

## NBC Paris - Product Information and Risk Disclosures

As per the Markets in Financial Instruments Directive (Directive 2014/65/EU) ("MIFID II"), NBC Paris is required to provide its professional clients with a description of the nature of, and risks associated with, financial instruments made available through its investment services and/or ancillary services.

This notice provides only a general description of some of the risks relating to such financial instruments. You should not rely on this notice as a comprehensive description of all risks relating to transactions in the below financial instruments. You are responsible for ensuring you understand your exposure to risks or potential losses in relation to a transaction.

### DEBT SECURITIES

Debt securities include fixed income investments such as bonds. Debt securities can be more stable than many other investment types, but are not without risk. The value of debt securities can experience volatility in some circumstances, due to factors such as interest rate sensitivity, market perception of the creditworthiness of the issuer, general market liquidity, and/or other economic factors. Debt securities issued by emerging market governments or smaller corporate issuers may be more volatile than those issued by major governments and companies. If an issuer is experiencing financial difficulty, capital invested in debt securities issued by such issuer may be at risk. Additional risks may be associated with certain types of debt securities, such as zero coupon bonds, foreign currency bonds, convertible bonds, reverse convertible bonds, indexed bonds and subordinated bonds.

### OTC DERIVATIVES

Over-the-counter (OTC) derivatives include swaps, forwards, options and swaptions that are traded bilaterally pursuant to a contract privately negotiated between the two counterparties to the transaction. The key risks associated with OTC derivatives include market risks (movements in reference rates or prices), counterparty credit risks, and liquidity risks. During periods of market stress, limited market liquidity could make it difficult to execute a transaction or liquidate an existing position at an advantageous price. The same considerations apply with respect to particularly large transactions. The following provides further information regarding the nature and risks of different types of OTC derivatives.

### Interest rate swaps

Fixed-for-floating: In a fixed-for-floating interest rate swap, one party makes periodic payments based on a fixed rate that is agreed upon at the execution of the swap, while the other party makes payments based on a floating rate that may be reset periodically.

From the perspective of a fixed rate payer, an increase in the overall level of fixed interest rates of the relevant tenors in the fixed-for-floating swap market (e.g., an upward shift of the relevant yield curve) will generally cause the swap to increase in value, because the fixed rate payer's contractually specified fixed rate obligations will be relatively lower with respect to the higher fixed rate then prevailing in the market. Conversely, if the overall level of fixed interest rates in the fixed-for-floating swap market falls, the value of the swap to the fixed rate payer will generally decline. From the perspective of the floating rate payer, the corresponding value changes will be reversed. Under certain fixed-for-floating interest rate swaps, known as "inverse floaters," the floating interest rate will be determined by subtracting the reference rate from a fixed level (among other features of the

calculation), which causes the floating interest rate to fluctuate inversely with the level of the reference rate. In this case, an upward shift of the relevant yield curve would generally cause an inverse floater to decline in value from the perspective of the fixed rate payer, and vice versa.

Overnight indexed swap: The term “overnight indexed swap” (“OIS swap”) generally refers to a fixed-for-floating swap in which the floating reference rate is an overnight interbank rate. Because the interval between payments under an OIS swap typically encompasses multiple daily observations of the overnight rate, the payment computation must take these multiple values into account. Various methods are possible, including arithmetic averaging and daily compounding with various compounding conventions. The compounding conventions may be included within the definition of the reference rate, or may be explicitly provided for in the swap confirmation.

Single currency basis swap: In a single currency basis swap, periodic payments are exchanged based on two floating reference rates, both denominated in the same currency, which may include two floating reference rates that are different designated maturities of the same underlying rate. The value of a basis swap generally is sensitive to changes in the relationship between the two floating rates, which in turn depends on market conditions affecting the supply and demand for funds or debt instruments in markets relevant for each reference rate. If the floating rates have different designated maturities, the value of the basis swap will be particularly sensitive to the shape of the relevant yield curve, and changes in its steepness or an inversion of the yield curve may result in significant losses. Accordingly, a basis swap with floating rates of the same underlying rate but different designated maturities may sometimes be referred to as a “steepener” or “flattener.” If leverage is applied to the applicable difference in the reference rates, or “basis,” any adverse movements of the reference rates from your perspective will be magnified.

Cross currency rate swap: In a cross-currency rate swap, payments are exchanged based on either two floating reference rates, one floating rate and one fixed rate, or two fixed rates, each with a corresponding notional amount denominated in a different currency. Notional amounts are exchanged on the effective date and the maturity date, although in some transactions notional amounts are not exchanged, creating a coupon-only cross currency rate swap. In a mark-to-market cross-currency swap, the notional amount in one currency (the “variable currency”) will be adjusted to maintain a constant value in terms of the other notional currency (the “constant currency”), and in addition to the other amounts payable on a payment date the parties will exchange a mark-to-market payment based on the change in the value of the variable currency relative to the constant currency over the payment period. The value of a cross-currency rate swap will depend on interest rates and yield curves in each currency, as well as the spot and forward exchange rates between the two currencies. Cross-currency rate swaps generally involve an exchange of different currencies, in which case settlement risk will be present unless the parties have arranged an effective mechanism for payment-versus payment-settlement. In some cases, the terms of a cross-currency rate swap may provide that amounts calculated in one or both of the notional currencies are converted into a settlement currency (which may be one of the notional currencies or may be a different currency) and netted.

Forward starting swap: The term “forward starting swap” generally refers to a fixed-for-floating interest rate swap where the terms are negotiated today but the swap does not initiate until some specified date in the future. Upon such date, a forward starting swap will operate as a typical fixed-for-floating interest rate swap does. For example, an investor who wants a swap with a three-year duration beginning one year from today can enter into a forward starting swap. Investors may wish to do this when they want to lock in certain rates that are being offered today. A forward starting swap can be equivalent to combining two spot fixed-for-floating swaps, and therefore the risks to investors are similar to those of fixed-for-floating swaps. From the perspective of the fixed rate payer, an increase in the overall level of fixed interest rates after the time the swap is executed will generally cause the forward starting swap to increase in value, because the fixed rate payer will have agreed to pay a rate that is now lower than prevailing rates. Conversely, if the overall level of fixed interest rates decreases, the value of the forward starting swap to the fixed rate payer will generally decline. From the perspective of the floating rate payer, the corresponding value changes will be reversed.

Accreting and amortizing swaps: In a standard fixed-for-floating swap, the notional principal amount of the swap upon which the fixed and floating payments are made is fixed for the life of the swap. In an accreting swap, the notional principal amount of the swap grows over time. Therefore, the fixed rate payments will increase over time and the floating rate payments will be calculated based on a growing principal amount. Conversely, in an

amortizing swap the notional principal amount of the swap decreases over time. The rate of accretion or amortization can be set to a specified level or tied to a reference rate. The pricing and valuation of accreting and amortizing swaps is no different than that of a fixed-for-floating rate swap. However, it should be noted that in the case of an accreting swap, exposure to changes in interest rates increases as time goes on, since the notional principal amount of the swap is increasing. Exposure to changes in interest rates decreases as time goes on in the case of an amortizing swap, since the notional principal amount of the swap is decreasing.

Constant maturity swap: In a constant maturity swap, the floating rate payment is based on a reference rate or yield of a specified, constant maturity. That is, instead of being tied to a rate such as LIBOR on each periodic reset, the floating rate leg will be periodically reset to what the fixed rate prevailing in the market at such time is for a swap with a given, constant maturity and a comparable opposite leg. This is called the “CMS rate.” The payment opposite the CMS rate leg may be a fixed rate, a standard floating rate or another CMS rate. The value of a constant maturity swap will depend on the shape of the yield curve. Generally, a constant maturity payer will benefit from a flattening or inversion of the yield curve and is exposed to the risk of the yield curve steepening. Other types of constant maturity swaps, including constant maturity Treasury swaps and constant maturity mortgage swaps, are similar to the constant maturity swap described above, except that the floating rate is based on a Treasury bond or a mortgage-backed security with a specified constant maturity, as applicable.

Range accrual swap: A range accrual swap will have one or more legs that pay either a fixed or floating rate payment, where interest only accrues at the specified rate on days on which one or more specified conditions is met. For example, interest may only accrue on such leg on days when 3 month LIBOR is within a specified range or ranges. The party paying a simple fixed or floating leg and receiving payments based on any range accrual leg assumes the risk that the reference rate, level, price or other value will stay outside of the specified range or ranges in which interest accrues (or, more generally, that the specified accrual condition does not occur). The condition for accrual may be observed daily during each payment period or weekly, monthly or at such other time period as may be agreed upon by the parties. The range or ranges can stay the same throughout the life of the swap or could change according to a predefined schedule. If the accrual of interest is subject to conditions relating to two different Underliers (called a “dual range accrual swap”), then the swap will be subject to risks associated with both Underliers, and no interest will accrue if either Underlier is outside of the relevant range, even if the other is within the relevant range.

Zero coupon swap: A zero coupon swap is a fixed-for-floating interest rate swap under which the fixed leg consists of a single fixed payment at maturity of the swap, rather than periodic payments over the term of the swap. The floating rate payer has increased credit exposure to the fixed rate payer under a zero coupon swap as compared to a conventional fixed-for-floating interest rate swap because of the greater amount that is owed to the floating rate payer by the fixed rate payer for a longer period of time. The floating rate payer also has increased exposure to fluctuations in general interest rates under a zero coupon swap as compared to a conventional fixed-for-floating interest rate swap because the floating rate payer will not receive fixed payments that it could otherwise reinvest at market rates throughout the term of the swap.

Other valuation considerations: The value of an interest rate swap may be determined by reference to a series of forward rates for each future calculation period. A forward rate can be viewed as representing the currently prevailing fixed forward price of a particular future floating rate payment. Forward rates may be observable market rates in some cases, or may be interpolated from observed rates or implied by zero-coupon interest rates with tenors corresponding to the beginning and end of the relevant calculation period. In general, the portion of the value of an interest rate swap that is attributable to the exchange of payments on a given payment date may be determined by discounting a payment of the forward rate to present value at an appropriate discount rate (which may be based on a different yield curve than used to derive the forward rates) and comparing this amount to the discounted present value of the corresponding fixed rate payment, in the case of a fixed-for-floating swap, or the corresponding payment of the forward rate for the other floating leg, in the case of a basis swap. Consequently, the value will depend not only on the current level of the interest rates of the same designated maturity as the floating reference rate, but also on the entire yield curve up to the maturity date of the swap. The value may be affected by changes in the shape of the yield curve as well as the overall level of interest rates. For certain types of swaps under which payment flows do not correspond in timing or amount to payments on the traded instruments that define the reference rates, valuations may depend on volatilities of forward rates. The pricing of such swaps is inherently more complex than the pricing of simpler interest rate swaps and generally requires use of models that describe fluctuations of the yield curve or approximated methods such as convexity

adjustments. Examples of such swaps include arrears-setting swaps (i.e., in which a floating rate is set at the end of a calculation period and applied retroactively) and constant maturity swaps.

### **Forward rate agreements**

A forward rate agreement (“FRA”) generally is an agreement to exchange payments based on the difference between (A) a fixed rate that is agreed upon at execution and (B) a floating rate that will be observed at some future date. If the FRA specifies a settlement date prior to the end of the accrual period for the observed floating rate, then the fixed and floating amounts that will accrue are discounted (typically using the observed floating rate to determine the discount factor) to their present value on the settlement date. This discount factor may differ from the rate at which you would be able to invest or borrow funds. Valuation considerations for FRAs are generally similar to those for interest rate swaps. The specified floating rate may be an interest rate, such as LIBOR, or a yield on a specified bond, such as the yield on a specified U.S. Treasury bond. If your objective in entering into a FRA is to hedge the interest rate you will be required to pay under an expected future financing, you should consider whether the floating rate under the FRA is determined on the same basis as that on which the interest rate you are hedging will be determined. Any differences may reduce the effectiveness of the FRA for your hedging purposes. A FRA entered into for the purpose of hedging the interest rate you will be required to pay under an expected future financing may also be referred to as a “rate lock agreement.”

### **Options / Swaptions**

Under an interest rate option, the parties have exposure to only one direction in the movements of a reference rate or the spread between reference rates. In the case of a call option, the “option buyer” pays a premium and will receive a payment from the “option seller” upon exercise if the reference rate or spread exceeds a specified strike level at the applicable time, and will otherwise not be entitled to any payment from the option seller. In the case of a put option, the option buyer pays a premium and will receive a payment from the option seller upon exercise if the reference rate or spread is less than a specified strike level at the applicable time, and will otherwise not be entitled to any payment from the option seller. If the option buyer pays the premium at the commencement of the Rates Transaction, the credit exposure under the Rates Transaction will be one-way (i.e., only the option buyer faces counterparty credit risk). If the option buyer pays the premium during or at the conclusion of the Rates Transaction, both parties will have counterparty credit risk.

A Rates Transaction commonly referred to as a “cap” is a series of call options on a specified reference rate, and a Rates Transaction commonly referred to as a “floor” is a series of put options on a specified reference rate. A party may enter into a cap or a floor as an individual Rates Transaction, or a cap and/or floor may be embedded in a Rates Transaction with other features.

A “collar” is a Rates Transaction in which one of the parties purchases a cap and sells a floor. The premium received from selling the floor may offset all or a portion of the premium for the purchased cap, or may in some instances be greater than the cap premium. As with other options, the sale of a floor or cap entails certain risks. If you are considering purchasing a collar in order to hedge a floating rate borrowing, you should be aware that by selling the embedded floor you will forego any benefit from reduced borrowing costs if interest rates decline below the strike rate of the floor.

An interest rate swaption is an option that provides one party with the right, but not the obligation, to enter into an interest rate swap at an agreed-upon fixed rate on the specified future exercise date or dates. In a “pay-fixed” swaption, the holder of the swaption has the right to enter into an interest rate swap as a payer of the fixed rate and receiver of the floating rate, whereas in a “receive-fixed” swaption, the holder has the right to enter into an interest rate swap as a receiver of the fixed rate and a payer of the floating rate. In either case, the writer of the swaption has the obligation to enter into the opposite side of the interest rate swap from the holder. In some cases a swaption only uses the underlying swap as a means to determine the amount payable upon exercise of the swaption. In that case, the underlying swap will be treated as if it terminated immediately upon exercising the swaption.

In some cases, you may decide to purchase an interest rate option or swaption to lock in interest rate hedging terms in advance of a future financing. You should be aware that if the future transaction is not consummated for any reason, you will have received no hedging benefit from the premium payment and other costs incurred in purchasing the option or swaption.

In some cases, you may decide to sell an interest rate option or swaption. Your objective in selling the option or swaption, for example, may be to capture the value of options you own, such as an option to redeem or prepay indebtedness, or your anticipated flexibility in determining when and whether to issue future indebtedness. You should be aware that such strategies are inherently risky, depend on a confluence of factors that are difficult to predict and may result in substantial losses.

A call option and a pay-fixed swaption generally increase in value as the underlying reference rate or spread, or the par swap rate (i.e., the value of the fixed rate at which a swap has zero present value) for the underlying swap, increases, assuming other relevant factors remain unchanged. The converse is true for a put option and a receive-fixed swaption. The price of any option or swaption will reflect both an intrinsic value component, which may be zero, and a time premium component. The pricing of interest rate options and swaptions is inherently more complex than the pricing of many other options because the value is a function of the entire yield curve rather than a single market price. Valuation models differ in the parameters used to describe fluctuations of the yield curve, and may be significantly more complex than option pricing models employed for other asset classes based on a single volatility.

Options and swaptions have an exercise style, which may be European, American or Bermudan, and exercise may be subject to various conditions. You should review and understand the conditions and requirements for exercising an interest rate option or swaption and the consequences of exercise.

### **Foreign Exchange Forward Contracts**

One of the most common types of Foreign Exchange Transaction is the foreign exchange forward contract (“FX Forward”), which is an agreement to buy one currency against the delivery of another currency at a rate set on the trade date for settlement on a specified date in the future. Under a deliverable FX Forward, the Transaction terms provide for an exchange of payments in each of the two currencies on the settlement date. Under a non-deliverable FX Forward (“NDF”), the Transaction terms provide for the payment of a net cash settlement amount on the settlement date in lieu of delivery of the notional amounts of the bought currency and the sold currency. The cash settlement amount is determined by converting the notional amount of one of the currencies (the “reference currency”) into the other currency (the “settlement currency”) at a spot foreign exchange rate that is observed on a pre-agreed pricing source or determined using another pre-agreed method (such source or method, the “settlement rate option”) on a date (“valuation date”) prior to the settlement date, and netting the currency amounts so that a single net payment in the settlement currency is made on the settlement date by the party owing the excess. In some NDFs, each of the bought currency and the sold currency is converted into a third currency that serves as the settlement currency. In either case, under an NDF no payment or account transfer takes place in the reference currency.

### **Foreign exchange options**

Foreign exchange options (“FX Options”) are Transactions that give the buyer of the option the right, but not the obligation, to make or take delivery of one currency in exchange for taking or making delivery of another currency at a pre-determined exchange rate. Similar to FX Forwards, FX Options may be settled on a deliverable or non-deliverable basis.

Buying options involves less risk than selling options as an investor may allow the option to lapse if the price of the underlying asset becomes adverse to their interests. In such a situation the maximum loss is limited to the premium, plus any commission or other transaction charges. However, if you buy a call option on a futures contract and the counterparty later exercises the option this will expose you to contingent liability risks, as identified above, and those risks associated with futures.

The risks involved in writing an option are significantly greater than those involved in buying options. You may be liable for margin to maintain your position and losses well in excess of any premium may be sustained. By writing an option, you accept a legal obligation to purchase or sell the underlying asset (or make an economically equivalent cash payment) if the option is exercised against you, regardless of the movement of the price of the underlying asset away from the exercise price. The risk involved in this is reduced if you already own the underlying asset. However, if you do not own the underlying asset the risk can be unlimited. Only experienced

persons with the complete knowledge of the applicable conditions and potential risk exposure should contemplate writing uncovered options.