

Negative Interest Rates Disclosure (including disclosures regarding benchmark rate floors)

Effect of Negative Interest Rates and Benchmark Floors on Underlying Hedged Items (Loans, Credit Facilities and Debt Instruments)

Variable (or “floating”) interest rates payable on loans, credit facilities and debt instruments are typically calculated as the sum of a benchmark rate such as LIBOR or SOFR (which resets periodically at an agreed frequency) and a percentage spread (or “margin”). If the benchmark rate turns negative as a result of central bank monetary policies or other economic developments,¹ this should not be presumed to deprive lenders or bondholders of all or part of their margin or principal, or to require lenders or bondholders to pay negative interest when no such promise to pay has been made. This margin is meant to compensate lenders and bondholders for making loans or acquiring debt instruments (including for the associated credit risk).

To address this, explicit 0% benchmark rate floors² have become common in syndicated and large corporate loans and are frequently being included in loans, credit facilities and debt instruments to make it clear that the margin over the benchmark rate is not reduced by negative rates. Instead of 0% benchmark rate floors, some lenders have begun including benchmark rate floors above 0% in loans and credit facilities (e.g., in some cases as high as 1%). These floors provide that if the benchmark rate falls below the floor rate of the loan or credit facility, the benchmark rate would be deemed to be the floor rate for purposes of the loan or credit facility, with the margin being added to the floor rate to compute the interest rate of the loan or credit facility.

The emergence of negative rates in certain economies and the inclusion of benchmark rate floors in underlying hedged items raise issues for borrowers and debt issuers to consider with their independent advisors when acquiring interest rate swaps to hedge against the risk of benchmark rates rising. Whether or not an underlying loan, credit facility or debt instrument is subject to an express or implied benchmark rate floor, there could be a mismatch between the interest payable by a borrower or debt issuer on the underlying hedged item and the cash flows it expects to receive or pay under the related interest rate swap, since interest rate swaps are typically offered without benchmark rate floors. This mismatch could also occur in the event that the parties agree to a benchmark rate floor on the loan or credit facility that is not the same as the floor, if any, on the floating leg of the swap. In addition to these issues, you may also wish to consider the accounting implications of such mismatches by consulting

¹ Just because a central bank rate in a particular country becomes negative does not mean that money market or benchmark lending rates in that country will turn negative, although it may be more likely. In Europe, certain benchmark rates have fallen below zero after the respective central bank rate turned negative, including CHF LIBOR, STIBOR, CIBOR, EONIA, EURIBOR and certain euro LIBOR rates.

² These interest rate floors provide that if the benchmark rate is negative, the benchmark rate is deemed to be zero for purposes of interest under the loan, credit facility or debt instrument. Alternatively, if such interest is to be computed by expressly taking into account a negative benchmark rate, the documents could provide for the margin to increase by the absolute value of such negative rate, which would have the same effect as a 0% floor. References herein to explicit 0% floors include either structure.

with your accountants, including the effect (if any) on the accounting treatment (such as hedge accounting treatment) of the related interest rate swaps.

Effect of Negative Interest Rates on Swaps (Negative Floating Rates)

Express wording in the terms of swap transactions is required to place a 0% floor on LIBOR, SOFR or other floating benchmark rate of a swap transaction, and no such 0% floor is included in an interest rate swap or other swap transaction unless mutually agreed between the parties as reflected in the swap confirmation. See the discussion below regarding the Floating Negative Interest Rate Method and the Zero Interest Rate Method.

If a Fixed Rate Payer or other swap counterparty wishes to acquire a 0% floor on the underlying benchmark rate of a swap, this may increase the price of the swap as reflected in a higher Fixed Rate. Whether the swap counterparty considers the increased cost to be justified may depend, in part, on whether it considers the risk of the relevant rate turning negative to be material and what the potential magnitude and duration of such negative rate could be. As interest rates are impossible to predict with any certainty,³ you may wish to consult with your independent financial advisors as you weigh the cost of a swap with a 0% floor (as reflected in a higher Fixed Rate) against the uncertain potential costs of the relevant rate turning negative under an unfloored swap with a lower Fixed Rate. In hindsight it may prove to have been cheaper over the life of the swap not to have acquired the 0% floor. Of course, in hindsight it may prove to have been cheaper to have acquired the 0% floor.

If you enter into an unfloored swap based on the assumption that a 0% floor can be acquired at any time, you should not expect the price of a 0% floor (which would be reflected in an adjustment of the swap's Fixed Rate) to remain constant, nor the availability of a 0% floor to remain the same, over the life of the swap as market conditions change. For example, if swap market participants perceive the likelihood, magnitude or duration of negative central bank rates or negative benchmark rates to have increased in a particular currency (or the relevant rate has actually turned negative), such pricing and availability could deteriorate substantially, potentially making the floor cost-prohibitive and leaving you without protection against the relevant rate turning and remaining negative for any sustained period of time. Of course, this could also happen before a swap is entered into, potentially making a 0% floor unavailable or cost prohibitive for you.

Besides the cost and availability of a 0% floor, there may be other factors to consider before deciding to acquire a floored swap, including the potential impact of the floor on the value of the swap. The value of a swap floored at 0% could be positively or negatively affected by the presence of the floor, since the floor's value may change in response to market conditions, including the pricing and liquidity of 0% floors in the swap market over the life of the floored swap. On the favorable side, a 0% floor acquired when negative rates are not a material risk may increase the swap's value to the Fixed Rate Payer once

³ Unlike positive interest rates for which decades of historical rates information exist to model projections for financial planning purposes, negative interest rates have been a relatively rare phenomenon, creating challenges for modeling one's exposure to negative rates and for assessing whether the risk of the relevant rate turning negative is material. Even during the Great Depression, U.S. short-term rates were not negative, and during the height of the global financial crisis, some U.S. Treasury yields fell below zero only briefly in 2008 when 1-month and 3-month Treasury bill rates fell below zero between early and mid-December of that year. The concurrent appearance in recent years of negative interest rates in several European countries when global financial markets are not in crisis is unprecedented, resulting more from central bank intervention (as negative interest rate policies are implemented) than from other factors that normally drive financial markets and influence interest rates.

the risk becomes material and increases, or the relevant rate actually turns negative (e.g., in response to negative central bank rates). On the unfavorable side, if the floor is acquired when such risk is high, then the swap may lose part of its value to the Fixed Rate Payer (that which is attributable to the floor) as the likelihood of negative rates diminishes or negative rates turn positive (e.g., if the relevant central bank backs away from using negative rates to carry out monetary policy). If you wish to use a cleared interest rate swap to hedge your exposure to increases in the benchmark rate, then you may need to consider the effect of including a 0% floor on your ability to clear the swap. A swap with a 0% floor on a benchmark rate may not necessarily be clearable by a particular clearinghouse.

Floating Negative Interest Rate Method

The “Floating Negative Interest Rate Method” under §6.4 of the 2006 ISDA Definitions (as amended by Supplements Nos. 16 & 22 published on August 8, 2009 and July 26, 2010, respectively) applies to any swap that uses the 2006 ISDA Definitions, unless the parties agree otherwise. It provides that if a Floating Amount is negative, the Floating Rate Payer does not make such payment. Instead, the other party (e.g., the Fixed Rate Payer) pays the absolute value of the negative Floating Amount in addition to any other amount payable by it (e.g., Fixed Amounts).

In a fixed-for-floating interest rate swap, for example, this means the Fixed Rate Payer may be paying under both legs of the swap (i.e., the Fixed Amount and the Floating Amount) if either a negative Floating Rate or a negative Floating Rate Spread results in a negative Floating Amount.

Zero Interest Rate Method

The “Zero Interest Rate Method” (as defined in §6.4 of the 2006 ISDA Definitions, as so amended) will apply to a swap only if the parties mutually agree (as specified in the swap confirmation). It provides that if a Floating Amount is negative, it is deemed to be zero, and therefore it is not payable by either party. This can be used to set a floor of zero on the Floating Rate (assuming no Floating Rate Spread), but acquiring this floor may affect the price of the swap. In a fixed-for-floating interest rate swap, for example, this may be reflected in a higher Fixed Rate.

Effect of a Negative or Positive Floating Rate Spread

If a swap includes a negative Floating Rate Spread on the floating benchmark rate, the likelihood of a negative Floating Amount becoming due by the Fixed Rate Payer is increased by the amount of such spread to the extent that the floating benchmark rate declines or turns negative. If a swap includes a positive Floating Rate Spread on the floating benchmark rate, the likelihood of a negative Floating Amount becoming due by the Fixed Rate Payer is decreased by the amount of such spread to the extent that the floating benchmark rate declines or turns negative.

This does not mean that a swap with a positive Floating Rate Spread is more beneficial for a Fixed Rate Payer to the extent the Fixed Rate of the swap is priced commensurately higher (i.e., by the amount of the Floating Rate Spread). This is because the Floating Rate Payer will still be receiving the higher Fixed Rate as the negative Floating Rate offsets the positive Floating Rate Spread until the Floating Amount

turns negative, at which point the Floating Rate Payer will begin receiving the negative rate through the Fixed Rate Payer's payment of the negative Floating Amount instead of through the higher Fixed Rate.

Unlike an underlying loan, credit facility or debt instrument with a 0% floor (express or implied) that protects the lender's or bondholders' margin, both the Floating Negative Interest Rate Method and the Zero Interest Rate Method give consideration to a swap's Floating Rate Spread in determining the effect of a negative floating benchmark rate on the payments to be made under the swap. In other words, the sum of the Floating Rate Spread (positive or negative) and a negative floating benchmark rate will reduce the Floating Amount under either method. Under §6.4 of the 2006 ISDA Definitions, a positive Floating Rate Spread and a negative floating benchmark rate may cause the Floating Amount of the swap to become negative, unless the Zero Interest Rate Method applies to the swap or the parties otherwise place a 0% floor on the floating benchmark rate of the swap.

If the parties wish to place a 0% floor on the floating benchmark rate of an interest rate swap that includes a positive Floating Rate Spread, they should do so by placing an express 0% floor on the floating benchmark rate in the swap confirmation rather than by specifying the Zero Interest Rate Method. This is because the Zero Interest Rate Method has the effect of flooring only the Floating Amount and not the floating benchmark rate unless the Floating Rate Spread is zero or negative.

Effect of Negative Interest Rates on Swaps (Negative Fixed Rates)

The "Fixed Negative Interest Rate Method" under §5.3 of the 2006 ISDA Definitions (as amended by Supplement No. 22 published on July 26, 2010) applies to any swap that uses the 2006 ISDA Definitions, unless the parties agree otherwise. It provides that if a Fixed Amount is negative, the Fixed Rate Payer does not make such payment. Instead, the other party (e.g., the Floating Rate Payer) pays the absolute value of the negative Fixed Amount in addition to any other amount payable by it (e.g., Floating Amounts).

In a fixed-for-floating interest rate swap, for example, this means the Floating Rate Payer may be paying under both legs of the swap if a negative Fixed Amount and a positive Floating Amount are payable. If a negative Fixed Amount becomes payable by the Floating Rate Payer under the Fixed Negative Interest Rate Method, and a negative Floating Amount becomes payable by the Fixed Rate Payer under the Floating Negative Interest Rate Method, the parties in effect will have traded their positions with each other as payers of the Floating Rate and Fixed Rate, respectively.

Unlike Floating Amounts where uncertainty generally exists as to whether future Floating Amounts will be positive or negative, Fixed Amounts are usually known to be positive or negative at a swap's inception when the Fixed Rate of the swap is quoted by a swap dealer or swap execution facility and accepted by the counterparty. Generally, the Fixed Rate will be positive, unless the swap is expressly quoted with a negative Fixed Rate. In the case of options on swaps, if the option is structured such that the Fixed Rate will not be known until exercise, then exercise of the option may result in a swap with a negative Fixed Rate (e.g., if swaps are trading in the market with negative Fixed Rates on the exercise date), depending upon how the swap or option is structured.

Effect of Negative Interest Rates on Close-out Amounts, Daily Marks and Collateral Calls

When a close-out amount or early termination amount must be determined under an ISDA Master Agreement or other swap trading relationship documentation, it is generally necessary to take into account the payments and deliveries that would fall due after the early termination date under the swaps being terminated early. In computing the close-out amount or early termination amount of a swap, it may be necessary to calculate the net present value (“NPV”) of relevant amounts representing such future payments and deliveries. To calculate the NPV of a future cash flow, one generally subtracts the projected future accumulated interest from the future cash flow. This involves discounting each future cash flow by the relevant interest rate for that cash flow to arrive at a NPV of that cash flow.

When the applicable interest rate used in a NPV calculation is negative for a particular cash flow (i.e., a negative discount rate), it generally has the effect of increasing the NPV calculated for such cash flow rather than discounting it. Therefore, when negative discount rates are used in this NPV calculation for a swap, it may result in a higher close-out amount or early termination amount for the swap. This principle may also apply to Daily Marks provided to a swap counterparty under CFTC rule §23.431(d). It may also increase the amount of collateral or other credit support required to be held under an ISDA Credit Support Annex or, in the case of a cleared swap, the amount of margin required to be held at a clearinghouse, clearing member or futures commission merchant.

Aside from such potential impact of negative discount rates on NPV calculations, the close-out amount or early termination amount that could potentially become payable by a Fixed Rate Payer under a fixed-for-floating interest rate swap may increase in response to relevant swap fixed rates prevailing in the market turning negative.⁴

For example, if relevant swap fixed rates prevailing in the market at the time of early termination of an interest rate swap are lower than the swap’s Fixed Rate, a Fixed Rate Payer generally can expect to be the payer of a close-out amount or early termination amount that represents the NPV of the difference between the swap’s Fixed Rate (as reflected in the swap’s future Fixed Amount cash flows) versus prevailing swap fixed rates (as reflected in corresponding future Fixed Amount cash flows computed in this scenario at the lower swap fixed rate).⁵ If prevailing swap fixed rates remain positive, it can generally be expected that the maximum potential amount of this NPV calculation would not exceed the NPV of the remaining Fixed Amounts. However, if prevailing swap fixed rates turn negative, this NPV calculation could exceed such maximum.

From the perspective of the Floating Rate Payer, assuming market fixed rates for swaps have remained positive, this calculation represents the NPV of the portion of the remaining Fixed Amounts that the Floating Rate Payer will have lost under the terminated swap when measured against such prevailing positive swap fixed rates. If prevailing market fixed rates for swaps have turned negative, the Floating Rate Payer’s losses will reflect not just an amount representing the NPV of the remaining positive Fixed

⁴ Similarly, prevailing negative swap fixed rates may affect Daily Marks or increase the amount of collateral, credit support or margin required from a party, such as a Fixed Rate Payer as illustrated in the discussion of unwinding or replacing an interest rate swap when swap fixed rates have turned negative.

⁵ Note, however, that the actual close-out amount or net termination amount may be either increased or reduced by other cash flows or amounts that are relevant under the terminated swap, including unpaid Fixed Amounts and Floating Amounts that became due before the swap’s early termination, together with accrued interest.

Amounts of the terminated swap, but also an amount representing the NPV of an additional series of corresponding negative Fixed Amounts.

Both of these NPV amounts representing the Floating Rate Payer's losses under the terminated swap can be illustrated by assuming hypothetically that, instead of an outright early termination of the swap, the parties are proceeding in a manner to unwind their respective positions in the original swap through an offsetting swap with each other, where the pricing of the offsetting swap (e.g., the negative Fixed Rate) reflects then current market conditions. Assume for this purpose that, under the original swap, you are the Fixed Rate Payer, and we are the Floating Rate Payer.

Hypothetically, if you were to acquire an offsetting swap from us (with such offsetting swap having a negative Fixed Rate reflecting then prevailing market conditions) in order to unwind and cash settle your position as a Fixed Rate Payer in the original swap, then we would be the Fixed Rate Payer and you would be the Floating Rate Payer under the offsetting swap, yet you would be undertaking to pay the absolute value of the negative Fixed Amounts under the offsetting swap by virtue of the "Fixed Negative Interest Rate Method" discussed above. Because unwinding your position in this manner involves canceling both swaps and settling the NPV of the net cash flows, we as your counterparty under the original swap and the offsetting swap will have losses from canceling both swaps (original and offsetting) as a result of prevailing swap fixed rates having turned negative.⁶

These amounts can also be illustrated for an outright early termination of the original swap by assuming hypothetically that, after we send you an early termination notice, we cover our position with a replacement swap with a swap dealer or other third party. The pricing of the replacement swap would reflect then current market conditions, including the possibility that prevailing swap fixed rates will have turned negative. Under a replacement swap with a negative fixed rate, we would still be in the position of a Floating Rate Payer, yet we would be undertaking to pay the absolute value of the negative Fixed Amounts under the replacement swap by virtue of the "Fixed Negative Interest Rate Method" discussed above.⁷ Because this obligation is incremental to the NPV of the positive Fixed Rate cash flows that we will have lost on the original swap upon its early termination, we will have losses from both swaps as a result of prevailing swap fixed rates having turned negative.

ISDA 2014 Collateral Agreement Negative Interest Rate Protocol

The 1994 and 1995 ISDA Credit Support Annexes ("CSAs") lack provisions for establishing payment obligations in relation to a negative interest amount on cash pledged or transferred under the CSA, assuming the applicable interest rate under the CSA turns negative. The ISDA 2014 Collateral Agreement Negative Interest Protocol ("Negative Interest Protocol") establishes a mechanism for parties to resolve

⁶ To illustrate, assume 3 years remain on an original 5-year swap with a Fixed Rate of 2%, and the parties enter into an offsetting 3-year swap with a negative 1% Fixed Rate. Upon cancellation of both swaps, your counterparty (which is the Floating Rate Payer of the original swap and the Fixed Rate Payer of the offsetting swap) will have lost the NPV of the Fixed Amounts you would be paying at positive 2% for the remaining 3 years under the original swap plus the NPV of the absolute value of the negative Fixed Amounts you would be paying at negative 1% under the offsetting swap over such 3-year period. In settling the NPV of the net cash flows for the remaining three years, you would be obligated to pay your counterparty the NPV of this combined 3% decline in Fixed Rates. Because the floating rate payable under the original swap would be offset by the floating rate payable under the offsetting swap, future floating rate settings (whether positive or negative) would not be taken into account in this loss calculation, although settlement of a floating rate amount may be required for the then-current calculation period, including for the accrued Floating Amount and accrued Fixed Amount under the original swap.

⁷ Both legs of the replacement swap, fixed and floating, could be negative at the time of replacement.

the question of how to handle these negative interest amounts, either by adhering to the Negative Interest Protocol on a multilateral basis with other adherents, or by amending CSAs individually on a bilateral basis where the relevant provisions of the Negative Interest Protocol are incorporated by reference into the CSA by an express amendment.

The Negative Interest Protocol resolves this question by requiring the Pledgor or Transferor under the CSA to pay the negative interest amount to the Secured Party or Transferee. There are certain limitations to using the Negative Interest Protocol to amend CSAs on a multilateral basis, since it excludes certain categories of CSAs, including (i) one-way CSAs (e.g., where only one party has to post collateral or credit support), (ii) CSAs or custodial arrangements with terms that are inconsistent with, or are otherwise disqualified under, the Negative Interest Protocol (terms such as a “Custodial Interest Provision”, an “Interest Amount Alternative Provision”, a “Negative Interest Amount Provision”, a “No Interest Provision”, or a “Spread Provision” as defined in the Negative Interest Protocol), and (iii) those where a consent, approval or other action is needed from a guarantor or other third party under a guaranty or other third-party credit support document in order to amend the CSA or to avoid affecting obligations under the CSA adversely.

Excluded CSAs would require bilateral amendments to resolve the question of how negative interest amounts should be treated under those CSAs if not otherwise expressly dealt with in the particular CSA or custodial arrangement.