

Translated Versions

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Disclosure to Citi Markets' Wholesale Fixed Income, Currency and Commodity Products Counterparties

Citigroup Inc. (together with its affiliates, “Citi”, “we” or “us”) is a global financial services firm that has operated and continues to operate as a dealer and market maker in wholesale fixed income, currencies and commodities (“FICC”) markets. Citi is dedicated to adhering to applicable laws and regulations in our dealings with our counterparties in those markets. This document is intended to clarify aspects of the trading relationship between Citi and our clients, customers or counterparties (each, a “counterparty” or “you”) in FICC markets. It is supplemented by certain Appendices that contain additional information relevant to certain aspects of Citi’s FICC activities.

The terms of dealing and disclosures set forth in this document are subject to (and, to the extent of any conflict, shall be governed by): (i) any written agreement with you or other written terms of business or other disclosures (including published policies) we have provided to you;¹ and (ii) any applicable law or regulation (including, but not limited to, any applicable requirements regarding best execution or conflicts of interest). Laws and regulations in various jurisdictions may provide rights or obligations other than those discussed in this document. This document does not apply to circumstances in which Citi has entered into a written agreement to provide brokerage, client clearing, advisory, fiduciary or agency services to you.

You should review this document in connection with other applicable Citi agreements, terms of business and disclosures in order to fully understand your trading relationship with us in the context of a particular transaction. When you enter into FICC transactions with us, it will be on the basis that you have read and understood these terms of dealing. If you have questions after reading this document, please contact your senior Citi coverage representative. This document is also available on [Citi’s website](#) and may be updated from time to time, including to address regulatory, market or industry developments.

I. Principal Trading

- Unless we otherwise agree or notify a counterparty, we participate in FICC markets and engage in transactions with our counterparties solely as a principal, on an arm’s-length basis, for our own account. In such capacity, Citi (including its sales and trading personnel) does not act as a broker, agent, fiduciary, advisor or in any similar capacity on behalf of its counterparty, and Citi does not undertake the duties that an entity acting in that capacity ordinarily would perform. Accordingly, statements we make to a counterparty should not be construed as recommendations or advice, nor should we be construed as the counterparty’s advisor. In addition, when we transact with our counterparties, we rely on the apparent authority of the employees, representatives, advisers and agents who communicate with us on their behalf.
- We generally do not disclose information regarding our market making, hedging, pre-hedging, or pre-positioning activities (as described below) to our counterparties on an order- or transaction-specific basis, but we require our personnel to be truthful if they agree to provide such information. We also are under no obligation to pass on to a counterparty profits derived from those activities.

II. Orders

- In this document, an “order” refers to any request, instruction or offer by a counterparty to enter

¹ Such agreements, terms of business and disclosures provided to you may include, but are not necessarily limited to, those applicable to specific jurisdictions, products and/or means of execution.

into a transaction with us on terms consistent with those specified by the counterparty, including orders with terms that permit us to exercise discretion as to the price, time or size at which we may agree to enter into a transaction with the counterparty. Unless the counterparty otherwise specifies, we assume that each order we receive remains valid until the end of the trading day in which we receive it.

- When we indicate our willingness to “work” an order (as such term is used herein), we are indicating our willingness to attempt to enter into a transaction with a counterparty within the price, time and size parameters requested by the counterparty. Our receipt of an order or any indication by us that we are working an order does not create a contract between us and a counterparty until and unless we have filled or executed against some or all of the order, at which point the counterparty will assume the risks associated with the filled or executed order, including market risk and credit risk.
- Where a counterparty submits or leaves an order on, or using, an electronic messaging or communication system permitted by us (*e.g.*, chat, email, instant messaging, voicemail system, etc.), the counterparty should not assume that Citi is aware and in receipt of the order unless a Citi representative has affirmatively acknowledged receipt of the order.
- We may look for market opportunities that both satisfy the terms of a counterparty’s order and allow us to make an appropriate return on the transaction with the counterparty, including while executing other transactions to satisfy our own competing trading interests and responding to competing orders from other counterparties. As such, except to the extent that we have agreed to different terms of execution with a counterparty, we will exercise our reasonable discretion in entering into a transaction with a counterparty based on its order, including with respect to fill quantity, execution time, prioritization and whether to pre-hedge or enter into such transaction electronically, manually, on an aggregated basis with other orders or using internal or external sources of liquidity.
- Where we receive or execute against a counterparty’s order through our electronic infrastructure, such infrastructure records the date and approximate time of the receipt of, or execution against, respectively, such order. These records are subject to the impact of latencies, including operational latencies or other latencies that may be inherent in, or result from, the messaging or communication channel through which orders are delivered to, or received by, us.

III. Market Making, Pre-Hedging & Execution

- As a market maker, we may have a number of positions and execute against the competing orders of multiple counterparties, as well as trading to satisfy our own interests. As a result, we may trade with others prior to or alongside hedging, pre-hedging, pre-positioning, or executing against a counterparty’s order, including in auction or other bidding scenarios or during time intervals and on trading venues where benchmarks are established.
- Following the receipt of an order or an indication of interest, we may, in our reasonable discretion, engage in pre-hedging or pre-positioning as we determine appropriate to manage risks that we assume (or anticipate assuming) in connection with such transaction or to inform the pricing of such transaction (or anticipated transaction). Such pre-hedging or pre-positioning may be executed before (including, but not limited to, within the seconds and minutes before) or during the pricing or consummation of any directly or indirectly related transactions between Citi and you. We also exercise reasonable discretion in deciding how, when and where to pre-hedge or pre-position, which may take into account both internal and external sources of liquidity, as well as other market conditions and Citi’s overall market exposure. Pre-hedging or pre-positioning activity between Citi and third-parties, and any related discussions, will be conducted by Citi as principal, not as agent for you. Our intention

in conducting such pre-hedging or pre-positioning activity is to facilitate order execution and reduce the potential market impact of filling your order or potential order, in addition to minimizing our risk of entering into the transaction. However, there is no guarantee that such activity will have the desired outcome. Our pre-hedging, pre-positioning and other market-making activities may, depending on market conditions, affect or negatively impact: market levels; the prices we offer to a counterparty or at which execution occurs; the availability of liquidity at levels necessary to execute counterparty orders; the level at which a benchmark or reference market rate is set; and whether prices change in a manner that accelerates, triggers, or delays or prevents the triggering of, stop-loss orders, barriers, knock-outs, knock-ins or similar order conditions, including in relation to transactions you conduct or may conduct with Citi. Any such market impact may operate to a counterparty's disadvantage. Such negative impacts are particularly possible during times of low liquidity in the relevant markets.

IV. **Pricing and Quotes**

- All quotes provided to a counterparty are indicative quotes (unless we indicate otherwise (e.g., by providing a quote in response to a request for a firm quote). In addition, unless we notify a counterparty otherwise, any price quoted by us to a counterparty (including in response to an order, and any final transaction price) is an “all-in” price, regardless of the circumstances under which a counterparty receives a price or otherwise learns of a price.
- Factors that we may take into account in determining the “all-in” price for transactions typically include those set out below in Appendix 1. The list is not exhaustive and we may take into account other factors that we consider appropriate.
 - The relevant impact of each individual factor on the price of a transaction will differ depending upon the specific circumstances of that transaction. As a result, we may quote different prices to different counterparties or at different times for the same or substantially similar type of transaction.
 - We generally do not disclose the amount of revenue we earn or expect to earn from a transaction or the components of our “all-in” price, but we require our personnel to be truthful if they agree to provide such information.
- Except to the extent that we have notified a counterparty of different pricing terms, when determining whether there is liquidity available at price levels necessary to execute an order, we may take into account factors set out in Appendix 1 in arriving at an “all-in” price, which might operate to a counterparty's disadvantage and may delay or prevent the execution against the order or increase the slippage or difference between any specified price trigger for the order and the actual execution price. Also, where a transaction or execution instruction is priced or triggered by reference to the market price for a product, we may agree to reference one or more specified sources. Absent such agreement, we will determine the market price in our commercially reasonable discretion, which, depending on the circumstances, may be a bid, offer, mid-market, market-on-close, last-traded, or other price.

V. **Confidentiality**

- We are bound by regulatory and certain contractual obligations relating to confidential information and have adopted policies and procedures to assist us in meeting these obligations. Where consistent with these obligations:
 - We may make use of information provided to us as principal in connection with potential or anticipated transactions between Citi and you in order to effectuate and risk manage

transactions, as well as for other risk management purposes. Specifically, unless otherwise agreed, we may use and/or disclose the economic terms of transaction, including a potential or anticipated transaction, and the identity of the counterparty to such a transaction, in order to evaluate and/or source liquidity and/or execute risk-mitigating transactions and/or determine what prices we quote to third parties. Such use and/or disclosure could adversely affect you.

- We analyze information regarding executed transactions on an individual and aggregate basis for a variety of purposes, including credit and market risk management, sales coverage, and counterparty relationship management. Unless otherwise agreed, we may analyze, comment on, and disclose anonymized and aggregated information regarding executed transactions, together with other relevant market information, internally and to third parties, as market color. We may also use such anonymized and aggregated information in products, services or data that we offer as part of our business. We may also use counterparty- or transaction-specific information regarding executed transactions for risk management or mitigation purposes.
- In addition, as part of our obligations as a regulated entity, we share counterparty and transaction information as required by our regulators around the globe.

VI. **Conflicts of Interest**

- The principal-to-principal nature of the FICC markets and our role as a dealer and market-maker opposite multiple counterparties gives rise to inherent conflicts of interest between us and our counterparties and among our counterparties with respect to whether, when, to what extent and at what prices we execute transactions with our counterparties.
- In some FICC markets we may pre-hedge or pre-position in anticipation of partial or full execution against a counterparty's order through the use of internally developed algorithms, internalization engines, smart order routers or other automated tools that are designed to access both external and internal sources of liquidity. We may derive additional benefits from that activity, including, among others, reduced transaction costs when we use internal liquidity and ownership or other economic interest (such as the right to receive payments or other fees or revenue sharing) in an external venue or platform where we trade to pre-hedge or pre-position in response to a counterparty's order (including trades involving such counterparty's use of one of our electronic execution algorithms). This activity may present conflicts of interest, but it is not our policy to conduct this activity in a manner designed to disadvantage such counterparty. As described in Section III above, despite Citi's good faith efforts, it is possible that such pre-hedging, pre-positioning, and other market-making activities may affect or negatively impact the terms of any transaction or potential transaction between Citi and you. Pre-hedging or pre-positioning activity between Citi and third-parties, and any related discussions, will be conducted by Citi as principal, not as agent for you, and all compensation or other economic interests resulting from such arrangements will accrue to Citi's account and not the counterparty's account.
- Reference price transactions are transactions agreed with reference to a future determined auction price, benchmark, or other reference price. For example, binary options, also known as barrier or digital options, are a class of option activated or cancelled when a pre-determined reference price is reached at a specified date or time (or during a specified date or time range). A counterparty should be aware of the key mechanics of reference prices and that the use of reference prices creates inherent conflicts of interest between Citi and its counterparties. Our hedging activity related to these reference prices, which may be conducted before, during or after the reference price is calculated, may affect the underlying reference price which may on occasion operate to a

counterparty's disadvantage. Our hedging activity is only for risk mitigation purposes and never to influence or manipulate the reference price. However, our hedging activity (including pre-hedging and pre-positioning activity) may impact the level of benchmark or reference market rates in a manner unfavorable to you.

- In addition to acting as a dealer and market maker, where permitted by applicable law or regulation, we may, for our own account, trade certain FICC products including, but not limited to, sovereign, municipal or agency securities. Such trading activities might affect market prices or liquidity in ways that are adverse to the interests of our counterparties. We have adopted policies and procedures designed to ensure that Citi personnel engaged in such trading activities do not have access to information regarding our market-making and other dealing activities, including counterparty orders.

VII. **Electronic Trading**

- Appendix 2 sets out certain additional information relating to electronic trading.

Pricing Factors

Factors that we may take into account in determining the “all-in” price for FICC transactions typically include (but are not limited to):

- (1) Product type and market in which the transaction would occur, such as: (i) the trading venue; (ii) the type of order; (iii) the size and direction of the transaction; (iv) market conditions, including market events, the extent and pace of price changes and time of execution; (v) transparency of the market, including actionable and visible liquidity, trading volume and available external venues or platforms; and (vi) the accessibility of third-party quotations and other pricing information;
- (2) Internal costs, such as hedging costs, funding costs, fees, capital costs and overhead;
- (3) Counterparty- and transaction-specific factors, such as: (i) the volume, types, size, frequency or speed of trading the counterparty executes with Citi and in the market; (ii) the potential market impact of the counterparty’s trading activity with Citi and in the market; (iii) the counterparty’s credit quality and Citi’s credit exposure to the counterparty; (iv) specific terms of the transaction or governing documentation; and (v) the extent and nature of the counterparty’s business relationship(s) with Citi; and
- (4) Applicable legal or regulatory requirements.

Electronic Trading

- In certain FICC markets, we may provide firm quotes (such as in response to a request for firm quote) or indicative quotes via automated channels, including but not limited to Citi-proprietary and third-party electronic platforms and direct application programming interfaces (collectively, “Platforms”). This is viewed by Citi as “Electronic Trading.”
- If we provide a counterparty with access to electronic execution algorithms developed by us, we do so on the following basis:
 - The pricing, speed and likelihood of executing an order using our electronic execution algorithms can vary depending on the particular algorithm’s parameters, including the Platforms where the algorithm directs our hedging activity to inform the pricing of our transactions with the counterparty (*i.e.*, sources liquidity) and whether the algorithm is sourcing liquidity passively or aggressively. Our selection of a default Platform or other liquidity source for an algorithm, or our routing prioritization, may present certain conflicts of interest, as described in greater detail under “Conflicts of Interest” above.
 - Prior to using an electronic execution algorithm, a counterparty should independently assess the suitability of the algorithm and any associated parameters for its needs based on all information available to the counterparty and its advisers.
 - By using an electronic execution algorithm, a counterparty assumes the risks generally associated with algorithmic execution and strategies, including, but not limited to: that market conditions may prevent the algorithm from functioning in accordance with its strategy, parameters, risk controls or the counterparty’s expectations; the potential vulnerability of algorithmic order execution to the conduct of other market participants trading on the Platforms where the algorithm sources liquidity; and technological or operational delay, failure or malfunction at any level or from any source (including, but not limited to, external Platforms, the counterparty’s trading connection or interface, our interfaces, systems or network) that directly or indirectly impact the functioning of the algorithm.
 - As a result of delays in the dissemination of price updates, market infrastructure, communication and internal processing latencies, some trading discrepancies may exist between the externally sourced prices utilized by our algorithms and current pricing on the relevant external Platforms.
- When a counterparty submits a request to trade at a price electronically streamed by us or submits a request-for-stream or request-for-quote to us electronically, this request may be subject to a series of pre-trade checks performed by our deal acceptance logic to determine whether or not we will accept the request.
 - These pre-trade checks, which may delay acceptance or rejection of a request to trade, are referred to in this document as “last look” when they are applied to indicative quotes that have not yet expired. General considerations and characteristics of last look are described below. The specific parameters and application of last look differ across counterparties, transaction types and Platforms and are subject to change at our discretion. Last look allows us to manage our execution risk without downgrading the quality of spreads and liquidity we indicate to our counterparties. In the absence of last look, we would potentially have to protect ourselves by providing less depth of liquidity and wider spreads to counterparties

using Platforms.

- We employ last look for the following primary reasons:
 - We indicate prices to a broad counterparty base. Those indicative prices are based on, among other considerations, our inventory and risk profile. Last look is in place in order to ensure that we can manage our position and risk profile.
 - Communication latencies can cause requests to trade and indicative quotes to become stale. Additionally, some market data is not updated continuously in real time.
 - We check the credit status of our counterparties and our credit exposure to the counterparty, which may change in real time.
 - We undertake other counterparty-based checks, such as counterparty authorization to engage in a particular transaction, to fulfill our risk management objectives and regulatory obligations.
- Along with risk management, regulatory, and staleness checks, we perform a price check. If the market price for a transaction is at a level beyond a threshold applied by our trade acceptance logic after receipt of a counterparty's request to trade, we will reject the trade request. We generally apply this price check symmetrically, in which case we will reject or accept the trade regardless of whether the market price has moved against us or against the counterparty. The application of last look to trading on or pursuant to the rules of certain swap execution facilities may vary with respect to some interest rate swap transactions. Further Citi has the discretion to respond to a quote via a Platform manually, including through means other than Electronic Trading and outside of the last look process. For example, a trader may manually respond to a request for quote using an electronic Platform, which is not Electronic Trading and therefore not subject to the last look process described herein.
- We generally apply last look immediately upon, and in some cases after a brief time delay following, receipt of a counterparty's order, although the application of last look may vary across different Platforms. Connectivity to the third-party vendors may vary and we suggest speaking to the vendor(s) directly to provide further information on what information is visible on the respective Platform(s) regarding firm or indicative quotes.
- We may take into consideration a variety of factors in setting last-look parameters, including: product type and Platform on which the transaction would occur; the counterparty's historical trading characteristics and preferences; trade size and the extent and nature of a counterparty's business relationship(s) with us.
- While a counterparty's trade request is pending, subject to completion of last look, we do not engage in any trading activity (including pre-hedging or pre-positioning activity) on the basis of that specific trade request or utilize that information for the purposes of adjusting our pricing.

Appendix 3

- Counterparties are encouraged to review important disclosures of (i) additional material incentives and conflicts of interest that we may have in our swap dealing and risk management activities which may adversely impact your interests in FICC instruments and markets, and (ii) material economic terms and risks of trading in FICC derivatives instruments, which are available in Citi's swap dealer disclosures at: <https://www.citivelocity.com/cv2/go/DoddFrankMaterialDisclosures>. Please contact your Citi coverage representative to obtain access to these disclosures if you do not have access.