ⁵	France								S3
	BNPP Moderate Focus Italia ⁵	France	Full ⁽⁴⁾	-	-		Full ⁽⁴⁾	-	-	
	BNPP Monétaire Assurance ⁵	France	Full ⁽⁴⁾	-	-		Full ⁽⁴⁾	-	-	
	BNPP Multistratégies Protection 80 ⁵	France	Full ⁽⁴⁾	-	-		Full ⁽⁴⁾	-	-	
	BNPP Next Tech ⁵	France	Full ⁽⁴⁾	-	-		Full ⁽⁴⁾	-	-	E1
	BNPP Protection Monde ⁵	France	Full ⁽⁴⁾	-	-		Full ⁽⁴⁾	-	-	
	BNPP Sélection Dynamique Monde ⁵	France	Full ⁽⁴⁾	-	-		Full ⁽⁴⁾	-	-	
	BNPP Sélection Flexible ⁵	France				S3	Full ⁽⁴⁾	-	-	
	BNPP Smallcap Euroland ⁵	France	Full ⁽⁴⁾	-	-		Full ⁽⁴⁾	-	-	
	BNPP Social Business France ⁵	France	Full ⁽⁴⁾	-	-		Full ⁽⁴⁾	-	-	
	BOB Cardif Life Insurance Co Ltd	China	Equity	50.0%	50.0%		Equity	50.0%	50.0%	
	C Santé ⁵	France	Full ⁽²⁾	-	-		Full ⁽²⁾	-	-	
	Camgestion Obliflexible ⁵	France	Full ⁽²⁾	-	-		Full ⁽²⁾	-	-	
	Capital France Hotel	France	Full ⁽²⁾	98.5%	98.5%		Full ⁽²⁾	98.5%	98.5%	V4
	Cardif Alternatives Part I ⁵	France	Full ⁽²⁾	-	-		Full ⁽²⁾	-	-	
	Cardif Assurance Vie	France	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	Cardif Assurance Vie (Austria branch)	Austria	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	Cardif Assurance Vie (Belgium branch)	Belgium	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	Cardif Assurance Vie (Bulgaria branch)	Bulgaria	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	Cardif Assurance Vie (Germany branch)	Germany	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	Cardif Assurance Vie (Italy branch)	Italy	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	Cardif Assurance Vie (Netherlands branch)	Netherlands	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	Cardif Assurance Vie (Portugal branch)	Portugal	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	Cardif Assurance Vie (Romania branch)	Romania	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	

Business	Name	Country	31 December 2022				31 December 2021			
			Method	Voting (%)	Interest (%)	Ref.	Method	Voting (%)	Interest (%)	Ref.
	Cardif Assurance Vie (Spain branch)	Spain	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	Cardif Assurance Vie (Switzerland branch)	Switzerland	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	Cardif Assurance Vie (Taiwan branch)	Taiwan	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	Cardif Assurances Risques Divers	France	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	Cardif Assurances Risques Divers (Austria branch)	Austria	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	Cardif Assurances Risques Divers (Belgium branch)	Belgium	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	Cardif Assurances Risques Divers (Bulgaria branch)	Bulgaria	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	Cardif Assurances Risques Divers (Germany branch)	Germany	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	Cardif Assurances Risques Divers (Italy branch)	Italy	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	Cardif Assurances Risques Divers (Netherlands branch)	Netherlands	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	Cardif Assurances Risques Divers (Poland branch)	Poland	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	Cardif Assurances Risques Divers (Portugal branch)	Portugal	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	Cardif Assurances Risques Divers (Romania branch)	Romania	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	Cardif Assurances Risques Divers (Spain branch)	Spain	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	Cardif Assurances Risques Divers (Switzerland branch)	Switzerland	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	Cardif Assurances Risques Divers (Taiwan branch)	Taiwan	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	Cardif Biztosito Magyarorszag ZRT	Hungary	Equity *	100.0%	100.0%		Equity *	100.0%	100.0%	
	Cardif BNPP AM Emerging Bond ⁵	France	Full ⁽²⁾	-	-		Full ⁽²⁾	-	-	
	Cardif BNPP AM Global Senior Corporate Loans ⁵	France	Full ⁽⁴⁾	-	-		Full ⁽⁴⁾	-	-	
	Cardif BNPP IP Convertibles World ⁵	France				S3	Full ⁽²⁾	-	-	
	Cardif BNPP IP Signatures ⁵	France	Full ⁽²⁾	-	-		Full ⁽²⁾	-	-	
	Cardif BNPP IP Smid Cap Euro ⁵	France	Full ⁽²⁾	-	-		Full ⁽²⁾	-	-	
	Cardif BNPP IP Smid Cap Europe ⁵	France				S3	Full ⁽⁴⁾	-	-	E1
	Cardif Colombia Seguros Generales SA	Colombia	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	Cardif CPR Global Return ⁵	France	Full ⁽²⁾	-	-		Full ⁽²⁾	-	-	
	Cardif do Brasil Seguros e Garantias SA	Brazil	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	Cardif do Brasil Vida e Previdencia SA	Brazil	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	Cardif Edrim Signatures ⁵	France	Full ⁽²⁾	-	-		Full ⁽²⁾	-	-	
	Cardif El Djazair	Algeria	Equity *	100.0%	100.0%		Equity *	100.0%	100.0%	
	Cardif Forsakring AB	Sweden	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	D1
	Cardif Forsakring AB (Denmark branch)	Denmark	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	D1
	Cardif Forsakring AB (Norway branch)	Norway	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	D1
	Cardif IARD	France	Full ⁽²⁾	66.0%	66.0%		Full ⁽²⁾	66.0%	66.0%	
	Cardif Insurance Co LLC	Russia	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	Cardif Life Insurance Co Ltd	Rep. of Korea	Full ⁽²⁾	85.0%	85.0%		Full ⁽²⁾	85.0%	85.0%	
	Cardif Life Insurance Japan	Japan	Full ⁽²⁾	75.0%	75.0%		Full ⁽²⁾	75.0%	75.0%	
	Cardif Ltda	Brazil	Equity *	100.0%	100.0%		Equity *	100.0%	100.0%	
	Cardif Lux Vie	Luxembourg	Full ⁽²⁾	100.0%	88.6%		Full ⁽²⁾	100.0%	88.6%	
	Cardif Mexico Seguros de Vida SA de CV	Mexico	Equity *	100.0%	100.0%		Equity *	100.0%	100.0%	
	Cardif Mexico Seguros Generales SA de CV	Mexico	Equity *	100.0%	100.0%		Equity *	100.0%	100.0%	
	Cardif Non Life Insurance Japan	Japan	Full ⁽²⁾	100.0%	75.0%		Full ⁽²⁾	100.0%	75.0%	
	Cardif Nordic AB	Sweden	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	Cardif Pinnacle Insurance Holdings PLC	UK	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	Cardif Pinnacle Insurance Management Services PLC	UK				S2	Full ⁽²⁾	100.0%	100.0%	

Business	Name	Country	31 December 2022				31 December 2021			
			Method	Voting (%)	Interest (%)	Ref.	Method	Voting (%)	Interest (%)	Ref.
	Cardif Polska Towarzystwo Ubezpieczen Na Zycie SA	Poland	Equity *	100.0%	100.0%		Equity *	100.0%	100.0%	
	Cardif Retraite	France	Full ⁽²⁾	100.0%	100.0%	E1				
	Cardif Seguros SA	Argentina	Equity *	100.0%	100.0%		Equity *	100.0%	100.0%	D1
	Cardif Services AEIE	Portugal	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	Cardif Servicios SAC	Peru	Equity *	100.0%	100.0%		Equity *	100.0%	100.0%	
	Cardif Vita Convex Fund Eur ⁵	France	Full ⁽²⁾	-	-		Full ⁽²⁾	-	-	
	Cardimmo	France	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	Cargeas Assicurazioni SPA	Italy								S2
	Carma Grand Horizon SARL	France	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	Cedrus Carbon Initiative Trends ⁵	France	Full ⁽²⁾	-	-		Full ⁽²⁾	-	-	
	Centre Commercial Francilia	France	FV	21.7%	21.7%	E3				
	CFH Algonquin Management Partners France Italia	Italy	Full ⁽²⁾	100.0%	98.5%		Full ⁽²⁾	100.0%	98.5%	V4
	CFH Bercy	France	Full ⁽²⁾	100.0%	98.5%		Full ⁽²⁾	100.0%	98.5%	V4
	CFH Bercy Hotel	France	Full ⁽²⁾	100.0%	98.5%		Full ⁽²⁾	100.0%	98.5%	V4
	CFH Bercy Intermédiaire	France	Full ⁽²⁾	100.0%	98.5%		Full ⁽²⁾	100.0%	98.5%	V4
	CFH Berlin Holdco SARL	Luxembourg	Full ⁽²⁾	100.0%	98.5%		Full ⁽²⁾	100.0%	98.5%	E2
	CFH Boulogne	France	Full ⁽²⁾	100.0%	98.5%		Full ⁽²⁾	100.0%	98.5%	V4
	CFH Cap d'Ail	France	Full ⁽²⁾	100.0%	98.5%		Full ⁽²⁾	100.0%	98.5%	V4
	CFH Milan Holdco SRL	Italy	Full ⁽²⁾	100.0%	98.5%		Full ⁽²⁾	100.0%	98.5%	V4
	CFH Montmartre	France	Full ⁽²⁾	100.0%	98.5%		Full ⁽²⁾	100.0%	98.5%	V4
	CFH Montparnasse	France	Full ⁽²⁾	100.0%	98.5%		Full ⁽²⁾	100.0%	98.5%	V4
	Corosa	France	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	Darnell DAC	Ireland	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	Défense CB3 SAS	France	FV	25.0%	25.0%		FV	25.0%	25.0%	
	Diversipierre DVP 1	France	Full ⁽²⁾	100.0%	88.1%	V3	Full ⁽²⁾	100.0%	88.7%	E1
	Diversipierre Germany GmbH	Germany	Equity *	100.0%	88.1%	V3	Equity *	100.0%	88.7%	E1
	DVP European Channel	France	Equity *	100.0%	88.1%	V3	Equity *	100.0%	88.7%	E1
	DVP Green Clover	France	Equity *	100.0%	88.1%	V3	Equity *	100.0%	88.7%	E1
	DVP Haussmann	France	Equity *	100.0%	88.1%	V3	Equity *	100.0%	88.7%	E1
	DVP Heron	France	Equity *	100.0%	88.1%	V3	Equity *	100.0%	88.7%	E1
	Eclair ⁵	France	Full ⁽⁴⁾	-	-		Full ⁽⁴⁾	-	-	
	Elegia Septembre 2028 ⁵	France								S1
	EP L ⁵	France	Full ⁽²⁾	-	-		Full ⁽²⁾	-	-	
	EP1 Grands Moulins ⁵	France	Equity *	-	-		Equity *	-	-	
	FDI Poncelet	France	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	Fleur SAS	France	FV	33.3%	33.3%		FV	33.3%	33.3%	
	Foncière Partenaires ⁵	France	FV	-	-		FV	-	-	
	Fonds d'Investissements Immobiliers pour le Commerce et la Distribution	France	FV	25.0%	25.0%		FV	25.0%	25.0%	
	FP Cardif Convex Fund USD ⁵	France	Full ⁽²⁾	-	-		Full ⁽²⁾	-	-	
	Fundamenta ⁵	Italy	Full ⁽²⁾	-	-		Full ⁽²⁾	-	-	
	G C Thematic Opportunities II ⁵	Ireland	Full ⁽²⁾	-	-		Full ⁽²⁾	-	-	
	GIE BNPP Cardif	France	Full ⁽²⁾	100.0%	100.0%	V4	Full ⁽²⁾	99.9%	99.9%	V2
	GPinvest 10	France	FV	50.0%	50.0%		FV	50.0%	50.0%	E3

Business	Name	Country	31 December 2022				31 December 2021			
			Method	Voting (%)	Interest (%)	Ref.	Method	Voting (%)	Interest (%)	Ref.
	Harewood Helena 2 Ltd	UK	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	Hemisphere Holding	France	Equity	20.0%	20.0%		Equity	20.0%	20.0%	
	Hibernia France	France	Full ⁽²⁾	100.0%	98.5%		Full ⁽²⁾	100.0%	98.5%	V4
	High Street Retail	France								S2
	Horizon Development GmbH	Germany	FV	66.7%	62.9%		FV	66.7%	62.9%	V3
	Icare	France	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	Icare Assurance	France	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	ID Cologne A1 GmbH	Germany	Equity *	79.2%	74.1%		Equity *	79.2%	74.1%	E3
	ID Cologne A2 GmbH	Germany	Equity *	79.2%	74.1%		Equity *	79.2%	74.1%	E3
	Karapass Courtage	France	Equity *	100.0%	100.0%		Equity *	100.0%	100.0%	
	Korian et Partenaires Immobilier 1	France	FV	24.5%	24.5%		FV	24.5%	24.5%	
	Korian et Partenaires Immobilier 2	France	FV	24.5%	24.5%		FV	24.5%	24.5%	
	Luizaseg	Brazil	Equity	50.0%	50.0%		Equity	50.0%	50.0%	
	Natio Assurance	France	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	Natio Fonds Ampere 1 ⁵	France	Full ⁽⁴⁾	-	-		Full ⁽⁴⁾	-	-	
	Natio Fonds Athenes Investissement N 5 ⁵	France	Full ⁽²⁾	-	-		Full ⁽²⁾	-	-	
	Natio Fonds Colline International ⁵	France	Full ⁽²⁾	-	-		Full ⁽²⁾	-	-	
	Natio Fonds Collines Investissement N 1 ⁵	France	Full ⁽²⁾	-	-		Full ⁽²⁾	-	-	
	Natio Fonds Collines Investissement N 3 ⁵	France	Full ⁽²⁾	-	-		Full ⁽²⁾	-	-	
	NCVP Participacoes Societarias SA	Brazil	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	New Alpha Cardif Incubator Fund ⁵	France	Full ⁽²⁾	-	-		Full ⁽²⁾	-	-	
	OC Health Real Estate GmbH	Germany	FV	35.0%	31.0%		FV	35.0%	31.0%	E3
	Opéra Rendement ⁵	France	Full ⁽²⁾	-	-		Full ⁽²⁾	-	-	
	Paris Management Consultant Co Ltd	Taiwan	Equity *	100.0%	100.0%		Equity *	100.0%	100.0%	
	Permal Cardif Co Investment Fund ⁵	France	Full ⁽²⁾	-	-		Full ⁽²⁾	-	-	
	Pinnacle Insurance PLC	UK				S2	Full ⁽²⁾	100.0%	100.0%	
	Pinnacle Pet Holding Ltd	UK	Equity	30.0%	30.0%	E3				
	Poistovna Cardif Slovakia AS	Slovakia	Equity *	100.0%	100.0%		Equity *	100.0%	100.0%	
	Preim Healthcare SAS ⁵	France	FV	-	-		FV	-	-	
	PWH	France	FV	47.5%	47.5%		FV	47.5%	47.5%	
	Reumal Investissements	France	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	Rubin SARL	Luxembourg	FV	50.0%	50.0%		FV	50.0%	50.0%	
	Rueil Ariane	France	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	SAS HVP	France	Full ⁽²⁾	100.0%	98.5%		Full ⁽²⁾	100.0%	98.5%	V4
	Schroder European Operating Hotels Fund 1 ⁵	Luxembourg	FV	-	-		FV	-	-	E1
	SCI 68/70 rue de Lagny - Montreuil	France	Full ⁽²⁾	99.9%	99.9%	V3	Full ⁽²⁾	100.0%	100.0%	
	SCI Alpha Park	France	FV	50.0%	50.0%		FV	50.0%	50.0%	
	SCI Batipart Chadesrent	France	FV	20.0%	20.0%		FV	20.0%	20.0%	E2
	SCI Biv Malakoff	France	FV	23.3%	23.3%		FV	23.3%	23.3%	E3
	SCI BNPP Pierre I	France	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	SCI BNPP Pierre II	France	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	SCI Bobigny Jean Rostand	France	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	SCI Bouleragny	France	FV	50.0%	50.0%		FV	50.0%	50.0%	
	SCI Cardif Logement	France	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	

Business	Name	Country	31 December 2022				31 December 2021			
			Method	Voting (%)	Interest (%)	Ref.	Method	Voting (%)	Interest (%)	Ref.
	SCI Citylight Boulogne	France	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	SCI Clichy Nuovo	France	FV	50.0%	50.0%		FV	50.0%	50.0%	
	SCI Défense Etoile	France	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	SCI Défense Vendôme	France	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	SCI Etoile du Nord	France	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	SCI Fontenay Plaisance	France	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	SCI Imefa Velizy	France	FV	21.8%	21.8%		FV	21.8%	21.8%	
	SCI Le Mans Gare	France	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	SCI Liberté	France								S2
	SCI Nanterre Guillaeries	France	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	SCI Nantes Carnot	France	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	SCI Odyssee	France	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	SCI Pantin Les Moulins	France	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	SCI Paris Batignolles	France	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	SCI Paris Cours de Vincennes	France	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	SCI Paris Grande Armée	France	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	SCI Paris Turenne	France	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	SCI Portes de Claye	France	Equity	45.0%	45.0%		Equity	45.0%	45.0%	
	SCI Rue Moussorgski	France	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	SCI Rueil Caudron	France	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	SCI Saint Denis Landy	France	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	SCI Saint Denis Mitterrand	France	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	SCI Saint-Denis Jade	France	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	SCI SCOO	France	Equity	46.4%	46.4%		Equity	46.4%	46.4%	
	SCI Vendôme Athènes	France	FV	50.0%	50.0%		FV	50.0%	50.0%	
	SCI Villeurbanne Stalingrad	France	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	Secar	France	FV	55.1%	55.1%		FV	55.1%	55.1%	
	Seniorenzentren Deutschland Holding SARL	Luxembourg	FV	20.0%	17.7%		FV	20.0%	17.7%	
	Seniorenzentren Reinbeck Oberursel München Objekt GmbH	Germany	FV	35.0%	31.0%		FV	35.0%	31.0%	
	Seniorenzentrum Butzbach Objekt GmbH	Germany	FV	35.0%	31.0%		FV	35.0%	31.0%	
	Seniorenzentrum Heilbronn Objekt GmbH	Germany	FV	35.0%	31.0%		FV	35.0%	31.0%	
	Seniorenzentrum Kassel Objekt GmbH	Germany	FV	35.0%	31.0%		FV	35.0%	31.0%	
	Seniorenzentrum Wolftrathshausen Objekt GmbH	Germany	FV	35.0%	31.0%		FV	35.0%	31.0%	
	Services Epargne Entreprise	France	Equity	35.6%	35.6%		Equity	35.6%	35.6%	
	SNC Batipart Mermoz	France	FV	25.0%	25.0%		FV	25.0%	25.0%	E2
	SNC Batipart Poncelet	France	FV	25.0%	25.0%		FV	25.0%	25.0%	V1
	Société Française d'Assurances sur la Vie	France	Equity	50.0%	50.0%		Equity	50.0%	50.0%	
	Société Immobilière du Royal Building SA	Luxembourg	Full ⁽²⁾	100.0%	88.6%		Full ⁽²⁾	100.0%	88.6%	
	Tikehau Cardif Loan Europe ⁵	France	Full ⁽²⁾	-	-		Full ⁽²⁾	-	-	
	Valeur Pierre Epargne	France	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	Vallitres FCP ⁵	France	Full ⁽²⁾	-	-		Full ⁽²⁾	-	-	
	Velizy Holding	France	FV	33.3%	33.3%		FV	33.3%	33.3%	

Business	Name	Country	31 December 2022				31 December 2021			
			Method	Voting (%)	Interest (%)	Ref.	Method	Voting (%)	Interest (%)	Ref.
Wealth Management										
	BNPP Wealth Management DIFC Ltd	United Arab Emirates				S3	Full	100.0%	100.0%	
	BNPP Wealth Management Monaco	Monaco	Full ⁽¹⁾	100.0%	100.0%		Full ⁽¹⁾	100.0%	100.0%	
Asset Management										
	Alfred Berg Kapitalforvaltning AS	Norway	Full	100.0%	98.2%		Full	100.0%	98.2%	
	Alfred Berg Kapitalforvaltning AS (Sweden branch)	Sweden	Full	100.0%	98.2%		Full	100.0%	98.2%	
	Bancoestado Administradora General de Fondos SA	Chile	Equity	50.0%	49.1%		Equity	50.0%	49.1%	
	Baroda BNPP AMC Private Ltd (Ex- BNPP Asset Management India Private Ltd)	India	Equity ⁽³⁾	49.9%	49.0%	V3/D8	Full	100.0%	98.2%	
	BNPP AM International Hedged Strategies ⁵	France	Full ⁽⁴⁾	-	-		Full ⁽⁴⁾	-	-	E1
	BNPP Asset Management Asia Ltd	Hong Kong	Full	100.0%	98.2%		Full	100.0%	98.2%	
	BNPP Asset Management Be Holding	Belgium	Full	100.0%	98.2%		Full	100.0%	98.2%	
	BNPP Asset Management Belgium	Belgium				S4	Full	100.0%	98.2%	
	BNPP Asset Management Brasil Ltda	Brazil	Full	100.0%	99.5%		Full	100.0%	99.5%	
	BNPP Asset Management France	France	Full	100.0%	98.2%		Full	100.0%	98.2%	
	BNPP Asset Management France (Austria branch)	Austria	Full	100.0%	98.2%		Full	100.0%	98.2%	
	BNPP Asset Management France (Belgium branch)	Belgium	Full	100.0%	98.2%	E2				
	BNPP Asset Management France (Germany branch)	Germany	Full	100.0%	98.2%		Full	100.0%	98.2%	
	BNPP Asset Management France (Italy branch)	Italy	Full	100.0%	98.2%		Full	100.0%	98.2%	
	BNPP Asset Management France (Netherlands branch)	Netherlands	Full	100.0%	98.2%		Full	100.0%	98.2%	
	BNPP Asset Management Holding	France	Full	99.9%	98.2%		Full	99.9%	98.2%	
	BNPP Asset Management Japan Ltd	Japan	Full	100.0%	98.2%		Full	100.0%	98.2%	
	BNPP Asset Management Luxembourg	Luxembourg	Full	99.7%	97.9%		Full	99.7%	97.9%	
	BNPP Asset Management Nederland NV	Netherlands								S4
	BNPP Asset Management NL Holding NV	Netherlands	Full	100.0%	98.2%		Full	100.0%	98.2%	
	BNPP Asset Management PT	Indonesia	Full	100.0%	98.2%		Full	100.0%	98.2%	
	BNPP Asset Management Services Grouping	France	Full	100.0%	98.2%		Full	100.0%	98.2%	
	BNPP Asset Management UK Ltd	UK	Full	100.0%	98.2%		Full	100.0%	98.2%	
	BNPP Asset Management USA Holdings Inc	USA	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP Asset Management USA Inc	USA	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP B Institutional I ⁶	Belgium	Full ⁽⁴⁾	-	-		Full ⁽⁴⁾	-	-	
	BNPP Capital Partners	France								S4
	BNPP Dealing Services	France	Full	100.0%	98.2%		Full	100.0%	98.2%	
	BNPP Diversiflex ⁵	France	Full ⁽⁴⁾	-	-	E1				
	BNPP Easy ⁵	Luxembourg	Full ⁽⁴⁾	-	-	E1				
	BNPP European SME Debt Fund 2 SCSp RAIF ⁵	Luxembourg				S2	Full ⁽⁴⁾	-	-	E1
	BNPP Flexi I ⁵	Luxembourg	Full ⁽⁴⁾	-	-		Full ⁽⁴⁾	-	-	
	BNPP Funds ⁵	Luxembourg	Full ⁽⁴⁾	-	-		Full ⁽⁴⁾	-	-	
	BNPP L1 ⁵	Luxembourg								S3
	BNPP Multigestion ⁵	France				S3	Full ⁽⁴⁾	-	-	
	BNPP Perspectives ⁵	France								S3
	Drypnr AS	Norway	Full	100.0%	0.0%		Full	100.0%	0.0%	
	EAB Group PLC	Finland				S2	Equity	17.6%	17.3%	
	Fundquest Advisor	France				S4	Full	100.0%	98.2%	
	Fundquest Advisor (United kingdom branch)	UK				S1	Full	100.0%	98.2%	

Business	Name	Country	31 December 2022				31 December 2021			
			Method	Voting (%)	Interest (%)	Ref.	Method	Voting (%)	Interest (%)	Ref.
	Gambit Financial Solutions	Belgium	Full	100.0%	98.2%		Full	100.0%	98.2%	V1
	Groei Vermogen NV	Netherlands								S3
	Hailong Fortis Private Equity Fund Management Co Ltd	China	Equity	33.0%	32.4%		Equity	33.0%	32.4%	
	Harewood Helena 1 Ltd	UK	Full	100.0%	100.0%		Full	100.0%	100.0%	
	Harmony Prime ⁵	France	Full ⁽⁴⁾	-	-	E1				
	HFT Investment Management Co Ltd	China	Equity	49.0%	48.1%		Equity	49.0%	48.1%	
	Impax Asset Management Group PLC	UK	Equity	13.8%	13.5%		Equity	13.8%	13.5%	V3
	Shinhan BNPP Asset Management Co Ltd	Rep. of Korea								S2
	SME Alternative Financing DAC ⁵	Ireland	Full	-	-		Full	-	-	
	Theam Quant ⁶	Luxembourg	Full ⁽⁴⁾	-	-		Full ⁽⁴⁾	-	-	
	Theam Quant Europe Climate Carbon Offset Plan ⁵	France	Full ⁽⁴⁾	-	-	E1				
Real Estate										
	Auguste Thouard Expertise	France	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	BNPP Immobilier Promotion Immobilier d'Entreprise	France				S4	Full ⁽²⁾	100.0%	100.0%	
	BNPP Immobilier Résidences Services	France	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	BNPP Immobilier Résidentiel	France	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	BNPP Immobilier Résidentiel Service Clients	France				S4	Full ⁽²⁾	100.0%	100.0%	
	BNPP Real Estate	France	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	BNPP Real Estate (United arab emirates branch)	United Arab Emirates	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	BNPP Real Estate Advisory & Property Management Luxembourg SA	Luxembourg	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	BNPP Real Estate Advisory & Property Management UK Ltd	UK	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	BNPP Real Estate Advisory and Property Management Ireland Ltd	Ireland	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	BNPP Real Estate Advisory Belgium SA	Belgium								S4
	BNPP Real Estate Advisory Italy SPA	Italy	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	BNPP Real Estate Advisory Netherlands BV	Netherlands	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	BNPP Real Estate APM CR SRO	Czech Rep.								S2
	BNPP Real Estate Conseil Habitation & Hospitality	France	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	BNPP Real Estate Consult France	France	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	BNPP Real Estate Consult GmbH	Germany	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	BNPP Real Estate Facilities Management Ltd	UK	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	BNPP Real Estate Financial Partner	France	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	BNPP Real Estate GmbH	Germany	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	BNPP Real Estate Holding Benelux SA	Belgium	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	BNPP Real Estate Holding GmbH	Germany	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	BNPP Real Estate Investment Management Belgium	Belgium	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	BNPP Real Estate Investment Management France	France	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP Real Estate Investment Management Germany GmbH	Germany	Full	94.9%	94.9%		Full	94.9%	94.9%	
	BNPP Real Estate Investment Management Germany GmbH (Italy branch)	Italy	Full	94.9%	94.9%		Full	94.9%	94.9%	
	BNPP Real Estate Investment Management Germany GmbH (Spain branch)	Spain	Full	94.9%	94.9%		Full	94.9%	94.9%	
	BNPP Real Estate Investment Management Germany GmbH Lisbon Representative Office	Portugal	Full	94.9%	94.9%	E1				
	BNPP Real Estate Investment Management Italy SPA	Italy	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP Real Estate Investment Management Ltd	UK	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	BNPP Real Estate Investment Management Luxembourg SA	Luxembourg	Full	100.0%	100.0%		Full	100.0%	100.0%	

Business	Name	Country	31 December 2022				31 December 2021			
			Method	Voting (%)	Interest (%)	Ref.	Method	Voting (%)	Interest (%)	Ref.
	BNPP Real Estate Investment Management Spain SA	Spain	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	BNPP Real Estate Investment Management UK Ltd	UK	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	BNPP Real Estate Italy SRL	Italy				S4	Full ⁽²⁾	100.0%	100.0%	
	BNPP Real Estate Magyarország Tanácsadó És Ingatlankezelő ZRT	Hungary								S2
	BNPP Real Estate Poland SP ZOO	Poland	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	BNPP Real Estate Portugal Unipersonal LDA	Portugal	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	BNPP Real Estate Property Development & Services GmbH	Germany	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	BNPP Real Estate Property Development UK Ltd	UK	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	BNPP Real Estate Property Development Italy SPA	Italy				S4	Full ⁽²⁾	100.0%	100.0%	
	BNPP Real Estate Property Management Belgium	Belgium								S4
	BNPP Real Estate Property Management France SAS	France	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	BNPP Real Estate Property Management GmbH	Germany	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	BNPP Real Estate Property Management Italy SRL	Italy	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	BNPP Real Estate Singapore Pte Ltd	Singapore	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	BNPP Real Estate Spain SA	Spain	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	BNPP Real Estate Transaction France	France	Full ⁽²⁾	96.8%	96.8%	V1	Full ⁽²⁾	96.6%	96.6%	V2
	BNPP Real Estate Valuation France	France	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	Cariboo Development SL	Spain	Equity	65.0%	65.0%		Equity	65.0%	65.0%	
	Construction-Sale Companies (c)	France	Full / Equity ⁽²⁾	-	-		Full / Equity ⁽²⁾	-	-	
	Exeo Aura & Echo Offices Lda	Portugal	Equity	31.0%	31.0%	E2				
	GIE BNPP Real Estate (Ex- GIE Siège Issy)	France	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	Horti Milano SRL	Italy	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	Lifizz	France								S4
	Nanterre Arboretum	France	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	Parker Tower Ltd	UK	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	Partner's & Services	France	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	REPD Parker Ltd	UK	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	Sviluppo Residenziale Italia SRL	Italy	Full ⁽²⁾	100.0%	100.0%		Full ⁽²⁾	100.0%	100.0%	
	Wapiti Development SL	Spain	Equity	65.0%	65.0%		Equity	65.0%	65.0%	E1
Principal Investments										
	BNPP Agility Capital	France	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP Agility Fund Equity SLP ⁵	France	Full ⁽⁴⁾	-	-		Full ⁽⁴⁾	-	-	
	BNPP Agility Fund Private Debt SLP ⁵	France	Full ⁽⁴⁾	-	-		Full ⁽⁴⁾	-	-	
OTHER BUSINESS UNITS										
Property Companies (Property Used In Operations) and Others										
	Anlin Participation 5	France	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP Home Loan SFH	France	Full ⁽¹⁾	100.0%	100.0%		Full ⁽¹⁾	100.0%	100.0%	
	BNPP Partners for Innovation	France	Full	100.0%	100.0%		Full	100.0%	100.0%	V1/D4
	BNPP Partners for Innovation Belgium	Belgium	Full	100.0%	100.0%		Full	100.0%	100.0%	V1/D4
	BNPP Partners for Innovation Italia SRL	Italy	Full	100.0%	100.0%		Full	100.0%	100.0%	V1/D4
	BNPP Procurement Tech	France	Full	100.0%	100.0%		Full	100.0%	100.0%	
	BNPP Public Sector SA	France	Full	100.0%	100.0%		Full	100.0%	100.0%	
	Euro Secured Notes Issuer ⁵	France				S3	Full	-	-	

Business	Name	Country	31 December 2022				31 December 2021			
			Method	Voting (%)	Interest (%)	Ref.	Method	Voting (%)	Interest (%)	Ref.
	FCT Lafayette 2021 ¹	France	Full	-	-		Full	-	-	E2
	FCT Laffitte 2016 ¹	France								S1
	FCT Laffitte 2021 ¹	France	Full	-	-		Full	-	-	E2
	FCT Opéra 2014 ¹	France	Full	-	-		Full	-	-	
	FCT Pyramides 2022 ¹	France	Full	-	-	E2				
	GIE Groupement Auxiliaire de Moyens	France	Full	100.0%	100.0%		Full	100.0%	100.0%	
	GIE Groupement d'Etudes et de Prestations	France	Full	100.0%	100.0%		Full	100.0%	100.0%	
	Transvalor	France	Equity	20.2%	20.2%		Equity	20.2%	20.2%	E1

(a) At 31 December 2022, 14 Private Equity investment entities versus 11 Private Equity investment entities au 31 December 2021.

(b) At 31 December 2022, the securitisation funds UCI and RMBS Prado include 14 funds (FCC UCI 11, 12, 14 à 17, RMBS Prado V to X, Green Belem I et RMBS Belem No 2) versus 15 funds (FCC UCI 11, 12, 14 to 17, Fondo de Titulizacion Structured Covered Bonds, RMBS Prado III à IX et Green Belem I) at 31 December 2021.

(c) At 31 December 2022, 125 Construction-sale companies (91 Full and 34 Equity) versus 115 Construction-sale companies (89 Full and 26 Equity) at 31 December 2021.

As requested by the ANC 2016 regulation, the list of entities that are controlled by the Group, jointly controlled or under significant influence, but excluded from the scope of consolidation since their contribution to the consolidated financial statements would be immaterial to the Group, and the list of equity investments, are available on the "Regulated Information" page of the <https://invest.bnpparibas.com> website.

Changes in the scope of consolidation

New entries (E) in the scope of consolidation

E1 Passing qualifying thresholds

E2 Incorporation

E3 Purchase, gain of control or significant influence

Removals (S) from the scope of consolidation

S1 Cessation of activity (dissolution, liquidation, etc.)

S2 Disposal, loss of control or loss of significant influence

S3 Passing qualifying thresholds

S4 Merger, Universal transfer of assets and liabilities

Variance (V) in voting or ownership interest

V1 Additional purchase

V2 Partial disposal

V3 Dilution

V4 Increase in %

Miscellaneous

D1 Consolidation method change not related to fluctuation in voting or ownership interest

D2 Entities of a business held for sale

D3 The Verner Investissements group was consolidated under equity method in BNP Paribas Group until 13 July 2021. Following the additional purchase of interest by BNP Paribas Group, the Verner Investments group was fully consolidated (see note 7.c.)

D4 The BNPP Partners for Innovation group was consolidated under equity method in BNP Paribas Group until 31 December 2021. Following the additional purchase of interest by BNP Paribas Group, The BNPP Partners for Innovation group was fully consolidated.

D5 Compagnie pour le Financement des Loisirs was consolidated under equity method in BNP Paribas Group until 31 December 2021. Following the additional purchase of interest by BNP Paribas Group, Compagnie pour le Financement des Loisirs was fully consolidated.

D6 Worldline Merchant Services Italia SPA was fully consolidated in BNP Paribas Group until 31 December 2021. Following the partial disposal by the Group, Worldline Merchant Services Italia SPA was consolidated under equity method

D7 bpost banque was consolidated under equity method in BNP Paribas Group until 31 December 2021. Following the additional purchase of interest by BNP Paribas Group, bpost banque was fully consolidated.

D8 Baroda BNPP AMC Private Ltd was fully consolidated in BNP Paribas Group until 31 December 2021. Following the partial disposal by the Group, Baroda BNPP AMC Private Ltd was consolidated under equity method

Equity * Controlled but non material entities consolidated under the equity method as associates

FV Joint control or investment in associates measured at Fair Value through P&L

s Structured entities

t Securitisation funds

Prudential scope of consolidation

(1) French subsidiaries whose supervision of prudential requirements is complied with through the supervision on a consolidated basis of BNP Paribas SA, in accordance with article 7.1 of Regulation n°575/2013 of the European Parliament and of the Council.

(2) Entities consolidated under the equity method in the prudential scope

(3) Jointly controlled entities under proportional consolidation in the prudential scope

(4) Collective investment undertaking excluded from the prudential scope.

7.m FEES PAID TO THE STATUTORY AUDITORS

Year to 31 Dec. 2022	Deloitte		PricewaterhouseCoopers		Mazars		TOTAL	
<i>Excluding tax, in thousands of euros</i>	Total	%	Total	%	Total	%	Total	%
Statutory audits and contractual audits, including	17,529	74%	19,920	72%	11,565	88%	49,014	76%
- Issuer	4,501		5,870		2,919		13,290	
- Consolidated subsidiaries	13,028		14,050		8,646		35,724	
Services other than those required for their statutory audit engagement, including	6,142	26%	7,669	28%	1,606	12%	15,417	24%
- Issuer	2,062		2,021		897		4,980	
- Consolidated subsidiaries	4,080		5,648		709		10,437	
TOTAL	23,671	100%	27,589	100%	13,171	100%	64,431	100%
<i>of which fees paid to statutory auditors in France for the statutory audit and contractual audit</i>	<i>6,509</i>		<i>6,216</i>		<i>5,359</i>		<i>18,084</i>	
<i>of which fees paid to statutory auditors in France for services other than those required for their statutory audit engagements</i>	<i>1,739</i>		<i>2,353</i>		<i>1,046</i>		<i>5,138</i>	

Year to 31 Dec. 2021	Deloitte		PricewaterhouseCoopers		Mazars		TOTAL	
<i>Excluding tax, in thousands of euros</i>	Total	%	Total	%	Total	%	Total	%
Statutory audits and contractual audits, including	16,037	76%	17,925	70%	12,979	88%	46,941	76%
- Issuer	3,774		4,780		3,179		11,733	
- Consolidated subsidiaries	12,263		13,145		9,800		35,208	
Services other than those required for their statutory audit engagement, including	5,081	24%	7,727	30%	1,694	12%	14,502	24%
- Issuer	1,801		2,310		825		4,936	
- Consolidated subsidiaries	3,280		5,417		869		9,566	
TOTAL	21,118	100%	25,652	100%	14,673	100%	61,443	100%
<i>of which fees paid to statutory auditors in France for the statutory audit and contractual audit</i>	<i>5,710</i>		<i>5,225</i>		<i>5,962</i>		<i>16,897</i>	
<i>of which fees paid to statutory auditors in France for services other than those required for their statutory audit engagements</i>	<i>1,634</i>		<i>2,427</i>		<i>983</i>		<i>5,044</i>	

The audit fees paid to auditors which are not members of the network of one of the auditors certifying the consolidated financial statements and the non-consolidated financial statements of BNP Paribas SA, mentioned in the table above, amount to EUR 786 thousand for the year 2022 (EUR 373 thousand in 2021).

Services other than those required for the statutory audit engagement are mainly composed this year of reviews of the entity's compliance with regulatory requirements, and reviews of internal control quality by comparison with international standards (such as ISAE 3402) as part of services provided to customers, particularly in the Securities and Asset Management businesses, and expertise on the Bank's transformation projects.

APPENDIX 7 — EXTRACT OF THE INTERIM FINANCIAL STATEMENTS OF THE ISSUER FOR THE SIX-MONTH PERIOD ENDED 30 JUNE 2022

The information set out in this Appendix 7 has been extracted from our interim financial statements for the six-month period ended 30 June 2022. References to page numbers on the following pages are to the page numbers of our interim financial statements.

Our interim financial statements have been prepared in accordance with our usual accounting policies and procedures.

BNP PARIBAS ISSUANCE B.V.

Herengracht 595
1017 CE Amsterdam, the Netherlands
Chamber of Commerce Amsterdam no. 33215278

Interim financial statements

for the six-months period ended 30 June 2022

Independent auditor

Deloitte Accountants B.V.
Gustav Mahlerlaan 2970, P.O. Box 58110 – 1040 HC Amsterdam

BNP PARIBAS ISSUANCE B.V.

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BNP PARIBAS ISSUANCE B.V.

Management Board's Report

Description and principal activity of the Company

BNP Paribas Issuance B.V. (the Company) was incorporated on 10 November 1989 under the law of the Netherlands.

The principal objectives of the Company are to issue securities, such as warrants, certificates, private placements, notes, to enter into related OTC agreements and to issue and acquire financial instruments of any nature for the account of various entities of the BNP Paribas group.

Audit committee

The Company qualifies as an organisation of public interest pursuant to Dutch and EU law. By making use of the exemption for groups, the Company did not install an audit committee. The Company belongs to the BNP Paribas group, which has an audit committee that complies with international corporate governance rules.

Operating result

The net profit for the period January-June 2022 is EUR 33,344 (the six-months period ended 30 June 2021 with a profit amounting to EUR 18,453).

Liquidity and shareholder's equity

No significant changes to liquidity resources occurred. Equity increased with the result for the period. Liquidity and capital resources are considered sufficient given the objective and activities of the Company.

Risk appetite

The company has a low risk appetite and does not enter into unhedged economic positions.

Financial risk management

Market risk

The Company takes on exposure to market risks arising from positions in interest rates, currency exchange rates, commodities and equity products, all of which are exposed to general and specific market movements. However, these risks are hedged by swap agreements with BNP Paribas group entities and OTC option agreements or collateral arrangements and therefore, in principle, these risks are mitigated.

Credit risk

The Company has a significant concentration of credit risks as all OTC contracts are acquired from its parent company and other group companies. Taking into consideration the objective and activities of the Company and the fact that the BNP Paribas group is under supervision of the European Central Bank and the *Autorité de contrôle prudentiel et de résolution*, Paris, management considers these risks as acceptable. The long-term senior debt of BNP Paribas is rated (A+) by Standard & Poor's and (Aa3) by Moody's.

Liquidity risk

The Company has significant liquidity risk exposure. To mitigate this exposure, the Company entered into netting agreements with its parent company and other group companies.

Employees

The Company employs no personnel.

Future outlook

The company will continue to issue structured products.

BNP PARIBAS ISSUANCE B.V.

Statement

To the best of our knowledge, we declare that:

1. The financial statements of the six-month period ended 30 June 2022 give a fair view of the assets, the financial position and the profit of the Company; and
2. The financial report as at 30 June 2022 gives a fair view of the Company's condition on that balance sheet date; the development of the Company during the financial period ended 30 June 2022 and all material risks to which the Company is exposed.

Amsterdam, 9 September 2022

The Management Board,

Signed by
BNP Paribas Finance B.V.

BNP PARIBAS ISSUANCE B.V.

Balance sheet

(before appropriation of the net result)

		30-6-2022	31-12-2021
	Notes	EUR	EUR
ASSETS			
Financial fixed assets			
Repurchase agreements	1	4,241,207,703	5,834,572,458
OTC contracts		<u>69,754,544,668</u>	<u>61,737,944,892</u>
		73,995,752,371	67,572,517,350
Current assets			
OTC contracts	1	23,576,677,182	18,108,398,276
Repurchase agreements	1	2,566,338,390	1,395,370,218
Taxes receivable		17,912	16,690
Accounts receivable		1,229,339	271,129
Cash at banks		<u>213,588</u>	<u>785,492</u>
		26,144,476,411	19,504,841,805
TOTAL ASSETS		<u>100,140,228,782</u>	<u>87,077,359,155</u>
Shareholder's equity			
Share capital issued and paid up	2	45,379	45,379
Retained earnings		606,558	572,663
Result for the period		<u>33,344</u>	<u>33,895</u>
		685,281	651,937
Liabilities			
Long-term liabilities			
Issued securities	3	73,995,752,372	67,572,517,350
Current liabilities			
Issued securities	3	26,143,015,571	19,503,768,494
Other liabilities		<u>775,558</u>	<u>421,374</u>
		26,143,791,129	19,504,189,868
TOTAL EQUITY AND LIABILITIES		<u>100,140,228,782</u>	<u>87,077,359,155</u>

BNP PARIBAS ISSUANCE B.V.

Profit and loss account

		Period 1-1 to 30-6-2022	Period 1-1 to 30-6-2021
	Notes	EUR	EUR
Net result financial instruments	4	-	-
Fee income and other income	5	<u>431,920</u>	<u>228,760</u>
Operating income		431,920	228,760
Operating expenses			
General and administrative expenses		<u>-387,715</u>	<u>-204,042</u>
Operating result		44,205	24,718
Interest income		-	-
Bank costs and similar charges		<u>-4,977</u>	<u>-3,009</u>
Profit before taxation		39,228	21,709
Corporate income tax	6	-5,884	-3,256
Profit after taxation		<u><u>33,344</u></u>	<u><u>18,453</u></u>

BNP PARIBAS ISSUANCE B.V.

Cash flow statement

	Notes	Period 1-1 to 30-6-2022 EUR	Period 1-1 to 30-6-2021 EUR
Cash flow from operating activities			
Issuing of securities against OTC coverage		-	-
Received reimbursed issuing expenses		3,597,299	6,121,629
Received reimbursed general expenses		96,280	578,379
Paid issuing expenses		-3,904,944	-5,690,932
Paid general expenses		-374,454	-449,396
Received interest	7	15,178,193	12,302,857
Paid interest and fees	7	-15,178,193	-12,302,857
Received taxes		13,915	96,745
Cash flow from operating activities		<u>-571,904</u>	<u>656,425</u>
Cash flow from financing activities		-	-
Cash flow from investing activities		-	-
Increase/ (decrease) cash at banks		<u><u>-571,904</u></u>	<u><u>656,425</u></u>
Movements in cash at banks			
Cash at banks at 1 January		785,492	163,341
Increase / (decrease)		<u>-571,904</u>	<u>656,425</u>
Cash at banks at 30 June		<u>213,588</u>	<u>819,766</u>

Refer to page 10 for the principles for preparation of the cash flow statement.

BNP PARIBAS ISSUANCE B.V.

Notes to the financial statements

GENERAL

BNP Paribas Issuance B.V. (the Company), having its registered address at Amsterdam, was incorporated under the law of the Netherlands on 10 November 1989 as a private limited liability company.

The Company is registered at Chamber of Commerce Amsterdam with no. 33215278

The principal objectives of the Company are to issue securities, such as warrants, certificates, private placements, notes, to enter into related OTC agreements and to issue and acquire financial instruments of any nature for the account of various entities of the BNP Paribas group.

All outstanding shares of the Company are owned by BNP Paribas S.A., Paris, France, which company consolidates the figures of the Company. The financial statements of BNP Paribas S.A. can be found on the website group.bnpparibas.com.

SIGNIFICANT ACCOUNTING POLICIES

Basis of presentation

The interim financial information of the Company are prepared in accordance with the Richtlijn voor de Jaarverslaggeving 394 'Tussentijdse Berichten' (Dutch Accounting Standard 394 on Interim Reports). All amounts are stated in euros, the reporting currency, unless stated otherwise.

The accounting principles of the Company are summarised below. These accounting principles have all been applied consistently throughout the financial year and the preceding year unless indicated otherwise.

Accounting convention

The accounts are prepared under the historical cost convention, except for derivatives that are measured at fair value with changes through profit and loss.

Going concern basis of accounting

The financial statements have been prepared on a going concern basis. The Company has a master hedging agreement with BNP Paribas group entities under which issued securities are hedged by swap agreements and OTC option agreements or collateral arrangements. In addition, the Company has an agreement with BNP Paribas group entities to recharge its operating expenses with a margin of 10%.

Use of estimates and judgements

The preparation of the financial statements requires management to make judgements, estimates and assumptions that affect the application of accounting policies and the reported amounts of assets, liabilities, income and expenses. Actual results may differ from these estimates.

Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised in the period in which the estimates are revised and in any future periods affected.

Information about critical judgements in applying accounting policies that have the most significant effect on the amounts recognised in the financial statements is included in note 3.

Recognition of income and expenses

The net result of financial instruments includes capital gains and losses, currency results, interest income and expense and changes in fair value of the issued securities and related OTC contracts. As the Company enters into a swap agreement with a BNP Paribas group company and an OTC option at exactly the same terms and conditions of the issued security or a collateral arrangement at each issue of securities, there is a complete hedge of the economic risk of the Company. Therefore, the net result on the derivatives equals zero and is recorded on a net basis.

Fee income, other income and general and administrative expenses are taken in the year to which they relate. Profits are recognised in the year they are realised; losses are taken as soon as they are foreseeable.

BNP PARIBAS ISSUANCE B.V.

If securities are exercised against the Company, the Company fulfils its obligation by exercising the related swap agreements or OTC contracts with entities of the BNP Paribas group as the case may be. Issued securities and related swap agreements and OTC contracts are released simultaneously. Issued securities not exercised at maturity and the related swap agreements and OTC contracts are released without any further future obligation for the Company.

Valuation of assets and liabilities - general

Unless indicated otherwise, assets and liabilities are stated at amortised cost.

Financial instruments

Financial instruments include accounts receivable and accounts payable, cash at banks and cash equivalents, issued securities, acquired swap agreements and OTC contracts.

Financial assets and liabilities are recognised on the balance sheet when the Company becomes a party to the contractual provisions of the instrument. Financial assets and liabilities are derecognised when those contractual provisions are expired or transferred.

Non-derivative financial instruments are measured and accounted for at fair value upon initial recognition and subsequently at amortised cost.

Derivatives (Issued securities and OTC's)

Derivatives are measured and accounted for at fair value upon initial recognition and at subsequent dates. Gains and losses are directly recognised in profit and loss. Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants in the principal market or most advantageous market at the measurement date. Reference is made to note 3 for details about the determination of fair values.

The fair values of OTC contracts are calculated in the same way as their related issued securities.

The Company does not apply hedge accounting.

Currencies

The functional currency of the Company is the euro.

Balance sheet items denominated in currencies other than the euro are translated at the rate of exchange prevailing on the balance sheet date. Transactions in foreign currencies (not concerning derivatives) during the reporting period have been incorporated at the rate of settlement.

The premiums of the issued securities and the cost of the related OTC contracts are denominated in different currencies. Moreover, the underlying contracts of the securities have their own currency denominations, which are often based on a basket of currencies. The net effect of the currency risk is nil, though, as this risk is completely hedged.

Corporate income tax

Tax on the result is calculated by applying the rates for the financial year to the result in the profit and loss account.

BNP PARIBAS ISSUANCE B.V.

PRINCIPLES FOR PREPARATION OF THE CASH FLOW STATEMENT

The cash flow statement is prepared according to the direct method and consists of cash only; paid interest is taken into account under paid general expenses.

Netting agreements between the Company and entities of the BNP Paribas group have been drawn up for all flows resulting from securities and OTC contracts to avoid that payments have to be made for these flows. The outcome of this procedure is reflected in the cash flow report under the heading "Issuance of securities against OTC coverage".

FINANCIAL RISK MANAGEMENT

Market risk

The Company takes on exposure to market risks arising from positions in interest rates, currency exchange rates, commodities and equity products, all of which are exposed to general and specific market movements. However, these risks are hedged by swap agreements with BNP Paribas group entities and OTC option agreements or collateral arrangements and therefore, in principle, these risks are mitigated.

Credit risk

The Company has a significant concentration of credit risks as all swap agreements and OTC contracts are acquired from its parent company and other group companies. Taking into consideration the objective and activities of the Company and the fact that BNP Paribas group is under supervision of the European Central Bank and the *Autorité de contrôle prudentiel et de résolution*, Paris, management considers these risks as acceptable. The long-term senior debt of BNP Paribas is rated (A+) by Standard & Poor's and (Aa3) by Moody's.

Liquidity risk

The Company has significant liquidity risk exposure. To mitigate this exposure, the Company entered into netting agreements with its parent company and other group companies.

RELATED-PARTY TRANSACTIONS

The Company has entered into various agreements with its parent company and other group companies relating to the issuing of securities, the hedging of the related exposures and the reimbursement of costs. Taking into account the position of the Company within the group, these agreements are at arm's length and have the objective of limiting cash flow, credit and market risks.

NOTES TO THE BALANCE SHEET

1. Financial fixed assets

For most of the issued securities, OTC contracts with BNP Paribas group companies are agreed, having the same characteristics as the issued securities. This means that the underlying quantity, issue price, strike, parity, maturity and quoted price for exercise are identical. Concerning one issued security, the Company entered into repurchase agreements with BNP Paribas.

The Company is also active into repack transactions: the Company is issuing securitized notes, backed by bonds.

Refer to note 3 for the details of the issued securities and hence the OTC contracts.

2. Shareholder's equity

Share capital: The Company's share capital amounts to EUR 45,379 composed by 45,379 issued and fully paid-up shares.

During the financial year under review, there have been no changes in the issued or paid-up capital. The authorised capital has been annulled pursuant to a change of the articles of association.

BNP PARIBAS ISSUANCE B.V.

Condensed schedule of changes in equity:

	Share capital and share premium	Retained earnings	Result for the period	Total equity
Balance as at 31 december 2020	45,379	530,180	42,483	618,042
Appropriation of result	-	42,483	-42,483	-
Net result of the period	-	-	18,453	18,453
Balance as at 30 June 2021	45,379	572,663	18,453	636,495

	Share capital and share premium	Retained earnings	Result for the period	Total equity
Balance as at 31 december 2021	45,379	572,663	33,895	651,937
Appropriation of result	-	33,895	-33,895	-
Net result of the period	-	-	33,344	33,344
Balance as at 30 June 2022	45,379	606,558	33,344	685,281

3. Issued securities

The Company establishes securities programmes and issues securities such as warrants, notes and certificates exercisable pursuant to the terms and conditions of such securities programmes. Entities of the BNP Paribas group have agreed to purchase the securities at the same time. The entities of the BNP Paribas group distribute the securities to third parties. BNP Paribas S.A. acts as guarantor for the securities programmes towards the investors.

Remaining maturity of the issued securities	Fair value 30-06-2022	Fair value 31-12-2021
	EUR	EUR
Up to 1 year	26,143,015,571	19,503,768,494
From 1- 5 years	41,131,635,065	39,137,674,311
Exceeding 5 years	32,864,117,307	28,434,843,039
Financial fixed assets	73,995,752,372	67,572,517,350
Total as per end period	100,138,767,943	87,076,285,844

BNP PARIBAS ISSUANCE B.V.

Methods of valuation of the issued securities 30-06-2022	Level 1	Level 2	Level 3	Total
	EUR	EUR	EUR	EUR
Warrants	-	6,135,377,346	5,327,211,080	11,462,588,426
Certificates	622,270	39,472,117,000	16,896,282,068	56,369,021,338
MTN	3,694,140	22,365,793,784	9,937,670,255	32,307,158,179
Total	4,316,410	67,973,288,130	32,161,163,403	100,138,767,943

Methods of valuation of the issued securities 31-12-2021	Level 1	Level 2	Level 3	Total
	EUR	EUR	EUR	EUR
Warrants	-	6,156,257,850	2,069,486,664	8,225,744,514
Certificates	128,014	23,811,157,559	24,569,480,056	48,380,765,629
MTN	- 12	23,152,293,147	7,317,482,566	30,469,775,701
Total	128,002	53,119,708,556	33,956,449,286	87,076,285,844

BNP Paribas group including the Company determines the fair value of financial instruments either by using prices obtained directly from external data or by using valuation techniques. These valuation techniques are primarily market and income approaches, encompassing generally accepted models (e.g. discounted cash flows, Black-Scholes model and interpolation techniques). They maximize the use of observable inputs and minimize the use of unobservable inputs. They are calibrated to reflect current market conditions and valuation adjustments are applied as appropriate when some factors such as model, liquidity and credit risks are not captured by the models or their underlying inputs but are nevertheless considered by market participants when setting the exit price.

The unit of measurement is generally the individual financial asset or financial liability, but a portfolio-based measurement can be elected subject to certain conditions. Accordingly, the group retains this portfolio-based measurement exception to determine the fair value when some group of financial assets and financial liabilities with substantially similar and offsetting market risks or credit risks are managed on the basis of a net exposure, in accordance with the documented risk management strategy.

Assets and liabilities measured or disclosed at fair value are categorised into the three following levels of the fair value hierarchy:

Level 1: Fair values are determined using directly quoted prices in active markets for identical assets and liabilities. Characteristics of an active market include the existence of a sufficient frequency and volume of activity and of readily available prices.

Level 2: Fair values are determined based on valuation techniques for which significant inputs are observable market data, either directly or indirectly. These techniques are regularly calibrated, and the inputs are corroborated with information from active markets.

Level 3: Fair values are determined using valuation techniques for which significant inputs are unobservable or cannot be corroborated by market-based observations due, for instance, to the illiquidity of the instrument and significant model risk. An unobservable input is a parameters for which there are no market data available and that is, therefore, derived from proprietary assumptions about what other market participants would consider when assessing fair value. The assessment of whether a product is illiquid or subject to significant model risks is a matter of judgment.

The level in the fair value hierarchy within which the asset or liability is categorised in its entirety is based upon the lowest level input that is significant to the entire fair value. All given estimated fair values are related to the market conditions prevailing at year end; the future values may differ.

BNP PARIBAS ISSUANCE B.V.

When issued, securities are publicly offered or privately placed. Sometimes privately placed securities are listed for the secondary market. Listed securities are listed on stock exchanges in/and outside of the European Union; the related OTC contracts are not listed. The majority of the issued securities are not traded actively in active markets.

No accrued interest is presented in the balance sheet because the accrued interest is part of the market value of the derivatives as disclosed in the balance sheet. The net result on the derivatives equals zero and is recorded on a net basis in the profit and loss account, see note 4.

Conditions that can influence the future cash flow

In general, it is assumed that the securities and the related swap agreements and OTC contracts are exercised at the exercise dates mentioned in the final terms of the securities against the fair value as determined. Based on these two assumptions the above specification based on maturity has been prepared. Netting agreements between the Company and entities of the BNP Paribas group have been drawn up for all flows resulting from securities, OTC contracts, swap agreements and collateral arrangements to avoid that payments have to be made for these flows. Conditions that could influence future cash flows will therefore have no impact on the cash flow of the Company.

NOTES TO THE PROFIT & LOSS ACCOUNT

4. Net result financial instruments

The net result of derivatives includes capital gains and losses, currency results, interest income and expense and changes in fair value on the issued securities and related swap agreements and OTC contracts. As the Company enters into an OTC option or swap agreement with a BNP Paribas group company at exactly the same terms and conditions of the issued security, at each issue of securities, there is a complete hedge of the economic risk of the Company. Therefore, the net result on the derivatives equals zero and is recorded on a net basis.

5. Fee income and other income

Other income concerns recharged general and administrative expenses increased with an up-count of 10%, based on cost plus agreements concluded for an indefinite period of time. These costs have been or will be invoiced to BNP Paribas group companies.

6. Corporate income tax

The corporate income tax is the estimated charge for the period amounting to EUR 5,884. The rate for the financial year 2022 is 15% (for taxable amounts up to EUR 395,000).

As from 1 January 2020, BNP Paribas Issuance B.V. is no more part of the consolidated tax group (fiscale eenheid) for Dutch corporate income tax purposes with other BNP Paribas group entities domiciled in the Netherlands.

Issuing expenses and remunerations

Issuing expenses are expenses related to issuing of the securities for the account of the Company and are reimbursed by BNP Paribas group companies, if charged to the Company.

The sole member of the Management Board will charge a management fee of EUR 32,250 over the reporting period (over the first six months of 2021: EUR 32,250).

As from 30 June 2022, Deloitte Accountants B.V. has been appointed as the external auditor of the Company. The audit fee with regard to the semi-annual report 2022 is EUR 36,750.

BNP PARIBAS ISSUANCE B.V.

NOTES TO THE CASH FLOW STATEMENT

7. Received interest and paid interest and fees

These cash flows relate to a new repack transaction in 2019 (notes issued by the Company backed by bonds). The company receives monthly interest and pays fees to BNP Paribas Group entities. The remainder is paid as interest to the noteholders.

OTHER

Commitments, contingencies and off-balance items

The Company has issued securities with pledged collateral. The value of the pledged collateral as at 30 June 2022 amounts to EUR 6,226,164,358 (31 December 2021: EUR 6,301,633,914).

Employees

The Company employs no personnel.

Subsequent events

No subsequent events have occurred.

Amsterdam, 9 September 2022

The Management Board,

Signed by
BNP Paribas Finance B.V.

BNP PARIBAS ISSUANCE B.V.

Other information

Statutory arrangements concerning the appropriation of profits

Paragraphs 1 and 2 of Article 19 of the articles of association:

19.1 The allocation of profits accrued in a financial year shall be determined by the Shareholders' Body. If the Shareholders' Body does not adopt a resolution regarding the allocation of the profits prior to or at latest immediately after the adoption of the annual accounts, the profits will be reserved.

19.2 Distribution of profits shall be made after the adoption of the annual accounts if permissible under the law given the contents of the annual accounts.

The Shareholders' Body is defined as the body of the Company consisting of shareholders entitled to vote.

Audit

The independent audit report is included on the next page.

PARTIES

OUR REGISTERED OFFICE

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