

CITIGROUP INC  
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**PRICING SUPPLEMENT NO. 2016—USNCH0277/A#4 AND 2016—USNCH0278/A#4 DATED MARCH 1, 2019  
 (TO PROSPECTUS SUPPLEMENT AND PROSPECTUS EACH DATED MAY 14, 2018)  
 MEDIUM-TERM SENIOR NOTES, SERIES N**

**Issued by Citigroup Global Markets Holdings Inc.**

**All payments due on the securities fully and unconditionally guaranteed by Citigroup Inc.**

\$1,600,000,000<sup>±±</sup> VelocityShares™ 3x Long Crude Oil ETNs linked to the S&P GSCI® Crude Oil Index ER due December 15, 2031 (the “**3x Long Crude Oil ETNs**”)

\$1,600,000,000<sup>±±</sup> VelocityShares™ 3x Inverse Crude Oil ETNs linked to the S&P GSCI® Crude Oil Index ER due December 15, 2031 (the “**3x Inverse Crude Oil ETNs**”)

ETNs	Leverage Amount	ETN Type	Exchange Ticker	Indicative Value Ticker	CUSIP	ISIN
3x Long Crude Oil ETNs	3	“Leveraged Long”	UWT	UWTIV	17325E291	US17325E2919
3x Inverse Crude Oil ETNs	-3	“Leveraged Inverse”	DWT	DWTIV	17325E309	US17325E3099

We are offering two separate series of exchange traded notes (collectively, the “**ETNs**”), each linked to the S&P GSCI® Crude Oil Index ER (the “**Index**”). We refer to the 3x Long Crude Oil ETNs as the “**Leveraged Long ETNs**,” and the 3x Inverse Crude Oil ETNs as the “**Leveraged Inverse ETNs**”.

The ETNs have been listed on the NYSE Arca under the exchange ticker symbols set forth in the table above. As long as an active secondary market in the ETNs exists, we expect that investors will purchase and sell the ETNs primarily in this secondary market. However, we have no obligation to maintain any listing on NYSE Arca or any other exchange.

**The ETNs are not intended to be “buy and hold” investments. The ETNs are intended to be daily trading tools for sophisticated investors to manage daily trading risks. They are designed to achieve their stated investment objectives on a daily basis, but their performance over different periods of time can differ significantly from their stated daily objectives. The ETNs are riskier than securities that have intermediate- or long-term investment objectives, and may not be suitable for investors who plan to hold them for a period other than one day. Any decision to hold the ETNs for more than one day should be made with great care and only as the result of a series of daily (or more frequent) investment decisions to remain invested in the ETNs for the next one-day period. Accordingly, the ETNs should be purchased only by knowledgeable investors who understand the potential consequences of an investment linked to the Index and of seeking daily compounding leveraged long or leveraged inverse investment results, as applicable. Investors should actively and frequently monitor their investments in the ETNs, even intra-day. *If you hold the ETNs for more than one day, it is possible that you will suffer significant losses in the ETNs even if the performance of the Index over the time you hold the ETNs is positive, in the case of the Leveraged Long ETNs, or negative, in the case of the Leveraged Inverse ETNs.***

**Investing in the ETNs involves significant risks. See “Risk Factors” beginning on page PS-13 of this pricing supplement.**

**Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined that this pricing supplement is truthful or complete. Any representation to the contrary is a criminal offense.**

Citigroup Global Markets Inc. (“CGMI”), an affiliate of ours, is the agent for this offering. We have issued and sold a portion of the ETNs to CGMI on the Initial Settlement Date and received proceeds equal to 100% of their Closing Indicative Value as of the Inception Date. For any ETNs we issue and sell after the Initial Settlement Date, we expect to receive proceeds equal to 100% of their Indicative Value at the time we price the sale of the ETNs to CGMI. CGMI may offer and sell ETNs from time to time as principal to investors and to dealers at a price based on the Indicative Value at the time of sale. Dealers may in turn offer and sell ETNs to investors at market prices prevailing at the time of sale, at prices related to market prices or at negotiated prices. We will not pay any commissions or underwriting fees to CGMI or any other dealer. For any ETNs it sells, CGMI is expected to charge to purchasers a creation fee of up to approximately 0.15% *times* the Indicative Value at which CGMI prices the sale of such ETNs, *provided however* that CGMI may from time to time increase or decrease the creation fee. In exchange for providing certain services relating to the distribution of the ETNs, CGMI, a member of the Financial Industry Regulatory Authority (“FINRA”), or another FINRA member may receive all or a portion of the Daily Investor Fee described below. In addition, CGMI will charge investors a redemption charge of 0.08% *times* the Closing Indicative Value on the Early Redemption Valuation Date of any ETN that is redeemed at the investor’s option. CGMI and its affiliates may also profit from expected hedging activity related to these offerings, even if the value of the ETNs declines. Please see “Supplemental Plan of Distribution (Conflicts of Interest)” in this pricing supplement for more information.

*The ETNs are not deposits or savings accounts but are unsecured debt obligations of Citigroup Global Markets Holdings Inc. guaranteed by Citigroup Inc. The ETNs and the guarantee of the ETNs by Citigroup Inc. are not insured or guaranteed by the Federal Deposit Insurance Corporation or by any other governmental agency or*

*instrumentality.*

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± This amended and restated pricing supplement amends and restates and supersedes Pricing Supplement No. 2016—USNCH0277 dated December 8, 2016, Pricing Supplement No. 2016—USNCH0278 dated December 8, 2016, Pricing Supplement No. 2016—USNCH0277/A/1 dated April 7, 2017, Pricing Supplement No. 2016—USNCH0278/A/1 dated April 7, 2017, Pricing Supplement No. 2016—USNCH0277/A/2 dated November 15, 2017, Pricing Supplement No. 2016—USNCH0278/A/2 dated November 15, 2017, Pricing Supplement No. 2016—USNCH0277/A/3 dated April 19, 2018 and Pricing Supplement No. 2016—USNCH0278/A/3 dated April 19, 2018. We refer to this amended and restated pricing supplement as the “pricing supplement”.

±± Reflects the aggregate stated principal amount of such ETNs offered hereby (corresponding to 64,000,000 ETNs in the case of the 3x Long Crude Oil ETNs and 64,000,000 ETNs in the case of the 3x Inverse Crude Oil ETNs). As of February 25, 2019, there were issued and outstanding the following:

\$756,875,000 in stated principal amount of 3x Long Crude Oil ETNs (30,275,000 ETNs) outstanding and held by the public and \$18,775,000 in stated principal amount of 3x Long Crude Oil ETNs (751,000 ETNs) outstanding and held in inventory.

\$207,300,000 in stated principal amount of 3x Inverse Crude Oil ETNs (8,292,000 ETNs) outstanding and held by the public and \$96,575,000 in stated principal amount of 3x Inverse Crude Oil ETNs (3,863,000 ETNs) outstanding and held in inventory.

### General

The ETNs are medium-term senior notes of Citigroup Global Markets Holdings Inc., guaranteed by Citigroup Inc., maturing December 15, 2031 (the “**Maturity Date**”). The ETNs are intended to be daily trading tools and are not intended to be held to maturity.

The initial issuance of ETNs of each series priced on December 8, 2016 (the “**Inception Date**”) and settled on December 13, 2016 (the “**Initial Settlement Date**”).

The ETNs are designed for investors who seek leveraged long or leveraged inverse exposure, as applicable, to the daily performance of the Index. The ETNs do not guarantee any return of principal and do not pay any interest during their term. For each ETN, investors will be entitled to receive a cash payment at maturity, upon early redemption or upon acceleration, as applicable, that will be linked to the performance of the Index, *plus* a Daily Accrual and *less* a Daily Investor Fee (each as defined herein). Investors should be willing to forgo interest payments and, if the Index declines or increases, as applicable, be willing to lose up to 100% of their investment. Any payment on the ETNs is subject to the credit risk of Citigroup Global Markets Holdings Inc. and Citigroup Inc.

**The ETNs are designed to reflect a leveraged long or leveraged inverse exposure, as applicable, to the performance of the Index on a daily basis, but their returns over different periods of time can, and most likely will, differ significantly from three times the return on a direct long or inverse, as applicable, investment in the Index. The ETNs are very sensitive to changes in the level of the Index, and returns on the ETNs may be negatively impacted in complex ways by the volatility of the Index on a daily or intraday basis. Accordingly, the ETNs should be purchased only by knowledgeable investors who understand the potential consequences of an investment linked to the Index and of seeking daily compounding leveraged long or leveraged inverse investment results, as applicable. Investors should actively and frequently monitor their investments in the ETNs.**

The exchange ticker, denominations and stated principal amount per ETN for each series of ETNs is set forth below. ETNs may be sold by us to CGMI, and by CGMI to investors or dealers, at a price that is higher or lower than the stated principal amount, based on the most recent Indicative Value of the ETNs. For information regarding potential splits or reverse splits of the ETNs, see “Specific Terms of the ETNs—Split or Reverse Split of the ETNs” herein.

ETNs	Exchange Ticker Denomination and Stated Principal Amount per ETN	
3x Long Crude Oil ETNs	UWT	\$25.00
3x Inverse Crude Oil ETNs	DWT	\$25.00

Delivery of the ETNs in book-entry form only will be made through The Depository Trust Company (“DTC”). Any further issuances of ETNs of any series will form a single series with the offered ETNs of such series, will have the same CUSIP number and will trade interchangeably with the offered ETNs of such series upon settlement. Any further issuances and sales will increase the outstanding number of the applicable series of the ETNs. See “Supplemental Plan of Distribution (Conflicts of Interest)” in this pricing supplement for further information.

If there is a substantial demand for the ETNs, we may issue and sell additional ETNs to CGMI, and CGMI may sell such ETNs to investors and dealers, frequently. However, we and CGMI are under no obligation to issue or sell additional ETNs of any series at any time, and if we and CGMI do issue and sell additional ETNs of any series, we or CGMI may limit or restrict such sales, and we may stop and subsequently resume selling additional ETNs of such series at any time. Furthermore, the stated principal amount of each series of ETNs stated at the top of the cover page of this pricing supplement is the maximum amount of each series of ETNs that we have currently authorized for issuance. Although we have the right to increase the authorized amount of either series of ETNs at any time, it is our current intention not to issue more than the current maximum authorized amount of each series of ETNs, even if there is substantial market demand for additional ETNs of such series. We may also reduce the maximum authorized amount of each series of ETNs at any time and have no obligation to issue up to the maximum authorized amount.

**Any limitation or suspension on the issuance or sale of the ETNs by us or CGMI may materially and adversely affect the price and liquidity of the ETNs in the secondary market. Alternatively, the decrease in supply may cause an imbalance in the market supply and demand, which may cause the ETNs to trade at a premium over the Indicative Value of the ETNs. Any premium may be reduced or eliminated at any time. Paying a premium purchase price over the Indicative Value of the ETNs could lead to significant losses in the event the investor sells such ETNs at a time when such premium is no longer present in the marketplace or such ETNs are**

**accelerated, including at our option, which we have the discretion to do at any time. If we accelerate the ETNs of any series at our option, investors will receive a cash payment in an amount equal to the Closing Indicative Value on the final**

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**Valuation Date of an Optional Acceleration Valuation Period, which will not include any premium. Investors should consult their financial advisors before purchasing or selling the ETNs, especially ETNs trading at a premium over their Indicative Value.**

We are not obligated to maintain the listing of the ETNs on the NYSE Arca or any other exchange. The ETNs may cease to be listed on the NYSE Arca or any other exchange because they cease to meet the listing requirements of the exchange or because we elect in our sole discretion to discontinue the listing of the ETNs on any exchange. We may elect to discontinue the listing of the ETNs at any time and for any reason, including in connection with a decision to discontinue further issuances and sales of the ETNs. If the ETNs cease to be listed on the NYSE Arca or any other exchange, the liquidity of the ETNs is likely to be significantly adversely affected and the ETNs may trade at a significant discount to their Indicative Value.

Any limitation or suspension on the issuance of the ETNs and any delisting of the ETNs will not affect the early redemption right of holders as described herein. However, an investor will not be able to exercise that right unless the investor submits for redemption at least the minimum number of ETNs specified below.

Janus Distributors LLC doing business as Janus Henderson Distributors (“**JHD**”) will receive all or a portion of the Daily Investor Fee in consideration for its role in marketing and placing the ETNs under the “VelocityShare<sup>™</sup>” brand. See “Supplemental Plan of Distribution (Conflicts of Interest)” in this pricing supplement for further information.

This pricing supplement provides specific pricing information in connection with the issuance of each series of the ETNs. Prospective investors should read this pricing supplement together with the accompanying prospectus supplement and prospectus for a description of the specific terms and conditions of the ETNs. This pricing supplement amends and supersedes the accompanying prospectus supplement and prospectus to the extent that the information provided in this pricing supplement is different from the terms set forth in the prospectus supplement or the prospectus.

CGMI may from time to time purchase outstanding ETNs of any series in the open market, in connection with early redemptions or in other transactions, and CGMI may use this pricing supplement together with the accompanying prospectus supplement and prospectus in connection with resales of some or all of the purchased ETNs in the secondary market.

The ETNs offered by this pricing supplement are linked to the same Index and have similar economic terms as certain exchange traded notes issued by Credit Suisse AG and marketed under the VelocityShares brand (the “**CS Notes**”). However, the ETNs differ in important ways from the CS Notes, including the fact that they have a different issuer and have terms that differ in important respects. Any investor who has invested previously in the CS Notes and is considering an investment in the ETNs should carefully review this pricing supplement and the accompanying

prospectus supplement and prospectus to understand the terms of the ETNs. Credit Suisse AG is not involved in any way in the offering of the ETNs.

## Key Terms

**Issuer:** Citigroup Global Markets Holdings Inc., a wholly owned subsidiary of Citigroup Inc.

**Guarantee:** All payments due on the ETNs are fully and unconditionally guaranteed by Citigroup Inc.

The return on the ETNs of each series will be based on the performance of the S&P GSCI® Crude Oil Index ER (the “**Index**”) during the term for such series of ETNs. Each series of ETNs tracks the daily performance of the Index. The Index tracks a hypothetical position in the nearest-to-expiration NYMEX light sweet crude oil futures contract, which is rolled each month into the futures contract expiring in the

**Index:** next month. The value of the Index fluctuates with changes in the price of the relevant NYMEX light sweet crude oil futures contracts. The Index is determined, composed and calculated by S&P Dow Jones Indices LLC (the “**Index Sponsor**”). The Index Sponsor publishes the level of the Index on Bloomberg under the ticker specified in the table below. See “Description of the Index” in this pricing supplement for further information about the Index.

<b>ETNs</b>	<b>Index</b>	<b>Index Ticker</b>
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3x Long Crude Oil ETNs	S&P GSCI® Crude Oil Index ER	SPGSCLP
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The Index, or any successor index or substitute index, may be modified, replaced or adjusted from time to time, as determined by the Calculation Agents (defined below) as set forth below. The Calculation Agents may modify, replace or adjust the Index under certain circumstances even if the Index Sponsor continues to publish the Index without modification, replacement or adjustment. See “Risk Factors—The Calculation Agents may perform their own calculation of the level of the Index in certain circumstances” and “Specific Terms of the ETNs—Discontinuation or Modification of the Index; Substitution of the Index” in this pricing supplement for further information.

Any payment on the ETNs, whether upon early redemption at your option, acceleration at our option or at maturity (but excluding payment upon automatic acceleration), will be based on the Closing Indicative Value of the applicable series of ETNs on one or more Valuation Dates, as described herein. The Closing Indicative Value for each series of ETNs on the Inception Date was \$25.00. The Closing Indicative Value on February 25, 2019 per \$25.00 stated principal amount of the 3x Long Crude Oil ETN was \$14.5994.

**Closing Indicative Value:** The Closing Indicative Value on February 25, 2019 per \$25.00 stated principal amount of the 3x Inverse Crude Oil ETN was \$8.5769. The Closing Indicative Value on each calendar day following the Inception Date for each series of ETNs will equal:

- For each calendar day prior to the Final Valuation Period or any Optional Acceleration Valuation Period for such series of ETNs, (1)(a) the Closing Indicative Value for such series of ETNs on the immediately preceding calendar day *times* (b) the Daily ETN Performance for such series of ETNs on such calendar day *minus* (2) the

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Daily Investor Fee for such series of ETNs on such calendar day.

· For each calendar day during the Final Valuation Period or any Optional Acceleration Valuation Period for such series of ETNs, (1) the sum of (a) the Index Exposure and (b) the Notional Cash Amount *minus* (2) the Daily Investor Fee for such series of ETNs on such calendar day.

The Closing Indicative Value will never be less than zero. If any series of ETNs undergoes a split or reverse split, the Closing Indicative Value for such series of ETNs will be adjusted accordingly (see “Specific Terms of the ETNs—Split or Reverse Split of the ETNs” in this pricing supplement). Janus Index & Calculation Services LLC, renamed Janus Henderson Indices LLC as of January 1, 2019 (“**JHI**”), or its affiliate is responsible for computing and disseminating the Closing Indicative Value, subject to CGMI’s right to dispute JHI’s calculation of the Closing Indicative Value, in which case, if the Calculation Agents are unable to agree, CGMI’s determination of the Closing Indicative Value shall be conclusive and binding.

The Closing Indicative Value of each series of ETNs on each Index Business Day is based on the closing level of the Index on that Index Business Day. The closing level of the Index on each Index Business Day is determined based on the daily settlement price of NYMEX light sweet crude oil futures contracts, which is determined as of 2:30 p.m., New York City time, on each Index Business Day. Although the daily settlement price is determined as of 2:30 p.m., there is typically a time lag in the publication of the daily settlement price, and the closing level of the Index based on the daily settlement price is typically not published until after 4:00 p.m., New York City time, which is the close of trading for the ETNs on the NYSE Arca. Accordingly, the Closing Indicative Value of each series of ETNs will also not be published until after the close of trading for the ETNs on the NYSE Arca, but will be based on the daily settlement price of NYMEX light sweet crude oil futures contracts as of 2:30 p.m.

Daily ETN  
Performance:

The Daily ETN Performance for any series of ETNs on any Index Business Day will equal (1) one *plus* (2) the Daily Accrual for such series of ETNs on such Index Business Day *plus* (3) the product of (a) the Daily Index Performance for such series of ETNs on such Index Business Day *times* (b) the Leverage Amount for such series of ETNs. The Daily ETN Performance for any series of ETNs is deemed to equal one on any day that is not an Index Business Day.

Daily Accrual: The Daily Accrual represents the rate of interest that could be earned on a notional capital reinvestment at the three month U.S. Treasury rate as reported on Bloomberg under ticker USB3MTA (or any successor ticker on Bloomberg or any successor service). The Daily Accrual for any series of ETNs on any Index Business Day will equal:

where  $Tbills_{t-1}$  is the three month U.S. Treasury rate reported on Bloomberg on the prior Index Business Day and  $d$  is the number of calendar days from and including the immediately prior Index

Business Day to but excluding the date of determination. The Daily Accrual for any series of ETNs is deemed to equal zero on any day that is not an Index Business Day.

**Daily Index Performance:** The Daily Index Performance for any series of ETNs on any Index Business Day will equal, except as otherwise provided herein, (1)(a) the closing level of the Index on such Index Business Day *divided by* (b) the closing level of the Index on the immediately preceding Index Business Day *minus* (2) one. If a Market Disruption Event occurs or is continuing on any Index Business Day or occurred or was continuing on the immediately preceding Index Business Day, the Calculation Agents will determine the Daily Index Performance for such series of ETNs on each such Index Business Day using an appropriate closing level of the Index for each such Index Business Day taking into account the nature and duration of such Market Disruption Event. Furthermore, if a Market Disruption Event occurs and is continuing with respect to any series of ETNs on any Index Business Day, the calculation of the Daily Index Performance for such series of ETNs will be modified so that the applicable leveraged exposure does not reset until the first Index Business Day on which no Market Disruption Event with respect to such series of ETNs is continuing. In addition, during a Valuation Period for any series of ETNs, the calculation of the Daily Index Performance for such series of ETNs will be modified so that the applicable leveraged exposure does not reset after such Valuation Period begins. See “Specific Terms of the ETNs—Closing Indicative Value” for more information. The Daily Index Performance for any series of ETNs is deemed to equal zero on any day that is not an Index Business Day.

**Leverage Amount:** The Leverage Amount for each series of ETNs is as follows:

3x Long Crude Oil ETNs: 3

3x Inverse Crude Oil ETNs: -3

The Daily Investor Fee for any series of ETNs on any Index Business Day will equal the product of (1) the Closing Indicative Value for such series of ETNs on the immediately preceding Index Business Day *times* (2)(a) the Investor Fee Factor for such series of ETNs *times* (b) 1/365 *times* (c) *d*, where *d* is the number of calendar days from and including the immediately prior Index Business Day to but excluding the date of determination. The Daily Investor Fee for any series of ETNs is deemed to equal zero on any day that is not an Index Business Day.

**Daily Investor Fee:**

**The Daily Investor Fee reduces the daily return of each series of ETNs. Over the time you hold the ETNs, if the level of the Index decreases or does not increase sufficiently (in the case of the Leveraged Long ETNs), or if it increases or does not decrease sufficiently (in the case of the Leveraged Inverse ETNs), in each case in addition to the Daily Accrual, to offset the effect of the Daily Investor Fee (and, if applicable, the Early Redemption Charge and the creation fee), you will receive less than the amount you paid for them upon sale,**

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**at maturity or upon early redemption or acceleration.**

Investor Fee Factor: The Investor Fee Factor for each series of ETNs is as follows:  
 3x Long Crude Oil ETNs: 1.50%  
 3x Inverse Crude Oil ETNs: 1.50%

Index Exposure: For each Valuation Date during the Final Valuation Period or any Optional Acceleration Valuation Period, as applicable, the product of (i) the Index Exposure on the immediately preceding Valuation Date (or, in the case of the first day of such Valuation Period, the Closing Indicative Value on the immediately preceding Index Business Day) *multiplied by* the Daily ETN Performance on the current Valuation Date and (ii) a fraction equal to (a) the number of scheduled Valuation Dates left in the applicable Valuation Period, excluding the current Valuation Date, *divided by* (b) the number of scheduled Valuation Dates left in the applicable Valuation Period, including the current Valuation Date. The Index Exposure on any day that is not a Valuation Date will be deemed to be the same as on the immediately preceding Valuation Date.

Notional Cash Amount: For each Valuation Date during the Final Valuation Period or any Optional Acceleration Valuation Period, as applicable, the sum of (i) the Notional Cash Amount on the immediately preceding Valuation Date (or, in the case of the first day of such Valuation Period, \$0.00) and (ii) (a) the Index Exposure on the immediately preceding Valuation Date (or, in the case of the first day of such Valuation Period, the Closing Indicative Value on the immediately preceding Valuation Date) *multiplied by* (b) the Daily ETN Performance on the current Valuation Date *multiplied by* (c) 1 *divided by* the number of scheduled Valuation Dates left in the applicable Valuation Period, including the current Valuation Date. The Notional Cash Amount on any day that is not a Valuation Date will be deemed to be the same as on the immediately preceding Valuation Date.

Intraday Indicative Value: The “Intraday Indicative Value” for each series of ETNs is designed to approximate the economic value of such series of ETNs at a given time. It is calculated using the same formula as the Closing Indicative Value, except that instead of using the closing level of the Index, the calculation is based on the most recent intraday level of the Index at the particular time. The Intraday Indicative Value for each series of the ETNs will be calculated every 15 seconds on each Index Business Day during NYSE Arca trading hours (or during NYMEX Trading Hours during an Automatic Acceleration Valuation Period on any scheduled Index Business Day) and will be disseminated over the Consolidated Tape, or other major market data vendor. At any time at which a Market Disruption Event with respect to a series of ETNs has occurred and is continuing, there shall be no Intraday Indicative Value for such series of ETNs, except for purposes of determining whether a Trigger Event has occurred and determining the Automatic Acceleration Redemption Amount during an Automatic Acceleration Valuation Period. JHI or its affiliate is responsible for computing and disseminating the Intraday Indicative Value, except that CGMI has sole discretion to determine the Intraday Indicative Value in connection with an Automatic Acceleration and during an Automatic Acceleration Valuation Period.

The Intraday Indicative Value is a calculated value and is not the same as the trading price of the ETNs and is not a price at which you can buy or sell the ETNs in the secondary market. The Intraday Indicative Value does not take into account the factors that may influence the trading price of the ETNs, such as imbalances of supply and demand, lack of liquidity and credit considerations. **The actual trading price of the ETNs in the secondary market may vary significantly from their Intraday Indicative Value.**

**Investors can compare the trading price of the ETNs (if such concurrent price is available) against the Intraday Indicative Value to determine whether the ETNs are trading in the secondary market at a premium or a discount to the economic value of the ETNs at any given time.** Investors are cautioned that paying a premium purchase price over the Intraday Indicative Value at any time could lead to the loss of any premium in the event the investor sells the ETNs when the premium is no longer present in the marketplace or when the ETNs are accelerated, including at our option, which we have the discretion to do at any time. It is also possible that the ETNs will trade in the secondary market at a discount below the Intraday Indicative Value and that investors would receive less than the Intraday Indicative Value if they had to sell their ETNs in the market at such time.

As discussed above under “—Closing Indicative Value”, the daily settlement price of NYMEX light sweet crude oil futures contracts is determined as of 2:30 p.m., New York City time, on each Index Business Day. However, because of a time lag in the publication of the daily settlement price, the closing level of the Index, which is based on the daily settlement price, is typically not published until after 4:00 p.m., New York City time. For a portion of the time period between 2:30 p.m. and the time when the closing level of the Index is published (typically from 2:30 p.m. until shortly after 3:00 p.m.), the Index Sponsor continues to publish an intraday level of the Index based on then current trading in NYMEX light sweet crude oil futures contracts (which takes place continuously before and after 2:30 p.m.). For the remainder of that time period (typically from shortly after 3:00 p.m. until after 4:00 p.m.), the Index Sponsor suspends real-time calculation of the intraday level of the Index until it publishes the official closing level after 4:00 p.m. Throughout this full time period, the Intraday Indicative Value will continue to be calculated and disseminated based on the most recently published intraday level of the Index.

The ETNs’ leveraged exposure to the Index is reset on each Index Business Day based on the Closing Indicative Value on that day, which in turn is based on the closing level of the Index, and which in turn is based on the daily settlement price of NYMEX light sweet crude oil futures contracts determined as of 2:30 p.m. Therefore, the ETNs’ leveraged exposure is effectively reset based on futures trading at 2:30 p.m. on each Index Business Day. However, between 2:30 p.m. and the close of trading on the NYSE Arca, because the closing level of the Index will not yet be

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available, the Intraday Indicative Value will be calculated without reflecting the reset of leveraged exposure (*i.e.*, as if the leveraged exposure based on the prior day's closing level were still in effect). The Intraday Indicative Value that is published during this period is likely to be different than it would be if it reflected the reset of leveraged exposure based on the daily settlement price at 2:30 p.m. Furthermore, because the real-time calculation of the intraday level of the Index will be suspended during the latter portion of this time period, the Intraday Indicative Value will not reflect trading in NYMEX light sweet crude oil futures contracts that takes place during that time. **For these reasons, between 2:30 p.m. and the close of trading on the NYSE Arca, the Intraday Indicative Value is likely to differ from the value of the ETNs that would be determined if complete and fully up-to-date information were available and used in the calculation. As a result, we expect there to be uncertainty about the intrinsic value of the ETNs during this time period, and the trading price of the ETNs is likely to diverge from the Intraday Indicative Value during this time period. Investors should exercise caution in connection with any trading in this time period, particularly if there is a significant move in futures prices during this time period.**

Although the daily settlement price of NYMEX light sweet crude oil futures contracts (and, in turn, the closing level of the Index) is determined as of 2:30 p.m. on each Index Business Day, this value may differ from the most recent published trading price of NYMEX light sweet crude oil futures contracts (and, in turn, the intraday Index level) at 2:30 p.m. because the daily settlement price is determined according to the procedure described in "Description of the Index" in this pricing supplement.

Accordingly, the Closing Indicative Value that is published after 4:00 p.m. based on the closing level of the Index may differ from the Intraday Indicative Value published based on the intraday level of the Index at 2:30 p.m. or from any subsequent Intraday Indicative Value published on that day.

Valuation Dates: Each Index Business Day in the Final Valuation Period or any Optional Acceleration Valuation Period and any Early Redemption Valuation Date.\*

If the ETNs have not been previously redeemed or accelerated, on the Maturity Date holders will receive, for each \$25.00 stated principal amount ETN of each series, a cash payment equal to the Closing Indicative Value of such series of ETNs on the final Valuation Date of the Final Valuation Period, as calculated by the Calculation Agents. The "**Final Valuation Period**" is the period of five

Payment at Maturity: Index Business Days commencing on December 4, 2031, each subject to postponement as described herein. The Daily Index Performance will be calculated on each day during the Final Valuation Period so that the applicable leverage of the ETNs does not reset after the Final Valuation Period begins. We refer to the amount of such payment as the "**Maturity Redemption Amount.**" The ETNs are intended to be daily trading tools and are not intended to be held to maturity. Any payment on the ETNs is subject to the credit risk of Citigroup Global Markets Holdings Inc. and Citigroup Inc.

Maturity Date: The scheduled Maturity Date for each series of ETNs is December 15, 2031.

Early Redemption: Prior to maturity or acceleration, you may, subject to certain restrictions described below, offer at least the applicable minimum number of the ETNs to us for redemption on an Early Redemption Date during the term of the ETNs. If you elect to offer the ETNs for redemption, and the requirements for acceptance by us are met, you will receive a cash payment per ETN on the Early Redemption Date equal to the Early Redemption Amount. Any payment on the ETNs is subject to the credit risk of Citigroup Global Markets Holdings Inc. and Citigroup Inc.

You must offer for redemption at least 25,000 ETNs of any one series, or an integral multiple of 25,000 ETNs of such series in excess thereof, at one time in order to exercise your right to cause us to redeem

the ETNs on any Early Redemption Date (the “**Minimum Redemption Amount**”), except that we or CGMI, as one of the Calculation Agents, may from time to time reduce, in part or in whole, the Minimum Redemption Amount. Any such reduction will be applied on a consistent basis for all holders of the relevant series of ETNs at the time the reduction becomes effective. If the ETNs undergo a split or reverse split, the minimum number of ETNs needed to exercise your right to redeem will remain the same.

Early Redemption Mechanics: You may exercise your early redemption right by causing your broker or other person with whom you hold the ETNs to deliver a Redemption Notice (as defined herein) to the Redemption Agent (as defined herein). If your Redemption Notice is delivered prior to 4:00 p.m. New York City time, on any Business Day, the immediately following Index Business Day will be the applicable “**Early Redemption Valuation Date**” for such series of ETNs. Otherwise, the second following Index Business Day will be the applicable Early Redemption Valuation Date. For an exercise of the early redemption right to be effective, the applicable Early Redemption Valuation Date must be on or before the first day of any Optional Acceleration Valuation Period or Final Valuation Period. In addition, if a Trigger Event occurs or an Automatic Acceleration Valuation Period is continuing on any date that would otherwise be an Early Redemption Valuation Date, you will not be entitled to receive the Early Redemption Amount and instead will receive the Automatic Acceleration Redemption Amount. See “Specific Terms of the ETNs—Redemption Procedures” in this pricing supplement.

Because the Early Redemption Amount you will receive for each ETN will not be calculated until the Index Business Day (or the second following Index Business Day) immediately following the Business Day you offer your ETNs for redemption, you will not know the applicable Early Redemption Amount at the time you exercise your early redemption right and will bear the risk that your ETNs will decline in value between the time of your exercise and the time at which the Early Redemption Amount is determined.

Early Redemption Date: The third Business Day following an Early Redemption Valuation Date.\*

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Early Redemption Amount: A cash payment per ETN equal to the greater of (A) zero and (B)(1) the Closing Indicative Value for such series of ETNs on the Early Redemption Valuation Date *minus* (2) the Early Redemption Charge.

Early Redemption Charge: The Early Redemption Charge for any series of ETNs will equal 0.08% *times* the Closing Indicative Value for such series of ETNs on the Early Redemption Valuation Date.

Acceleration at Our Option: We will have the right to accelerate the ETNs of any series in whole but not in part on any Business Day occurring on or after the Inception Date (an “**Optional Acceleration**”). Upon an Optional Acceleration, you will receive a cash payment per ETN in an amount (the “**Optional Acceleration Redemption Amount**”) equal to the Closing Indicative Value of such series of ETNs on the final Valuation Date of the Optional Acceleration Valuation Period.  
The Daily Index Performance will be calculated on each day during the Optional Acceleration Valuation Period so that the applicable leverage of the affected ETNs does not reset after the Optional Acceleration Valuation Period begins. Any payment on the ETNs is subject to the credit risk of Citigroup Global Markets Holdings Inc. and Citigroup Inc.

In the case of an Optional Acceleration of the ETNs of any series, the “**Optional Acceleration Valuation Period**” shall be a period of five consecutive Index Business Days specified in our notice of Optional Acceleration, the first Index Business Day of which shall be at least two Business Days after the date on which we give you notice of such Optional Acceleration. The Optional Acceleration Redemption Amount will be payable on the third Business Day following the last such Index Business Day in the Optional Acceleration Valuation Period (such third Business Day the “**Optional Acceleration Date**”).\* We will give you notice of any Optional Acceleration of the ETNs through customary channels used to deliver notices to holders of exchange traded notes.

Automatic Acceleration: If the Intraday Indicative Value of any series of ETNs at any time during NYSE Arca trading hours and at or prior to the Settlement Time on any scheduled Index Business Day is less than 25% of the Closing Indicative Value of such ETNs on the immediately preceding Index Business Day (meaning that the Intraday Indicative Value has declined by more than 75% from the prior day’s Closing Indicative Value) (such event, a “**Trigger Event**”), such series of ETNs will be automatically accelerated (an “**Automatic Acceleration**”) and the holders of such ETNs will receive a cash payment per ETN equal to the Automatic Acceleration Redemption Amount on the Automatic Acceleration Date.

In the event of Automatic Acceleration of any series of ETNs, the “**Automatic Acceleration Redemption Amount**” will be equal to the arithmetic average of the Intraday Indicative Value of such series of ETNs as calculated every 15 seconds during the Automatic Acceleration Valuation Period. If the Automatic Acceleration Valuation Period ends on the scheduled Index Business Day immediately succeeding the scheduled Index Business Day on which the relevant Trigger Event occurs, the Intraday Indicative Value will be calculated on such succeeding scheduled Index Business Day so that the applicable leveraged exposure of the affected ETNs does not reset after the Trigger Event occurs and, if the Trigger Event occurs during a “roll period” for the Index, the roll is not given effect.

If a Trigger Event occurs on any scheduled Index Business Day, the “**Automatic Acceleration Valuation Period**” will commence immediately upon the occurrence of the Trigger Event and will continue during NYMEX trading hours until:

- if the Trigger Event occurs more than or equal to two hours prior to the time as of which the closing level of the Index is determined (which is currently 2:30 p.m., New York City time) (the “**Settlement Time**”), the Settlement Time on such scheduled Index Business Day; or
- if the Trigger Event occurs less than two hours prior to the Settlement Time, the Settlement Time on the immediately succeeding scheduled Index Business Day.

The Automatic Acceleration Redemption Amount will be payable on the third Business Day following the scheduled Index Business Day on which the Automatic Acceleration Valuation Period ends (such third Business Day the “**Automatic Acceleration Date**”).

Business Day:	Any day that is not (a) a Saturday or Sunday or (b) a day on which banking institutions generally are authorized or obligated by law or executive order to close in New York.
Index Business Day:	An Index Business Day is a day on which (i) trading is generally conducted on the primary exchange on which futures contracts included in the Index are traded, as determined by the Calculation Agents, which is initially the New York Mercantile Exchange, Inc. (“ <b>NYMEX</b> ”) (the “ <b>Primary Exchange</b> ”), (ii) the Index is scheduled to be published by the Index Sponsor and (iii) trading is generally conducted on NYSE Arca, in each case as determined by the Calculation Agents.
Calculation Agents:	CGMI, which is an affiliate of ours, and JHI. See “Specific Terms of the ETNs—Role of Calculation Agents” in this pricing supplement.

\* Any Valuation Date for any series of ETNs is subject to postponement if such date is not an Index Business Day or as a result of a Market Disruption Event; any Valuation Date in a Valuation Period is subject to postponement if a preceding Valuation Date in such Valuation Period is postponed; the Maturity Date will be postponed if the scheduled Maturity Date is not a Business Day or if the last scheduled Valuation Date in the Final Valuation Period is postponed; any Early Redemption Date will be postponed if a Market Disruption Event occurs or is continuing on the corresponding Valuation Date; and the Optional Acceleration Date will be postponed if the last scheduled Valuation Date in the Optional Acceleration Valuation Period is postponed, in each case as described herein under “Specific Terms of the ETNs—Market Disruption Events.” No interest or additional payment will accrue or be payable as a result of any postponement of any Valuation Date, the Maturity Date, any Early Redemption Date or the Optional Acceleration Date, as applicable.

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The “Key Terms” set forth above are only a summary of certain key terms of the ETNs. You should carefully review the section “Specific Terms of the ETNs” in this pricing supplement, together with the sections “Description of the Notes” in the accompanying prospectus supplement and “Description of Debt Securities” in the accompanying prospectus, for a complete description of the terms of each series of ETNs.

*(continued on next page)*

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## UNDERSTANDING THE VALUE OF THE ETNS

Any payment on the ETNs, whether it is the Early Redemption Amount payable upon early redemption at your option, the Optional Acceleration Redemption Amount payable upon acceleration at our option or the Maturity Redemption Amount payable at maturity (but excluding the Automatic Acceleration Redemption Amount payable upon Automatic Acceleration), will be based on the Closing Indicative Value of the applicable ETNs on one or more Valuation Dates. The Intraday Indicative Value of the ETNs at any time during an Index Business Day provides an indication of what the Closing Indicative Value of the ETNs would be if the then-current intraday level of the Index were to be the closing level of the Index on that Index Business Day. In the event of Automatic Acceleration, the Intraday Indicative Value is also used to determine the Automatic Acceleration Redemption Amount. We have arranged for the Intraday Indicative Value and Closing Indicative Value (each, an “**Indicative Value**”) for each series of ETNs to be published on each Index Business Day under the applicable Indicative Value ticker for such series of ETNs, as set forth on the cover of this pricing supplement, because we believe these values provide important information to investors seeking to buy or sell the ETNs in the secondary market. However, the Intraday Indicative Value and Closing Indicative Value of the ETNs are not the same as the trading price of the ETNs, which is the price at which you may be able to sell your ETNs in the secondary market. The trading price of the ETNs is a market-determined price that will reflect market supply and demand and may differ from the most recent Indicative Value. The trading price of each series of ETNs will be published on each Index Business Day under the applicable exchange ticker for such series of ETNs, as set forth on the cover of this pricing supplement, and reflects the last reported trading price of such series of ETNs, regardless of the date and time of such trading price.

An explanation of each valuation is set forth below.

*Closing Indicative Value*

The Closing Indicative Value for each series of ETNs is designed to reflect the end-of-day economic value of such series of ETNs. The Closing Indicative Value for each series of ETNs on the Inception Date was \$25.00. The Closing Indicative Value for any series of ETNs on any given calendar day following the Inception Date will be equal to:

For each calendar day prior to the Final Valuation Period or any Optional Acceleration Valuation Period for such series of ETNs, (1)(a) the Closing Indicative Value for such series of ETNs on the immediately preceding calendar day *times* (b) the Daily ETN Performance for such series of ETNs on such calendar day *minus* (2) the Daily Investor Fee for such series of ETNs on such calendar day.

For each calendar day during the Final Valuation Period or any Optional Acceleration Valuation Period for such series of ETNs, (1) the sum of (a) the Index Exposure and (b) the Notional Cash Amount *minus* (2) the Daily Investor Fee for such series of ETNs on such calendar day.

The Closing Indicative Value will never be less than zero.

The Closing Indicative Value of each series of ETNs on each Index Business Day is based on the closing level of the Index on that Index Business Day. The closing level of the Index on each Index Business Day is determined based on the daily settlement price of NYMEX light sweet crude oil futures contracts, which is determined as of 2:30 p.m., New York City time, on each Index Business Day. Although the daily settlement price is determined as of 2:30 p.m., there is typically a time lag in the publication of the daily settlement price, and the closing level of the Index based on the daily settlement price is typically not published until after 4:00 p.m., New York City time, which is the close of trading for the ETNs on the NYSE Arca. Accordingly, the Closing Indicative Value of each series of ETNs will also not be published until after the close of trading for the ETNs on the NYSE Arca, but will be based on the daily settlement price of NYMEX light sweet crude oil futures contracts as of 2:30 p.m.

During the Final Valuation Period or any Optional Acceleration Valuation Period, the Closing Indicative Value is calculated in a manner that results in a proportional reduction of exposure to the Index on each Valuation Date in that Valuation Period. In other words, on each Valuation Date over the course of the applicable Valuation Period, a portion of each ETN's value will be converted into notional cash exposure (and thereby crystallized) based on the level of the Index on that day, and on each subsequent Valuation Date a progressively smaller portion of the ETN's value will be exposed to changes in the Index on that day and a progressively greater amount will be

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converted into notional cash exposure, until at the end of the Valuation Period the full amount of the ETN's exposure has been converted into notional cash exposure. The cumulative amount of that notional cash exposure (*less* the Daily Investor Fee) is the Closing Indicative Value on the last Valuation Date of the applicable Valuation Period.

For more information about the calculation of the Closing Indicative Value, see “Specific Terms of the ETNs—Closing Indicative Value” in this pricing supplement.

### *Intraday Indicative Value*

The “**Intraday Indicative Value**” for each series of ETNs is designed to reflect the economic value of such series of ETNs at a given time. It is calculated using the same formula as the Closing Indicative Value, except that instead of using the closing level of the Index, the calculation is based on the most recent intraday level of the Index at the particular time. The Intraday Indicative Value of each series of ETNs will be calculated every 15 seconds on each Index Business Day during NYSE Arca trading hours (or during NYMEX Trading Hours during an Automatic Acceleration Valuation Period on any scheduled Index Business Day) and will be disseminated over the Consolidated Tape, or other major market data vendor, and will be published under the applicable Indicative Value ticker for such series of ETNs, as set forth on the cover of this pricing supplement. At any time at which a Market Disruption Event with respect to any series of ETNs has occurred and is continuing, there shall be no Intraday Indicative Value for such series of ETNs, except for purposes of determining whether a Trigger Event has occurred and determining the Automatic Acceleration Redemption Amount during an Automatic Acceleration Valuation Period.

As discussed above under “—Closing Indicative Value”, the daily settlement price of NYMEX light sweet crude oil futures contracts is determined as of 2:30 p.m., New York City time, on each Index Business Day. However, because of a time lag in the publication of the daily settlement price, the closing level of the Index, which is based on the daily settlement price, is typically not published until after 4:00 p.m., New York City time. For a portion of the time period between 2:30 p.m. and the time when the closing level of the Index is published (typically from 2:30 p.m. until shortly after 3:00 p.m.), the Index Sponsor continues to publish an intraday level of the Index based on then current trading in NYMEX light sweet crude oil futures contracts (which takes place continuously before and after 2:30 p.m.). For the remainder of that time period (typically from shortly after 3:00 p.m. until after 4:00 p.m.), the Index Sponsor suspends real-time calculation of the intraday level of the Index until it publishes the official closing level after 4:00 p.m. Throughout this full time period, the Intraday Indicative Value will continue to be calculated and disseminated based on the most recently published intraday level of the Index.

The ETNs' leveraged exposure to the Index is reset on each Index Business Day based on the Closing Indicative Value on that day, which in turn is based on the closing level of the Index, and which in turn is based on the daily settlement price of NYMEX light sweet crude oil futures contracts determined as of 2:30 p.m. Therefore, the ETNs' leveraged exposure is effectively reset based on futures trading at 2:30 p.m. on each Index Business Day. However, between 2:30 p.m. and the close of trading on the NYSE Arca, because the closing level of the Index will not yet be available, the Intraday Indicative Value will be calculated without reflecting the reset of leveraged exposure (*i.e.*, as if the

leveraged exposure based on the prior day's closing level were still in effect). The Intraday Indicative Value that is published during this period is likely to be different than it would be if it reflected the reset of leveraged exposure based on the daily settlement price at 2:30 p.m. Furthermore, because the real-time calculation of the intraday level of the Index will be suspended during the latter portion of this time period, the Intraday Indicative Value will not reflect trading in NYMEX light sweet crude oil futures contracts that takes place during that time. **For these reasons, between 2:30 p.m. and the close of trading on the NYSE Arca, the Intraday Indicative Value is likely to differ from the value of the ETNs that would be determined if complete and fully up-to-date information were available and used in the calculation. As a result, we expect there to be uncertainty about the intrinsic value of the ETNs during this time period, and the trading price of the ETNs is likely to diverge from the Intraday Indicative Value during this time period. Investors should exercise caution in connection with any trading in this time period, particularly if there is a significant move in futures prices during this time period.**

Although the daily settlement price of NYMEX light sweet crude oil futures contracts (and, in turn, the closing level of the Index) is determined as of 2:30 p.m. on each Index Business Day, this value may differ from the

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most recent published trading price of NYMEX light sweet crude oil futures contracts (and, in turn, the intraday Index level) at 2:30 p.m. because the daily settlement price is determined according to the procedure described in “Description of the Index” in this pricing supplement. Accordingly, the Closing Indicative Value that is published after 4:00 p.m. based on the closing level of the Index may differ from the Intraday Indicative Value published based on the intraday level of the Index at 2:30 p.m. or from any subsequent Intraday Indicative Value published on that day.

For more information about the calculation of the Intraday Indicative Value, see “Specific Terms of the ETNs—Intraday Indicative Value” in this pricing supplement.

### *Trading Price*

The market value of the ETNs at any given time, which we refer to as the trading price, is the price at which you may be able to sell your ETNs in the secondary market at such time, if one exists. In the absence of an active secondary market for the ETNs, the last reported trading price may not reflect the actual price at which you may be able to sell your ETNs at a particular time. The trading price of the ETNs in the secondary market is not the same as the Indicative Value of the ETNs at any time, even if a concurrent trading price in the secondary market were available at such time. The trading price of any series of the ETNs at any time may vary significantly from the Indicative Value of such ETNs at such time because the market value reflects investor supply and demand for the ETNs. Any premium may be reduced or eliminated at any time. Paying a premium purchase price over the Indicative Value of the ETNs could lead to significant losses in the event the investor sells such ETNs at a time when such premium is no longer present in the marketplace or such ETNs are accelerated, including at our option, which we have the discretion to do at any time. If we accelerate the ETNs of any series at our option, investors will receive a cash payment in an amount based on the Closing Indicative Value of such ETNs on the final Valuation Date of an Optional Acceleration Valuation Period, which will not include any premium. Investors should consult their financial advisors before purchasing or selling the ETNs, especially ETNs trading at a premium over their Indicative Value.

See “Risk Factors—The Intraday Indicative Value and the Closing Indicative Value and the applicable Redemption Amount are not the same as the closing price or any other trading price of the ETNs in the secondary market” in this pricing supplement.

### *Early Redemption Amount*

If you elect to offer your ETNs for early redemption, and the requirements for acceptance by us are met (including the requirement that you submit at least the Minimum Redemption Amount of 25,000 ETNs of any one series or an integral multiple of 25,000 ETNs of such series in excess thereof), you will receive a cash payment per ETN on the Early Redemption Date equal to the Early Redemption Amount. The Early Redemption Amount, if applicable, will be equal to the greater of (A) zero and (B) (1) the Closing Indicative Value on the Early Redemption Valuation Date

*minus* (2) the Early Redemption Charge, which is equal to 0.08% *times* the Closing Indicative Value on the Early Redemption Valuation Date, and will be calculated by the Calculation Agents.

For more information about the calculation of the Early Redemption Amount, see “Specific Terms of the ETNs—Payment Upon Early Redemption” in this pricing supplement.

*Optional Acceleration Redemption Amount*

We will have the right to accelerate the ETNs of any series in whole but not in part on any Business Day occurring on or after the Inception Date. Upon an Optional Acceleration, you will receive the Optional Acceleration Redemption Amount. The Optional Acceleration Redemption Amount will be equal to the Closing Indicative Value of the applicable series of ETNs on the final Valuation Date of the Optional Acceleration Valuation Period. The Daily Index Performance will be calculated on each day during the Optional Acceleration Valuation Period so that the applicable leverage of the affected ETNs does not reset after the Optional Acceleration Valuation Period begins.

For more information about the calculation of the Optional Acceleration Redemption Amount, see “Specific Terms of the ETNs—Acceleration at Our Option” in this pricing supplement.

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*Automatic Acceleration Redemption Amount*

If the Intraday Indicative Value of any series of ETNs at any time during NYSE Arca trading hours and at or prior to the Settlement Time on any scheduled Index Business Day is less than 25% of the Closing Indicative Value of such ETNs on the immediately preceding Index Business Day (meaning that the Intraday Indicative Value has declined by more than 75% from the prior day's Closing Indicative Value), such series of ETNs will be automatically accelerated and the holders of such ETNs will receive a cash payment per ETN equal to the Automatic Acceleration Redemption Amount on the Automatic Acceleration Date. The Automatic Acceleration Redemption Amount will be equal to the arithmetic average of the Intraday Indicative Value of such series of ETNs as calculated every 15 seconds during the Automatic Acceleration Valuation Period.

For more information about the calculation of the Automatic Acceleration Redemption Amount, see “Specific Terms of the ETNs—Automatic Acceleration” in this pricing supplement.

*Maturity Redemption Amount*

If the ETNs have not been previously redeemed or accelerated, on the Maturity Date the holder will receive a cash payment per ETN equal to the Maturity Redemption Amount, which will be equal to the Closing Indicative Value of the applicable series of ETNs on the final Valuation Date of the Final Valuation Period. The Daily Index Performance will be calculated on each day during the Final Valuation Period so that the leverage of the applicable ETNs does not reset after the Final Valuation Period begins.

For more information about the calculation of the Maturity Redemption Amount, see “Specific Terms of the ETNs—Payment at Maturity” in this pricing supplement.



## HYPOTHETICAL EXAMPLES

**Illustrations of the Calculation of the Closing Indicative Value prior to the Final Valuation Period or an Optional Acceleration Valuation Period**

The examples below illustrate how the Closing Indicative Value of the ETNs would be calculated on a hypothetical Index Business Day (referred to as Day 1 below) based on various hypothetical percentage changes in the closing level of the Index from the prior Index Business Day (referred to as Day 0 below). The examples below illustrate one-day returns on the ETNs because the ETNs are designed to meet their stated investment objectives on a daily basis. For illustrations of the risks of holding the ETNs for more than one day, see “—Illustrations of the ‘Decay’ Effect on the ETNs” below. The examples below illustrate the calculation of the Closing Indicative Value prior to the Final Valuation Period or any Optional Acceleration Valuation Period. For illustrations of the calculation of the Closing Indicative Value during the Final Valuation Period or any Optional Acceleration Valuation Period, see “—Illustrations of the Calculation of the Closing Indicative Value during the Final Valuation Period or an Optional Acceleration Valuation Period” below.

The examples below only illustrate changes in the Closing Indicative Value of the ETNs and do not reflect the impact of any creation fee or Early Redemption Fee on an investor’s return on the ETNs. If an investor were to purchase the ETNs from CGMI, the investor would incur a fee equal to the Indicative Value used to price the sale of the ETNs to that investor *times* the creation fee of up to 0.15%, and if an investor were to exercise the early redemption right, the investor would incur a fee equal to the Closing Indicative Value on the applicable Early Redemption Valuation Date *times* 0.08%. If applicable, the creation fee and Early Redemption Fee will reduce an investor’s return on an investment in the ETNs.

The examples below do not reflect the Automatic Acceleration feature of the ETNs. The examples show scenarios in which the Closing Indicative Value on Day 1 has fallen nearly to zero in order to show that an adverse movement of 33.33% or more in the level of the Index would result in a complete loss in value of the ETNs. However, in these scenarios, once the Intraday Indicative Value of the ETNs of any series has fallen to less than 25% of the prior Index Business Day’s Closing Indicative Value, the ETNs of that series would be automatically accelerated and holders would receive an amount calculated based on the arithmetic average of Intraday Indicative Values of such ETNs over an Automatic Acceleration Valuation Period, rather than on the Closing Indicative Value.

The examples below are based on the following hypothetical assumptions:

<b>Term</b>	<b>Assumed Value</b>
Closing Indicative Value on prior Index Business Day (Day 0)	\$100
3-month U.S. Treasury rate on prior Index Business Day ( $Tbills_{t-1}$ )	0.10%

Number of calendar days since prior Index Business Day (*d*)                      1

Based on these assumptions, the Daily Accrual and Daily Investor Fee for the examples below would be calculated as follows:

Daily Accrual    ===0.000002778133

Daily Investor Fee =Closing Indicative Value on Day 0 × (Investor Fee Factor × 1/365 × *d*)  
                          =\$100 × (0.015 × 1/365 × 1)  
                          =\$0.004109589

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*Leveraged Long ETNs*

The table below illustrates how the Closing Indicative Value (or “CIV”) of the Leveraged Long ETNs would be calculated on a given Index Business Day (Day 1) based on the assumptions specified above and assuming various hypothetical percentage changes in the closing level of the Index from the prior Index Business Day (Day 0). The percentage change in the closing level of the Index from Day 0 to Day 1 is referred to as the “Daily Index Performance” in the table below. Each row in the table below illustrates the calculation of the Closing Indicative Value on Day 1 given the Daily Index Performance specified in that row. The table below is merely illustrative and does not show all possible outcomes.

<b>Daily ETN Performance</b>				
CIV Day 0 (\$)	×	[1 + Daily Accrual + (Daily Index Performance × Leverage)]	Daily Investor Fee (\$)	= CIV Day 1 (\$)
100	×	[1 + 0.000002778133 + (-33.33% × 3)]	0.004109589	= 0.0062
100	×	[1 + 0.000002778133 + (-10.00% × 3)]	0.004109589	= 69.9962
100	×	[1 + 0.000002778133 + (-5.00% × 3)]	0.004109589	= 84.9962
100	×	[1 + 0.000002778133 + (-3.00% × 3)]	0.004109589	= 90.9962
100	×	[1 + 0.000002778133 + (-1.00% × 3)]	0.004109589	= 96.9962
100	×	[1 + 0.000002778133 + (0.00% × 3)]	0.004109589	= 99.9962
100	×	[1 + 0.000002778133 + (1.00% × 3)]	0.004109589	= 102.9962
100	×	[1 + 0.000002778133 + (3.00% × 3)]	0.004109589	= 108.9962
100	×	[1 + 0.000002778133 + (5.00% × 3)]	0.004109589	= 114.9962
100	×	[1 + 0.000002778133 + (10.00% × 3)]	0.004109589	= 129.9962
100	×	[1 + 0.000002778133 + (33.33% × 3)]	0.004109589	= 199.9862

As the table above illustrates, the change in the Closing Indicative Value of the Leveraged Long ETNs from one Index Business Day to the next will reflect 3 times the percentage change in the closing level of the Index over that period, *plus* the Daily Accrual and *minus* the Daily Investor Fee. If the closing level of the Index declines by 33.33% or more from one Index Business Day to the next, the Leveraged Long ETNs will lose all of their value over that one-day period.

*Leveraged Inverse ETNs*

The table below illustrates how the Closing Indicative Value (or “CIV”) of the Leveraged Inverse ETNs would be calculated on a given Index Business Day (Day 1) based on the assumptions specified above and assuming various hypothetical percentage changes in the closing level of the Index from the prior Index Business Day (Day 0). The percentage change in the closing level of the Index from Day 0 to Day 1 is referred to as the “Daily Index Performance”

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in the table below. Each row in the table below illustrates the calculation of the Closing Indicative Value on Day 1 given the Daily Index Performance specified in that row. The table below is merely illustrative and does not show all possible outcomes.

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## Daily ETN Performance

CIV Day 0 (\$)	×	[1 + Daily Accrual + (Daily Index Performance	× Leverage)]	Daily Investor Fee (\$)	= CIV Day 1 (\$)
100	×	[1 + 0.000002778133 + (-33.33%	× -3)]	0.004109589	= 199.9862
100	×	[1 + 0.000002778133 + (-10.00%	× -3)]	0.004109589	= 129.9962
100	×	[1 + 0.000002778133 + (-5.00%	× -3)]	0.004109589	= 114.9962
100	×	[1 + 0.000002778133 + (-3.00%	× -3)]	0.004109589	= 108.9962
100	×	[1 + 0.000002778133 + (-1.00%	× -3)]	0.004109589	= 102.9962
100	×	[1 + 0.000002778133 + (0.00%	× -3)]	0.004109589	= 99.9962
100	×	[1 + 0.000002778133 + (1.00%	× -3)]	0.004109589	= 96.9962
100	×	[1 + 0.000002778133 + (3.00%	× -3)]	0.004109589	= 90.9962
100	×	[1 + 0.000002778133 + (5.00%	× -3)]	0.004109589	= 84.9962
100	×	[1 + 0.000002778133 + (10.00%	× -3)]	0.004109589	= 69.9962
100	×	[1 + 0.000002778133 + (33.33%	× -3)]	0.004109589	= 0.0062

As the table above illustrates, the change in the Closing Indicative Value of the Leveraged Inverse ETNs from one Index Business Day to the next will reflect -3 times the percentage change in the closing level of the Index over that period, *plus* the Daily Accrual and *minus* the Daily Investor Fee. If the closing level of the Index increases by 33.33% or more from one Index Business Day to the next, the Leveraged Inverse ETNs will lose all of their value over that one-day period.

## Illustrations of the “Decay” Effect on the ETNs

The daily resetting of each ETN’s leveraged exposure to the Index is likely to cause each ETN to experience a “decay” effect, which is likely to worsen over time and will be greater the more volatile the Index. The decay effect refers to a likely tendency of the ETNs to lose value over time independent of the performance of the Index. The decay effect results any time the Index moves in a direction on one day that is different from the direction it moved on the prior day. If the Index increases one day and decreases the next, the resetting of the leveraged exposure based on the higher value after the first day means that a greater amount of value is exposed to the decrease on the next day than if the leveraged exposure had not been reset; and if the Index decreases one day and increases the next, the resetting of the leveraged exposure based on the lower value after the first day means that a smaller amount is exposed to the increase in the next day. One consequence of this daily resetting of leverage is that, if the Index moves in one direction from Day 0 to Day 1 and then returns to its Day 0 level on Day 2, the Closing Indicative Value of the ETNs will be lower on Day 2 than it was on Day 0, even though the closing level of the Index is the same on Day 2 as it was on Day 0. As a result of this decay effect, it is nearly certain that the value of each series of ETNs will have declined to near zero (absent reverse splits) by the Maturity Date of the ETNs, and likely significantly sooner. Accordingly, the ETNs are not suitable for intermediate- or long-term investment, as any intermediate- or long-term investment is very likely to sustain significant losses, even if the Index appreciates over the relevant time period. Although the decay effect is more likely to manifest itself the longer the ETNs are held, the decay effect can have a significant impact on ETN performance even over a period as short as two days. **The ETNs are not intended to be “buy and hold” investments. If you invest in the ETNs, you should continuously monitor your holding of the ETNs and make investment**

**decisions at least on each Index Business Day or even intraday.**

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The examples below are designed to illustrate the decay effect on the Closing Indicative Value of the ETNs over a short period of time. To isolate the decay effect, the examples below disregard the effects of the Daily Accrual and the Daily Investor Fee. If the Daily Accrual and the Daily Investor Fee were also taken into account, and if the Daily Investor Fee were to exceed the Daily Accrual (as it consistently would have done in recent years), then the hypothetical Closing Indicative Values below would be even lower.

Each of the examples below illustrates hypothetical daily fluctuations in the closing level of the Index over a period of 10 Index Business Days. By choosing to show changes over 10 Index Business Days, we are not suggesting that 10 Index Business Days is an appropriate period of time to hold the ETNs. Rather, we are showing changes over 10 Index Business Days to illustrate how the decay effect increases over a number of days and to illustrate the risks of holding the ETNs for more than one Index Business Day. As described elsewhere in this pricing supplement, the ETNs are intended to be daily trading tools for sophisticated investors to manage daily trading risks.

In each of the examples below, the closing level of the Index is the same at the end of the hypothetical 10 Index Business Day period as it was at the beginning of the period. We are showing examples on this basis to illustrate how the decay effect has an impact on the Closing Indicative Value of the ETNs that is independent from the directional performance of the Index. If the Index were to move in an adverse direction (down in the case of the Leveraged Long ETNs, or up in the case of the Leveraged Inverse ETNs) over the relevant time period, the Closing Indicative Values would be lower than in the examples illustrated below.

The examples below are based on a hypothetical closing level of the Index of 100 and a hypothetical Closing Indicative Value of \$100 at the beginning of the hypothetical 10 Index Business Day period.

**Example 1. The closing level of the Index fluctuates by 1% per day.**

In this example, the Index fluctuates by 1% per day (as a percentage of the initial level) over a 10 Index Business Day period. The first table below illustrates the effects of these changes on the Leveraged Long ETNs, and the second illustrates the effects of these changes on the Leveraged Inverse ETNs.

*Leveraged Long ETNs*

Day	Index Level	% Change of Index Level from Day 0	Closing Indicative Value (\$)	% Change of Closing Indicative Value from Day 0
0	100		100.00	
1	101	1.00%	103.00	3.00%

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2	100	0.00%	99.94	-0.06%
3	99	-1.00%	96.94	-3.06%
4	100	0.00%	99.88	-0.12%
5	101	1.00%	102.88	2.88%
6	100	0.00%	99.82	-0.18%
7	99	-1.00%	96.83	-3.17%
8	100	0.00%	99.76	-0.24%
9	101	1.00%	102.75	2.75%
10	100	<b>0.00%</b>	99.70	<b>-0.30%</b>

*Leveraged Inverse ETNs*

<b>Day</b>	<b>Index Level</b>	<b>% Change of Index Level from Day 0</b>	<b>Closing Indicative Value (\$)</b>	<b>% Change of Closing Indicative Value from Day 0</b>
0	100		100.00	
1	101	1.00%	97.00	-3.00%
2	100	0.00%	99.88	-0.12%
3	99	-1.00%	102.88	2.88%
4	100	0.00%	99.76	-0.24%

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5	1011.00%	96.77	-3.23%
6	1000.00%	99.64	-0.36%
7	99	-1.00%	102.632.63%
8	1000.00%	99.52	-0.48%
9	1011.00%	96.54	-3.46%
10	<b>1000.00%</b>	99.40	<b>-0.60%</b>

In this example, although the closing level of the Index fluctuated within a narrow range around the initial level and concluded the hypothetical 10 Index Business Day period at the same level at which it started, the Closing Indicative Value of the ETNs has experienced a decay of -0.30% for the Leveraged Long ETNs and -0.60% for the Leveraged Inverse ETNs.

**Example 2. The closing level of the Index fluctuates by 5% per day.**

In this example, the Index fluctuates by 5% per day (as a percentage of the initial level) over a 10 Index Business Day period. The first table below illustrates the effects of these changes on the Leveraged Long ETNs, and the second illustrates the effects of these changes on the Leveraged Inverse ETNs.

*Leveraged Long ETNs*

Day	Index Level	% Change of Index Level from Day 0	Closing Indicative Value (\$)	% Change of Closing Indicative Value from Day 0
0	100		100.00	
1	105	5.00%	115.00	15.00%
2	100	0.00%	98.57	-1.43%
3	95	-5.00%	83.79	-16.21%
4	100	0.00%	97.02	-2.98%
5	105	5.00%	111.57	11.57%
6	100	0.00%	95.63	-4.37%
7	95	-5.00%	81.28	-18.72%
8	100	0.00%	94.12	-5.88%
9	105	5.00%	108.24	8.24%
10	100	<b>0.00%</b>	92.77	<b>-7.23%</b>

*Leveraged Inverse ETNs*

Day

	<b>Index Level</b>	<b>% Change of Index Level from Day 0</b>	<b>Closing Indicative Value (\$)</b>	<b>% Change of Closing Indicative Value from Day 0</b>
0	100		100.00	
1	105	5.00%	85.00	-15.00%
2	100	0.00%	97.14	-2.86%
3	95	-5.00%	111.71	11.71%
4	100	0.00%	94.08	-5.92%
5	105	5.00%	79.96	-20.04%
6	100	0.00%	91.39	-8.61%
7	95	-5.00%	105.10	5.10%
8	100	0.00%	88.50	-11.50%
9	105	5.00%	75.23	-24.77%
10	100	<b>0.00%</b>	85.97	<b>-14.03%</b>

In this example, the greater magnitude of the daily changes in the closing level of the Index as compared to the prior example results in significantly greater decay, with a decay of -7.23% for the Leveraged Long ETNs and -14.03% for the Leveraged Inverse ETNs. The Closing Indicative Value experienced this significant decay even though the closing level of the Index concluded the hypothetical 10 Index Business Day period at the same level at which it started.

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**Example 3. The closing level of the Index fluctuates by 12% per day.**

In this example, the Index fluctuates by 12% per day (as a percentage of the initial level) over a 10 Index Business Day period. The first table below illustrates the effects of these changes on the Leveraged Long ETNs, and the second illustrates the effects of these changes on the Leveraged Inverse ETNs.

*Leveraged Long ETNs*

Day	Index Level	% Change of Index Level from Day 0	Closing Indicative Value (\$)	% Change of Closing Indicative Value from Day 0
0	100		100.00	
1	112	12.00%	136.00	36.00%
2	100	0.00%	92.29	-7.71%
3	88	-12.00%	59.06	-40.94%
4	100	0.00%	83.22	-16.78%
5	112	12.00%	113.19	13.19%
6	100	0.00%	76.80	-23.20%
7	88	-12.00%	49.16	-50.84%
8	100	0.00%	69.26	-30.74%
9	112	12.00%	94.20	-5.80%
10	100	<b>0.00%</b>	63.92	<b>-36.08%</b>

*Leveraged Inverse ETNs*

Day	Index Level	% Change of Index Level from Day 0	Closing Indicative Value (\$)	% Change of Closing Indicative Value from Day 0
0	100		100.00	
1	112	12.00%	64.00	-36.00%
2	100	0.00%	84.57	-15.43%
3	88	-12.00%	115.02	15.02%
4	100	0.00%	67.96	-32.04%
5	112	12.00%	43.50	-56.50%
6	100	0.00%	57.48	-42.52%
7	88	-12.00%	78.17	-21.83%
8	100	0.00%	46.19	-53.81%
9	112	12.00%	29.56	-70.44%
10	100	<b>0.00%</b>	39.07	<b>-60.93%</b>

In this example, the greater magnitude of the daily changes in the closing level of the Index as compared to both of the prior examples results in significantly greater decay, with a decay of -36.08% for the Leveraged Long ETNs and -60.93% for the Leveraged Inverse ETNs. The Closing Indicative Value experienced this significant decay even though the closing level of the Index concluded the hypothetical 10 Index Business Day period at the same level at which it started. As this example illustrates, the greater the daily fluctuations in the closing level of the Index (*i.e.*, the greater the volatility), the greater the decay.

In each example, there is no change in the closing level of the Index from Day 0 to Day 10, in order to isolate the decay effect from other factors that affect the Closing Indicative Value. If the Index depreciated (in the case of the Leveraged Long ETNs) or appreciated (in the case of the Leveraged Inverse ETNs) over the same time period, that adverse Index movement would have caused the Closing Indicative Value to be even lower. For example, on Day 7 of Example 3 above with respect to the Leveraged Long ETNs, the Index level was 12% lower than it was on Day 0, and the Closing Indicative Value was 50.84% lower on that day than it was on Day 0, for a loss that is greater than 3 times the decline of the Index from Day 0 to Day 7. Similarly, on Day 9 of Example 3 above with respect to the Leveraged Inverse ETNs, the Index level was 12% higher than it was on Day 0, and the Closing Indicative Value was 70.44% lower on that day than it was on Day 0, for a loss that is greater than 3 times the increase of the Index from Day 0 to Day 9.

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The above examples illustrate the following important points about the decay effect over any holding period of more than one day:

**The decay effect worsens over time.** In each of the examples above, the closing level of the Index returns to the original level of 100 on multiple days during the 10 Index Business Day period. Each time the level returns to 100, the Closing Indicative Value is lower than it was on any earlier date on which the closing level was 100. The same is true for each of the other closing levels shown in the examples above.

**Although the decay effect worsens over time, it can have a meaningful effect even over a period as short as two days.** In Example 3 above, the closing level of the Index falls from 100 to 88 from Day 2 to Day 3 and then returns to 100 on Day 4. Although the closing level of the Index is the same on Day 4 as it was on Day 2, the Closing Indicative Value of each of the ETNs on Day 4 is significantly lower than it was on Day 2.

**The decay effect worsens as volatility increases.** Volatility refers to the average magnitude of daily fluctuations in the closing level of the Index over any period of time. The daily fluctuations in Example 2 are significantly larger than they are in Example 1, and the daily fluctuations in Example 3 are significantly larger than they are in Example 2. As a result, the decline in the Closing Indicative Value in Example 2 is significantly greater than it is in Example 1, and the decline in the Closing Indicative Value in Example 3 is significantly greater than it is in Example 2.

**The daily compounding of returns will adversely affect the Closing Indicative Value of the ETNs any time the closing level of the Index moves in a different direction on one day than it did on the prior day.** If the closing level of the Index increases from Day 0 to Day 1 and then decreases by the same amount from Day 1 to Day 2, or if the closing level decreases from Day 0 to Day 1 and then increases by the same amount from Day 1 to Day 2, the Closing Indicative Value on Day 2 will be lower than it was on Day 0 even though the closing level of the Index on Day 2 is the same as it was on Day 0.

**The 3-to-1 (long or inverse) leverage ratio does not hold for any period longer than one day.** In Example 3 above, for the Leveraged Long ETNs, the 50.84% loss reflected in the Closing Indicative Value from Day 0 to Day 7 was approximately 4.24 times greater than the 12% decline in the closing level of the Index over the same period, and for the Leveraged Inverse ETNs, the 70.44% loss reflected in the Closing Indicative Value from Day 0 to Day 9 was approximately 5.87 times greater than the 12% increase in the closing level of the Index over the same period.

In fact, the Closing Indicative Value of the ETNs may decline significantly over any given time period even if the closing level of the Index from the beginning to the end of that time period increases (in the case of the Leveraged Long ETNs) or decreases (in the case of the Leveraged Inverse ETNs). In Example 3 above, the closing level of the Index has appreciated by 12% from Day 0 to Day 9, but the Closing Indicative Value of the Leveraged Long ETNs was 5.80% lower on Day 9 than it was on Day 0. Similarly, in Example 3 above, the closing level of the Index has depreciated by 12% from Day 0 to Day 7, but the Closing Indicative Value of the Leveraged Inverse ETNs was 21.83% lower on Day 7 than it was on Day 0.

**The decay effect will be greater for the Leveraged Inverse ETNs than for the Leveraged Long ETNs.** In each of the examples above, the Closing Indicative Value of the Leveraged Inverse ETNs on Day 10 of the hypothetical 10 Index Business Day period is lower than the Closing Indicative Value of the Leveraged Long ETNs on that day.

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Illustrations of the Calculation of the Closing Indicative Value during the Final Valuation Period or an Optional Acceleration Valuation Period

If we exercise our right to accelerate the ETNs of any series at our option, or if the ETNs of any series remain outstanding until maturity, the amount we will be obligated to pay on the Optional Acceleration Date or the Maturity Date, as applicable, will be equal to the Closing Indicative Value of the applicable ETNs on the final Valuation Date of the applicable Valuation Period, which will consist of five consecutive Index Business Days. During the Final Valuation Period or an Optional Acceleration Valuation Period, as applicable, the Closing Indicative Value of the applicable series of ETNs will be calculated on each Valuation Date of that Valuation Period in a manner that differs from the manner in which the Closing Indicative Value is calculated prior to the Valuation Period. On each day of the Final Valuation Period or an Optional Acceleration Valuation Period, the Closing Indicative Value of the ETNs will be equal to the Index Exposure on that day *plus* the Notional Cash Amount on that day *minus* the Daily Investor Fee. This calculation is designed to achieve a proportional reduction of exposure to the Index on each Valuation Date in the Valuation Period. In other words, on each Valuation Date over the course of the applicable Valuation Period, a portion of each ETN’s value will be converted into notional cash exposure (and thereby crystallized) based on the level of the Index on that day, and on each subsequent Valuation Date a progressively smaller portion of the ETN’s value will be exposed to changes in the Index on that day and a progressively greater amount will be converted into notional cash exposure, until at the end of the Valuation Period the full amount of the ETN’s exposure has been converted into notional cash exposure. The cumulative amount of that notional cash exposure (*less* the Daily Investor Fee) is the Closing Indicative Value on the last Valuation Date of the applicable Valuation Period.

The table below illustrates the hypothetical calculation of the Closing Indicative Value (“CIV”) of the ETNs on each Valuation Date during the Final Valuation Period or an Optional Acceleration Valuation Period. The table below assumes that the Closing Indicative Value of the ETNs on the Index Business Day immediately preceding the beginning of the Valuation Period is \$100 and that the first Valuation Date occurs on a Monday (*i.e.*, for purposes of calculating the Daily Investor Fee, three calendar days after the immediately preceding Index Business Day). In the table below, “IF” refers to a fraction equal to the number of scheduled Valuation Dates left in the Valuation Period, excluding the current Valuation Date, *divided by* (b) the number of scheduled Valuation Dates left in the applicable Valuation Period, including the current Valuation Date; and “NF” refers to a fraction equal to 1 *divided by* the number of scheduled Valuation Dates left in the applicable Valuation Period, including the current Valuation Date.

The table assumes Daily ETN Performances on each Valuation Date of the applicable Valuation Period as indicated below. A Daily ETN Performance of greater than 1 means that the Index has moved in a favorable direction since the prior Index Business Day, and a Daily ETN Performance of less than 1 means that the Index has moved in an unfavorable direction since the prior Index Business Day. The Daily ETN Performance numbers below are entirely hypothetical and have been selected for the sole purpose of illustrating the mechanics of the calculation of the Closing Indicative Value during the Final Valuation Period or an Optional Acceleration Valuation Period. The actual Closing Indicative Values determined during any actual Valuation Period will differ from the illustration below.

$$\text{Day Index Exposure} \times \text{IF} = \text{+Notional Cash Amount} + \text{×NF} = \text{-Daily Investor Fee} = \text{CIV}$$

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	Index Exposure on Prior Index Business Day	Daily ETN Performance	Index Exposure on Current Index Business Day	Notional Cash Amount on Prior Index Business Day	Index Exposure on Prior Index Business Day	Daily ETN Performance	Notional Cash Amount on Current Index Business Day	
1	[(100	×0.97)	×4/5]= <b>\$77.60</b>	+\$0.00	+[100	×0.97	×1/5]= <b>\$19.40</b>	- <b>\$0.012328767</b> = <b>\$96.9</b>
2	[(77.60	×1.03)	×3/4]= <b>\$59.95</b>	+\$19.40	+[77.60	×1.03	×1/4]= <b>\$39.38</b>	- <b>\$0.003985795</b> = <b>\$99.3</b>
3	[(59.95	×0.98)	×2/3]= <b>\$39.16</b>	+\$39.38	+[59.95	×0.98	×1/3]= <b>\$58.96</b>	- <b>\$0.004081809</b> = <b>\$98.1</b>
4	[(39.16	×1.02)	×1/2]= <b>\$19.97</b>	+\$58.96	+[39.16	×1.02	×1/2]= <b>\$78.94</b>	- <b>\$0.004032534</b> = <b>\$98.9</b>
5	[(19.97	×0.94)	×0] = <b>\$0.00</b>	+\$78.94	+[19.97	×0.94	×1] = <b>\$97.71</b>	- <b>\$0.004064726</b> = <b>\$97.7</b>

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## RISK FACTORS

An investment in the ETNs is significantly riskier than an investment in conventional debt securities. The ETNs are subject to all of the risks associated with an investment in our conventional debt securities (guaranteed by Citigroup Inc.), including the risk that we and Citigroup Inc. may default on our obligations under the ETNs, and are also subject to risks associated with fluctuations in the level of the Index.

The risk factors below describe certain significant risks associated with an investment in the ETNs. You should read these risk factors together with the risk factors included in the accompanying prospectus supplement and in the documents incorporated by reference in the accompanying prospectus, including Citigroup Inc.'s most recent Annual Report on Form 10-K and any subsequent Quarterly Reports on Form 10-Q, which describe risks relating to the business of Citigroup Inc. more generally

**The ETNs do not pay interest or guarantee any return of your initial investment and you may lose all or a significant part of your investment in the ETNs.**

The terms of the ETNs differ from those of ordinary debt securities in that the ETNs neither pay interest nor guarantee payment of the stated principal amount per ETN at maturity or upon redemption or acceleration, and you may incur a loss of your initial investment. Because the payment due at maturity or upon redemption or acceleration may be less than the amount originally invested in the ETNs, the return on the ETNs may be negative.

The Early Redemption Amount, Optional Acceleration Redemption Amount, Automatic Acceleration Redemption Amount and Maturity Redemption Amount, as applicable (each, a "**Redemption Amount**"), will each depend on the change in the level of the Index. You may lose all or a significant amount of your investment in the ETNs if the level of the Index decreases or does not increase sufficiently (in the case of the Leveraged Long ETNs) or increases or does not decrease sufficiently (in the case of the Leveraged Inverse ETNs). Any payment on the ETNs is subject to the credit risk of Citigroup Global Markets Holdings Inc. and Citigroup Inc.

**The ETNs will magnify any adverse movements in the closing level of the Index by 3 times and, therefore, are highly speculative and highly risky.**

For every 1% adverse movement in the daily performance of the Index (*i.e.*, a 1% decrease in the case of the Leveraged Long ETNs or a 1% increase in the case of the Leveraged Inverse ETNs), the Closing Indicative Value of the ETNs will decline by 3% (or even more if the Daily Investor Fee exceeds the Daily Accrual). For example, if the Index moves by 3.33% in an adverse direction, the ETNs will lose 10% of their value, and if the Index moves by

33.33% in an adverse direction, the ETNs will lose all of their value, all within a one-day period. Accordingly, the ETNs are highly speculative and highly risky and are suitable only for sophisticated investors who understand and can bear the risks associated with 3 times magnified losses resulting from adverse movements in the daily performance of the Index.

**The ETNs are not suitable for investors with intermediate- or longer-term investment objectives.**

The ETNs are not intended to be “buy and hold” investments. The ETNs are designed to achieve their stated investment objective on a daily basis, but their performance over different periods of time can differ significantly from their stated daily objective because the relationship between the level of the Index and the Closing Indicative Value of the ETNs will begin to break down as the length of an investor’s holding period increases. The ETNs are not intermediate- or long-term substitutes for long and/or short positions in the futures contracts underlying the Index.

Investors should carefully consider whether the ETNs are appropriate for their investment portfolio. As discussed above, because the ETNs are meant to provide leveraged long or leveraged inverse exposure, as applicable, to changes in the daily closing level of the Index, their performance over days, months or years can differ significantly from the performance of the Index during the same period of time. *Therefore, it is possible that you will suffer significant losses in the Leveraged Long ETNs even if the long-term performance of the Index is positive. It is possible for the level of the Index to increase over time while the market value of the Leveraged Long ETNs declines over time. In addition, it is possible that you will suffer significant losses in the Leveraged Inverse ETNs even if the long-term performance of the Index is negative. It is possible for the level of the Index*

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**to decrease over time while the market value of the Leveraged Inverse ETNs declines over time. You should proceed with extreme caution in considering an investment in the ETNs.**

The ETNs seek to provide a leveraged long or leveraged inverse return, as applicable, based on the daily performance of the Index (as adjusted for fees). The ETNs do not attempt to, and should not be expected to, provide returns that reflect 3-to-1 direct or inverse leverage on the return of the Index for periods longer than a single day. The ETNs rebalance their theoretical exposure on a daily basis, increasing exposure in response to that day's gains or reducing exposure in response to that day's losses.

The daily resetting of each ETN's leveraged exposure to the Index is likely to cause each ETN to experience a "decay" effect, which is likely to worsen over time and will be greater the more volatile the Index. The "decay" effect refers to a likely tendency of the ETNs to lose value over time. As a result of this decay effect, it is nearly certain (absent reverse splits) that the value of each series of ETNs will have declined to near zero by the Maturity Date of the ETNs, and likely significantly sooner. Accordingly, the ETNs are not suitable for intermediate- or long-term investment, as any intermediate- or long-term investment is very likely to sustain significant losses, even if the Index appreciates (in the case of the Leveraged Long ETNs) or depreciates (in the case of the Leveraged Inverse ETNs) over the relevant time period. Although the decay effect is more likely to manifest itself the longer the ETNs are held, the decay effect can have a significant impact on ETN performance even over a period as short as two days. See "Hypothetical Examples" above for hypothetical illustrations of the decay effect on the ETNs.

**The ETNs should be purchased only by knowledgeable investors who understand the potential consequences of an investment linked to the Index and of seeking daily compounding leveraged long or leveraged inverse investment results, as applicable.** The ETNs may not be appropriate for investors who intend to hold positions in an attempt to generate returns over periods different than one day. Any decision to hold the ETNs for more than one day should be made with great care and **only** as the result of a series of daily (or more frequent) investment decisions to remain invested in the ETNs for the next one-day period.

**Despite the title of the ETNs, the leveraged exposure of the ETNs will differ from 3 times if you purchase them intraday.**

If you purchase any ETNs at a price other than the most recent Closing Indicative Value, the effective amount of leverage provided by those ETNs from the time of purchase until the next determination of the Closing Indicative Value will differ from the 3 times or -3 times leverage ratio targeted by the ETNs. In general, if you buy the ETNs at a price that is higher than the most recent Closing Indicative Value, the effective leverage will be less than 3 times (in absolute value terms, in the case of the Leveraged Inverse ETNs), and if you buy the ETNs at a price that is lower than the most recent Closing Indicative Value, the effective leverage will be greater than 3 times (in absolute value terms, in the case of the Leveraged Inverse ETNs). The greater the deviation of your purchase price from the most recent Closing Indicative Value, the greater the deviation from 3 times or -3 times leverage, as applicable. Because the ETNs are intended to be daily trading products, it is expected that investors will buy the ETNs intraday at a price that differs

from the most recent Closing Indicative Value, and it is therefore expected that investors will have effective leverage that differs from 3 times.

The table below illustrates what the effective amount of leverage provided by the ETNs would be, as measured from the intraday Index level at the time of purchase to the closing level of the Index used to determine the next Closing Indicative Value, for a range of hypothetical changes in the intraday level of the Index from its prior closing level to the intraday level at the time of purchase. The table below is based on a hypothetical Closing Indicative Value on the prior Index Business Day of \$50 and a hypothetical closing level of the Index on the prior Index Business Day of 100.00. For simplicity, the table disregards the effect of the Daily Accrual and the Daily Investor Fee and assumes that the price at which the ETNs can be purchased in the market is equal to their Intraday Indicative Value. If the ETNs were not purchased at their Intraday Indicative Value, or if the Daily Accrual and the Daily Investor Fee were taken into account, the effective leverage indicated below would be different.

Furthermore, the table below assumes that the intraday purchase is made prior to 2:30 p.m. As discussed elsewhere in this pricing supplement, the Intraday Indicative Value from 2:30 p.m. to the close of trading on the NYSE Arca will not reflect the reset of leveraged exposure that occurs based on the 2:30 p.m. daily settlement price

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and will not reflect trading that occurs throughout that full time period. Accordingly, the effective leverage amounts indicated below would not be accurate from 2:30 p.m. to the close of trading on the NYSE Arca.

Column A of the table below sets forth various hypothetical intraday levels of the Index at the time of the intraday purchase of the ETNs. Column B indicates the percentage change represented by the corresponding intraday level in Column A from the hypothetical closing level of 100.00 on the prior Index Business Day. Column C indicates the hypothetical intraday purchase price of the Leveraged Inverse ETNs based on the corresponding hypothetical intraday Index level in Column A; Column F indicates the same for the Leveraged Long ETNs. Column D indicates the hypothetical exposure to NYMEX light sweet crude oil futures contracts represented by the Leveraged Inverse ETNs based on the hypothetical intraday Index level in Column A; Column G indicates the same for the Leveraged Long ETNs. The “exposure” of the ETNs indicated in Columns D and G represents the notional value of the NYMEX light sweet crude oil futures contract(s) corresponding to a single unit of the ETNs at the time of intraday purchase (a positive value for the Leveraged Long ETNs, and a negative value for the Leveraged Inverse ETNs).

A: Index level	B: % change in Index	C: Hypothetical price of Leveraged Inverse ETNs C=\$50*(1-3*B)	D: Hypothetical notional exposure of Leveraged Inverse ETNs D=\$50*(1+B)*-3	E: Effective leverage amount of Leveraged Inverse ETNs E=D/C	F: Hypothetical price of Leveraged Long ETNs E=\$50*(1+3*B)	G: Hypothetical notional exposure of Leveraged Long ETNs G=\$50*(1+B)*3	E: Effective leverage amount of Leveraged Long ETNs E=G/F
120.00	20%	\$20.00	-\$180.00	-9.00	\$80.00	\$180.00	2.25
115.00	15%	\$27.50	-\$172.50	-6.27	\$72.50	\$172.50	2.38
110.00	10%	\$35.00	-\$165.00	-4.71	\$65.00	\$165.00	2.54
105.00	5%	\$42.50	-\$157.50	-3.71	\$57.50	\$157.50	2.74
104.00	4%	\$44.00	-\$156.00	-3.55	\$56.00	\$156.00	2.79
103.00	3%	\$45.50	-\$154.50	-3.40	\$54.50	\$154.50	2.83
102.00	2%	\$47.00	-\$153.00	-3.26	\$53.00	\$153.00	2.89
101.00	1%	\$48.50	-\$151.50	-3.12	\$51.50	\$151.50	2.94
100.00	0%	\$50.00	-\$150.00	-3.00	\$50.00	\$150.00	3.00
99.00	-1%	\$51.50	-\$148.50	-2.88	\$48.50	\$148.50	3.06
98.00	-2%	\$53.00	-\$147.00	-2.77	\$47.00	\$147.00	3.13
97.00	-3%	\$54.50	-\$145.50	-2.67	\$45.50	\$145.50	3.20
96.00	-4%	\$56.00	-\$144.00	-2.57	\$44.00	\$144.00	3.27
95.00	-5%	\$57.50	-\$142.50	-2.48	\$42.50	\$142.50	3.35
90.00	-10%	\$65.00	-\$135.00	-2.08	\$35.00	\$135.00	3.86
85.00	-15%	\$72.50	-\$127.50	-1.76	\$27.50	\$127.50	4.64
80.00	-20%	\$80.00	-\$120.00	-1.50	\$20.00	\$120.00	6.00

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The above table shows that if the level of the Index increases during the Index Business Day for each series of ETNs, your effective leverage (a) increases (in absolute value terms) from 3 times leveraged inverse for the Leveraged Inverse ETNs and (b) decreases from 3 times leveraged long for the Leveraged Long ETNs. For example, if the level of the Index increases by 20%, your effective leverage (a) increases (in absolute value terms) from -3 to -9 for the Leveraged Inverse ETNs and (b) decreases from 3 to 2.25 for the Leveraged Long ETNs.

The above table also shows that if the level of the Index decreases since the last determination of the Closing Indicative Value for such series of ETNs, your effective leverage (a) decreases (in absolute value terms) from 3 times leveraged inverse for the Leveraged Inverse ETNs and (b) increases from 3 times leveraged long for the Leveraged Long ETNs. For example, if the level of the Index decreases by 20%, your effective leverage (a) decreases (in absolute value terms) from -3 to -1.5 for the Leveraged Inverse ETNs and (b) increases from 3 to 6 for the Leveraged Long ETNs.

As used above, the term “effective leverage” refers to the ratio between the percentage change in the Indicative Value of the ETNs (from the price you pay for them to the next Closing Indicative Value) and the percentage change in the level of the Index (from the level at the time you buy the ETNs to the next closing level). For example, assume you purchased the Leveraged Long ETNs above for a price of \$35 per ETN at a time when the intraday Index level is 90.00. If the next closing level of the Index is 81.00 (a 10% decline from the intraday Index level of 90.00 at the time of purchase), the next Closing Indicative Value would be \$21.50, which is approximately 38.6% less than the \$35 price you paid for them. In this example, the decline in value of the ETNs is approximately 3.86 times greater than the decline in the level of the Index, for effective leverage of approximately 3.86. As this example illustrates, if you buy the ETNs at an intraday purchase price that is less than the most recent Closing Indicative Value, your effective leverage will be greater than 3 times. Now assume you had instead purchased the Leveraged Inverse ETNs at a time when the intraday Index level is 90.00, for a purchase price of \$65.00, which is greater than the most recent Closing Indicative Value. If the next closing level of the Index is 81.00 (a 10% decline from the intraday Index level of 90.00 at the time of purchase), the next Closing Indicative Value would be \$78.50, which is approximately 20.8% greater than the \$65 price you paid for them. In this example, the increase in value of the ETNs is approximately 2.08 times greater than the decline in the level of the Index, for effective leverage of approximately -2.08. As this example illustrates, if you buy the ETNs at an intraday purchase price that is greater than the most recent Closing Indicative Value, your effective leverage will be less than 3 times.

**The ETNs are subject to the credit risk of Citigroup Global Markets Holdings Inc. and Citigroup Inc.**

Although the return on the ETNs of each series will be based on the performance of the Index, the payment of any amount due on the ETNs, including any payment at maturity or upon early redemption or acceleration, is subject to the credit risk of Citigroup Global Markets Holdings Inc. and Citigroup Inc. Investors are dependent on Citigroup Global Markets Holdings Inc.’s ability to pay all amounts due on the ETNs and Citigroup Inc.’s ability to perform its obligations under its guarantee, and therefore investors are subject to the credit risk of Citigroup Global Markets Holdings Inc. and Citigroup Inc. In addition, any decline in the credit ratings of Citigroup Global Markets Holdings Inc. or Citigroup Inc., any adverse changes in the market’s view of the creditworthiness of either entity or any increase in either entity’s credit spreads is likely to adversely affect the market value of the ETNs.

**The ETNs may not be a suitable investment for you.**

The ETNs may not be a suitable investment for you if:

You are not willing to be exposed on a leveraged basis to fluctuations in the price of NYMEX light sweet crude oil futures in general and in the level of the Index in particular.

- You seek a certain return of your initial investment.

- You seek an investment with a longer investment objective than one day.

- You are not willing to actively and frequently monitor your investment in the ETNs.

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You believe the level of the Index will decrease (if you invest in the Leveraged Long ETNs) or increase (if you invest in the Leveraged Inverse ETNs) or will not increase (if you invest in the Leveraged Long ETNs) or decrease (if you invest in the Leveraged Inverse ETNs) by an amount, and at a time or times, sufficient to offset the sum of the Daily Investor Fee (and, if applicable, the Early Redemption Charge and the creation fee) over your intended holding period of the ETNs and to provide you with a satisfactory return on your investment during the time you hold the ETNs.

You prefer the lower risk and therefore accept the potentially lower returns of fixed income investments with comparable maturities and credit ratings.

You seek current income from your investment.

You are not a sophisticated investor or you seek an investment for purposes other than managing daily trading risks.

You do not want to pay the Daily Investor Fee, the Early Redemption Charge or the creation fee, which are charged on the ETNs and will reduce your return (or increase your loss, as applicable) on your investment.

**If the Closing Indicative Value for any series of the ETNs increases from one day to the next, any subsequent adverse daily performance of the Index will result in a larger decrease in the level of such Closing Indicative Value than if the current respective Closing Indicative Value had remained constant.**

If the Closing Indicative Value for any series of the ETNs increases from one day to the next, the amount of decrease of such Closing Indicative Value resulting from a subsequent adverse daily performance of the Index will increase correspondingly. This is because the next applicable Daily ETN Performance will be applied to a greater Closing Indicative Value. As such, the amount of decrease from any adverse daily performance of the Index will be more than if the Closing Indicative Value were maintained constant. This means that if the Closing Indicative Value for any series of the ETNs increases from one day to the next as a result of the level of the Index increasing, in the case of the Leveraged Long ETNs, or decreasing, in the case of the Leveraged Inverse ETNs, by a certain percentage, it will take a smaller percentage decrease, in the case of the Leveraged Long ETNs, or increase, in the case of the Leveraged Inverse ETNs, in the level of the Index to decrease such Closing Indicative Value (and subsequently the value of your investment) to its value prior to such increase. One consequence is that, if the Index moves in one direction from Day 0 to Day 1 and then returns to its Day 0 level on Day 2, the Closing Indicative Value of the ETNs will be lower on Day 2 than it was on Day 0, even though the closing level of the Index is the same on Day 2 as it was on Day 0.

**If the Closing Indicative Value for any series of the ETNs decreases from one day to the next, any subsequent beneficial daily performance of the Index will result in a smaller increase in the level of such Closing Indicative Value than if the current respective Closing Indicative Value had remained constant.**



If the Closing Indicative Value for any series of the ETNs decreases from one day to the next, the amount of increase of such Closing Indicative Value resulting from a subsequent beneficial daily performance of the Index will decrease correspondingly. This is because the next applicable Daily ETN Performance will be applied to a lesser Closing Indicative Value. As such, the amount of increase from any beneficial daily performance of the Index will be less than if the Closing Indicative Value were maintained constant. This means that if the Closing Indicative Value for any series of the ETNs decreases from one day to the next as a result of the level of the Index decreasing, in the case of the Leveraged Long ETNs, or increasing, in the case of the Leveraged Inverse ETNs, by a certain percentage, it will take a larger percentage increase, in the case of the Leveraged Long ETNs, or decrease, in the case of the Leveraged Inverse ETNs, in the level of the Index to increase such Closing Indicative Value (and subsequently the value of your investment) to its value prior to such decrease. One consequence is that, if the Index moves in one direction from Day 0 to Day 1 and then returns to its Day 0 level on Day 2, the Closing Indicative Value of the ETNs will be lower on Day 2 than it was on Day 0, even though the closing level of the Index is the same on Day 2 as it was on Day 0.

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**If a Trigger Event occurs, the ETNs will be automatically accelerated and you will likely incur a significant loss on, and may lose up to all of, your investment.**

If the Intraday Indicative Value of any series of ETNs at any time during NYSE Arca trading hours and at or prior to the Settlement Time on any scheduled Index Business Day is less than 25% of the Closing Indicative Value of such ETNs on the immediately preceding Index Business Day (meaning that the Intraday Indicative Value has declined by more than 75% from the prior day's Closing Indicative Value), a Trigger Event will be deemed to have occurred and such series of ETNs will be automatically accelerated. A 75% decline in the Indicative Value of the ETNs corresponds to an approximately 25% decline (in the case of the Leveraged Long ETNs) or increase (in the case of the Leveraged Inverse ETNs) in the level of the Index from its prior closing level to its current intraday level (disregarding the Daily Accrual and Daily Investor Fee). Upon such Automatic Acceleration, the holders of such ETNs will receive a cash payment per ETN equal to the arithmetic average of the Intraday Indicative Value of the ETNs over the Automatic Acceleration Valuation Period. The Automatic Acceleration Valuation Period is an intraday period that will begin immediately upon the occurrence of the Trigger Event and continue during NYMEX Trading Hours until either 2:30 p.m., New York City time, on the current scheduled Index Business Day or 2:30 p.m., New York City time, on the next scheduled Index Business Day, depending on the time of day at which the Trigger Event occurs.

The fact that a Trigger Event occurs when the Intraday Indicative Value of the ETNs is less than 25% of the Closing Indicative Value on the prior Index Business Day does not mean that the Automatic Acceleration Redemption Amount payable following Automatic Redemption will be equal to 25% of the Closing Indicative Value on the prior Index Business Day. If the intraday level of the Index continues to decline (in the case of the Leveraged Long ETNs) or increase (in the case of the Leveraged Inverse ETNs) sharply after the Trigger Event occurs and during the Automatic Acceleration Valuation Period, that decline or increase will be reflected in the Intraday Indicative Values that are used to determine the Automatic Acceleration Redemption Amount. It is possible that the amount a holder receives after Automatic Acceleration of the ETNs would be significantly less than 25% of the Closing Indicative Value on the prior Index Business Day and may be zero.

If a Trigger Event occurs, the ETNs will be automatically accelerated, even if the sharp rise or fall in the Index that triggers the Trigger Event is temporary and quickly reversed. An Automatic Acceleration may cause the return on the ETNs to be worse than it would have been if the ETNs had not been automatically accelerated. For example, suppose there is a surprise announcement that causes a sharp (greater than 25%) drop in oil prices on one Index Business Day, causing a Trigger Event to occur and leading to Automatic Acceleration of the ETNs based on that sharply lower price. Suppose then that, after having had time to absorb the news, the market recovers most of its losses on the next day. In that case, a direct investor in NYMEX light sweet crude oil futures contracts would have seen its losses pared by the recovery on the next day. The investor in the ETNs, however, would have had its significant losses crystallized as a result of the Automatic Acceleration provision.

**There is an increased risk that our hedging activity in NYMEX light sweet crude oil futures contracts will impact the market price of those contracts, and in turn the level of the Index, in the event of Automatic Acceleration.**

If a Trigger Event occurs with respect to any series of ETNs, those ETNs will be automatically accelerated and we will pay the holder of the ETNs an amount based on the Intraday Indicative Value of the ETNs over the Automatic Acceleration Valuation Period. If a Trigger Event occurs, we expect that the counterparty through which we hedge our obligations under the ETNs will seek to unwind any hedge it has in place with respect to the ETNs during the Automatic Acceleration Valuation Period. If the amount of ETNs outstanding at the time of a Trigger Event is substantial, and taking into account that our counterparty's hedging exposure may be as much as 3 times the aggregate value of the applicable ETNs (in light of the 3 times (long or inverse) leverage, but subject to any other offsetting positions that our hedging counterparty may have), our hedging counterparty may have a sizeable position with respect to NYMEX light sweet crude oil futures contracts. If a Trigger Event occurs, we expect our hedging counterparty to unwind some or all of that position over the Automatic Acceleration Valuation Period. The Automatic Acceleration Valuation Period may be as short as approximately two hours. The efforts of our hedging counterparty to unwind a sizeable position in NYMEX light sweet crude oil futures contracts over a relatively short period of time could have a potentially market-moving effect on the price of NYMEX light sweet crude oil futures contracts and could exacerbate any price movements that take place within the Automatic Acceleration Valuation Period, adversely affecting the Intraday Indicative Value during that period and resulting in a lower payment on the

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ETNs following the Automatic Acceleration. Our affiliates may also engage in other trading activity unrelated to the ETNs during the Automatic Acceleration Valuation Period. This trading activity could compound the effects of our hedging counterparty's hedging unwind activity during the Automatic Acceleration Valuation Period. Our affiliates may profit from trading activity during the Automatic Acceleration Valuation Period even at a time when investors in the applicable series of ETNs suffer a significant loss.

**If a Market Disruption Event occurs, the Calculation Agents may be required to exercise discretion in making certain important determinations, and any determination they make may be adverse to you.**

From time to time, the commodity futures markets may be subject to trading disruptions, such as trading halts, trading at limit prices and the failure to publish trading prices, that may result in the occurrence of a Market Disruption Event under the terms of the ETNs. The Calculation Agents will have discretion to determine whether any event constitutes a Market Disruption Event under the terms of the ETNs. In addition, at any time when a Market Disruption Event occurs, the Calculation Agents will have discretion to calculate an appropriate level of the Index to use for purposes of calculating the Closing Indicative Value or Intraday Indicative Value of the ETNs taking into account the nature and duration of such Market Disruption Event. If a Market Disruption Event occurs during a Valuation Period or on a Valuation Date (or on the immediately preceding Index Business Day), this discretionary determination by the Calculation Agents will have a direct impact on the Redemption Amount that we pay to holders of the ETNs.

Although a Market Disruption Event may occur at any time, there is a heightened risk that a Market Disruption Event will occur at a time when a Trigger Event has occurred and the ETNs have been automatically accelerated. This is because a Trigger Event will occur when there has been an extraordinary intraday change in the level of the Index, which is a time when markets are more likely to be disrupted. Accordingly, if an Automatic Acceleration of any series of ETNs occurs, there is a heightened risk that the Calculation Agents will be required to exercise discretion in determining Intraday Indicative Values, both for purposes of determining whether the Trigger Event has occurred and for purposes of calculating the amount of the payment to be received by holders of the ETNs following the acceleration.

In making discretionary determinations in connection with a Market Disruption Event, the Calculation Agents will take into account the impact of that event on any hedging transaction that we or our affiliates may have in place with respect to the ETNs. In making these determinations, the Calculation Agents will be obligated to act in good faith and using commercially reasonable judgment, but in so doing they may take actions to protect our interests and the interests of our affiliates even when so doing may not be in your interests. The Calculation Agents are not your fiduciaries and have no obligation to take into account your interests in making discretionary determinations under the ETNs. Because one of the Calculation Agents, CGMI, is our affiliate, CGMI's interests as our affiliate may cause its interests to conflict with yours in making any determinations under the ETNs. In the event of any disagreement between CGMI and JHI in making determinations that the Calculation Agents are required to make jointly under the terms of the ETNs, CGMI's determination (following a dispute resolution procedure) will control.

Any discretionary determinations made by the Calculation Agents may adversely affect the return on the ETNs.

**The NYSE Arca may halt trading in the ETNs or may limit the extent to which trading prices may change within specified time periods, which in either case would adversely impact investors' ability to sell the ETNs.**

Trading in the ETNs may be halted due to market conditions or, in the judgment of the exchange, if necessary to protect investors or in the public interest. General exchange trading is subject to trading halts caused by extraordinary market volatility pursuant to "circuit breaker" rules based on a specified decline in a market index (e.g., the S&P 500 Index). In addition, a particular series of ETNs may be subject to "limit up" and "limit down" rules or trading pause requirements that are triggered by a significant change in the trading price of those ETNs within a specified period of time. These "limit up" and "limit down" and trading pause rules, if triggered, could prevent investors from transacting at the then prevailing Intraday Indicative Value or at all. If the level of the Index declines (in the case of the Leveraged Long ETNs) or increases (in the case of the Leveraged Inverse ETNs) during the trading day, triggering a "limit down" mechanism or trading pause, you may be unable to sell your ETNs for some period of time, either because no trading at all is permitted or because the price that any purchaser would be

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willing to pay for them at the time may be significantly below the lowest price that a purchaser would be permitted to pay for them on the exchange. In that circumstance, by the time you are finally able to sell your ETNs, you may have incurred significantly greater losses than you would have incurred had you been able to sell them when you initially wanted to. Additionally, the ability to short sell ETNs may be restricted when there is a 10% or greater change from the previous day's official closing price. Exchange rules relating to these matters are subject to change from time to time.

If a Trigger Event occurs, it will be on account of a large intraday decline in the Intraday Indicative Value of the applicable series of ETNs. Because of the extraordinary circumstances in which a Trigger Event occurs and the accompanying large decline in value of the ETNs, there is a greater likelihood that a trading halt or limit price with respect to the ETNs will be in effect for some period of time around the time when the Trigger Event occurs. As a result, if a Trigger Event occurs, there is an increased risk that you will be unable to sell your ETNs at that time and, therefore, will be unable to reduce your exposure to the ETNs at that time.

**Although NYMEX light sweet crude oil futures contracts trade 23 hours a day, the ETNs will trade only during regular trading hours on the NYSE Arca.**

NYMEX light sweet crude oil futures contracts trade 23 hours a day, 6 days a week. By contrast, the ETNs will trade on the NYSE Arca only during the hours that the NYSE Arca is open. Significant movements in the price of NYMEX light sweet crude oil futures contracts, and therefore the level of the Index, may take place at times when the NYSE Arca is closed, and you will not have the opportunity to trade the ETNs until the NYSE Arca is open. For example, an announcement or development that has a significant impact on NYMEX light sweet crude oil futures prices may take place overnight in New York. By the time the NYSE Arca opens, a significant change in the price of NYMEX light sweet crude oil futures contracts may already have taken place, and the price at which you may be able to trade the ETNs may be significantly worse than the price you might have achieved had you been able to trade the ETNs sooner. The 3 times (long or inverse) leveraged exposure offered by each ETN magnifies the potential for significant losses to occur prior to your first opportunity to trade the ETNs. If the overnight movement is sufficiently great (more than approximately 33.33%, taking into account the 3 times (long or inverse) leverage), the Intraday Indicative Value may be zero from the moment the ETNs begin to trade on the NYSE Arca, in which case the ETNs would be automatically accelerated and we would not pay holders anything in respect of their ETNs upon that acceleration.

**We may accelerate the ETNs at our option at any time on or after the Inception Date.**

We have the right to accelerate the ETNs of any series at any time and pay you an amount equal to the Closing Indicative Value of such series of ETNs on the final Valuation Date of the Optional Acceleration Valuation Period. If we accelerate any series of ETNs, you will only receive the Optional Acceleration Redemption Amount for such series of ETNs and you will not receive any other compensation or amount for the loss of the investment opportunity of holding such series of ETNs. We will determine whether to exercise our right to accelerate any series of ETNs at our option based on our interests and may do so at a time when it would be in your interests for the ETNs to remain

outstanding.

**The payment upon an Optional Acceleration or at maturity is based upon a declining exposure to the Index over a number of Valuation Dates.**

The payment upon an Optional Acceleration or at maturity is based upon the sum of the Index Exposure and Notional Cash Amount determined over the Final Valuation Period or Optional Acceleration Valuation Period, as applicable. The calculation of the Index Exposure and Notional Cash Amount during these periods simulates a proportionate move from Index Exposure to cash. This means that the return on the ETNs will not be based entirely on Index fluctuations during this period and you will not entirely benefit from any favorable movements in the level of the Index during this period as the Index Exposure declines. You should understand that the Daily Investor Fee will continue to accrue on both the Index Exposure and the Notional Cash Amount over the Final Valuation Period or Optional Acceleration Valuation Period, as applicable, even though your potential to benefit from any favorable performance of the Index during that time will be based only on the Index Exposure. Moreover, even for the simulated cash position represented by the Notional Cash Amount, you will not be compensated for any interest or

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time value of money during this period prior to your receiving the payment upon acceleration or at maturity, as applicable.

**The daily return of each series of ETNs will be reduced by the Daily Investor Fee.**

Because the Daily Investor Fee (and, if applicable, the Early Redemption Charge and the creation fee) reduces the return you may receive on your ETNs, the level of the Index must increase significantly, in the case of the Leveraged Long ETNs, or decrease significantly, in the case of the Leveraged Inverse ETNs, in order for you to receive at least the amount of your initial investment upon sale, redemption, acceleration or maturity of the ETNs. If the level of the Index decreases or does not increase sufficiently, in the case of the Leveraged Long ETNs, or increases or does not decrease sufficiently, in the case of the Leveraged Inverse ETNs, to offset the effect of the Daily Investor Fee over the time you hold the ETNs (and, if applicable, the Early Redemption Charge and the creation fee), you will receive less than the initial investment amount of your ETNs upon sale, redemption, acceleration or maturity of the ETNs.

**There are restrictions on the minimum number of ETNs you may redeem and on the dates on which you may redeem them.**

To exercise your early redemption right, you must redeem at least 25,000 ETNs of any one series, the Minimum Redemption Amount, at one time and you must cause your broker to deliver a notice of redemption, substantially in the form of Annex A (the “**Redemption Notice**”), to JHD (the “**Redemption Agent**”) via email or other electronic delivery as requested by the Redemption Agent. If your Redemption Notice is delivered prior to 4:00 p.m., New York City time, on any Business Day, the immediately following Index Business Day will be the applicable “**Early Redemption Valuation Date**” for such series of ETNs. Otherwise, the second following Index Business Day will be the applicable Early Redemption Valuation Date. If the Redemption Agent receives your Redemption Notice no later than 4:00 p.m., New York City time, on any Business Day, the Redemption Agent will respond by sending your broker an acknowledgment of the Redemption Notice accepting your redemption request by 7:30 p.m., New York City time, on the Business Day prior to the applicable Early Redemption Valuation Date. The Redemption Agent or its affiliate must acknowledge to your broker acceptance of the Redemption Notice in order for your redemption request to be effective.

The redemption feature is intended to induce arbitrageurs to counteract any trading of the ETNs at a discount to their Indicative Value. There can be no assurance that arbitrageurs will employ the redemption feature in this manner.

**An Early Redemption Charge of 0.08% per ETN will be charged upon an early redemption.**



We will charge a fee of 0.08% *times* the Closing Indicative Value per ETN upon an early redemption. The imposition of the fee will mean that you will not receive the full amount of the Closing Indicative Value upon an early redemption at your election.

**You will not know the Early Redemption Amount for any ETNs you elect to redeem prior to maturity at the time you make such election.**

In order to exercise your right to redeem the ETNs prior to maturity, you must cause your broker or other person with whom you hold the ETNs to deliver a Redemption Notice (as defined herein) to the Redemption Agent (as defined herein) by no later than 4:00 p.m., New York City time, on the Business Day prior to your desired Early Redemption Valuation Date. The Early Redemption Amount cannot be determined until the Early Redemption Valuation Date, and as such you will not know the Early Redemption Amount for the ETNs at the time you make an irrevocable election to redeem the ETNs. The Early Redemption Amount for the ETNs on the applicable Early Redemption Valuation Date may be substantially less than it would have been on the prior day and may be zero.

**Past performance of the Index is no guide to future performance.**

The actual performance of the Index over the term of the offered ETNs may bear little relation to the historical values of the Index or to the hypothetical return examples set forth elsewhere in this pricing supplement. We cannot predict the future performance of the Index.

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**The market price of the ETNs may be influenced by many unpredictable factors.**

The market value of the ETNs will fluctuate between the date you purchase them and the applicable Valuation Date or Valuation Period. You may also sustain a significant loss if you sell the ETNs in the secondary market. In addition to others, the following factors, many of which are beyond our control, will influence the market value of the ETNs, as well as the applicable Redemption Amount:

the level of the Index at any time,

the volatility of the futures contracts included in the Index,

the liquidity of the futures contracts included in the Index,

economic, financial, regulatory, political, judicial, military and other events that affect commodities markets generally, the Index or the relevant futures contracts included in the Index,

supply and demand for the ETNs in the secondary market, including, but not limited to, inventory positions with any market maker or other person or entity who is trading the ETNs (supply and demand for the ETNs will be affected by the total issuance of ETNs, and we are under no obligation to issue additional ETNs to increase the supply),

global supply and demand for crude oil, which is influenced by such factors as forward selling by crude oil producers, purchases made by crude oil producers to unwind crude oil hedge positions, central bank purchases and sales of crude oil and production and cost levels in major crude oil-producing countries,

interest and yield rates and rate spreads in the markets,

the time remaining until the ETNs mature, and

the actual or perceived creditworthiness of Citigroup Global Markets Holdings Inc. and Citigroup Inc.

You cannot predict the future performance of the Index based on the historical performance of the Index or the futures contracts included in the Index. The factors interrelate in complex ways, and the effect of one factor on the market value of the ETNs may offset or enhance the effect of another factor.

**The liquidity of the market for the ETNs may vary materially over time.**

We have sold a portion of the ETNs on the Initial Settlement Date, all of which were initially held by CGMI or its affiliates. CGMI may sell ETNs to investors or to dealers from time to time. We cannot predict how much investor demand there will be for the ETNs. The number of ETNs outstanding could be reduced at any time due to early redemptions of the ETNs as described in this pricing supplement or due to repurchases of the ETNs by our affiliates in the secondary market. Accordingly, the liquidity of the market for the ETNs could vary materially over the term of the ETNs. While you may elect to offer your ETNs for early redemption by us prior to maturity, such early redemption is subject to restrictive conditions and procedures described elsewhere in this pricing supplement, including the condition that you must offer at least the applicable Minimum Redemption Amount to us at one time.

**There may not be an active trading market for your ETNs.**

Although the ETNs have been listed on the NYSE Arca, there is no assurance that a trading market for the offered ETNs will develop or, if one develops, continue. Even if there is a secondary market for your ETNs, it may not be sufficiently liquid to enable you to sell your ETNs readily and you may suffer substantial losses and/or sell your ETNs at prices substantially less than their Intraday Indicative Value or Closing Indicative Value, including being unable to sell them at all or only for a price of zero in the secondary market.

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No assurance can be given as to the continuation of the listing for the life of the offered ETNs, or the liquidity or trading market for the offered ETNs. We are not required to maintain any listing of your ETNs on the NYSE Arca and the liquidity of the market for any series of ETNs could vary materially over the term of the ETNs. The ETNs may cease to be listed on the NYSE Arca or any other exchange because they cease to meet the listing requirements of the exchange or because we elect in our sole discretion to discontinue the listing of the ETNs on any exchange. We may elect to discontinue the listing of the ETNs at any time and for any reason, including in connection with a decision to discontinue further issuances and sales of the ETNs. If the ETNs cease to be listed on the NYSE Arca or any other exchange, the liquidity of the ETNs is likely to be significantly adversely affected and the ETNs may trade at a significant discount to their Indicative Value.

**The Intraday Indicative Value and the Closing Indicative Value and the applicable Redemption Amount are not the same as the closing price or any other trading price of the ETNs in the secondary market.**

The Intraday Indicative Value and the Closing Indicative Value of each series of the ETNs are not the same as the closing price or any other trading price of such ETNs in the secondary market, if one exists. The Closing Indicative Value on each calendar day following the Inception Date for each series of ETNs will be determined according to a formula that is based on the performance of the Index since its closing level on the prior Index Business Day. The Intraday Indicative Value of each series the ETNs will be calculated every 15 seconds on each Index Business Day during the period when a Market Disruption Event has not occurred or is not continuing and disseminated over the Consolidated Tape, or other major market data vendor. The Intraday Indicative Value at any time is based on the most recent intraday level of the Index.

The trading price of the ETNs at any time is the price at which you may be able to sell your ETNs in the secondary market at such time, if one exists. In the absence of an active secondary market for the ETNs, the last reported trading price may not reflect the actual price at which you may be able to sell your ETNs at a particular time. The trading price of any series of the ETNs at any time may vary significantly from the Intraday Indicative Value and the Closing Indicative Value due to, among other things, imbalances of supply and demand, lack of liquidity, transaction costs, credit considerations and bid-offer spreads, and any corresponding premium in the trading price may be reduced or eliminated at any time.

Paying a premium purchase price over the Indicative Value of the ETNs could lead to significant losses in the event the investor sells such ETNs at a time when such premium is no longer present in the marketplace or such ETNs are accelerated, including at our option, which we have the discretion to do at any time. If we accelerate the ETNs of any series at our option, investors will receive a cash payment in an amount equal to the Closing Indicative Value on the final Valuation Date of the Optional Acceleration Valuation Period, which will not include any premium. Investors should consult their financial advisors before purchasing or selling the ETNs, especially ETNs trading at a premium over their Indicative Value.

**Between 2:30 p.m., New York City time, and the close of trading in the ETNs on the NYSE Arca on each Index Business Day, the published Intraday Indicative Value will not be based on fully up-to-date information (which will not be available), and the trading price of the ETNs is likely to diverge from the published Intraday Indicative Value.**

The closing level of the Index on each Index Business Day is determined based on the daily settlement price of NYMEX light sweet crude oil futures contracts, which is determined as of 2:30 p.m., New York City time, on each Index Business Day. Although the daily settlement price is determined as of 2:30 p.m., there is typically a time lag in the publication of the daily settlement price, and the closing level of the Index based on the daily settlement price is typically not published until after 4:00 p.m., New York City time, which is the close of trading for the ETNs on the NYSE Arca. For a portion of the time period between 2:30 p.m. and the time when the closing level of the Index is published (typically from 2:30 p.m. until shortly after 3:00 p.m.), the Index Sponsor continues to publish an intraday level of the Index based on then current trading in NYMEX light sweet crude oil futures contracts (which takes place continuously before and after 2:30 p.m.). For the remainder of that time period (typically from shortly after 3:00 p.m. until after 4:00 p.m.), the Index Sponsor suspends real-time calculation of the intraday level of the Index until it publishes the official closing level after 4:00 p.m. Throughout this full time period, the Intraday Indicative Value will continue to be calculated and disseminated based on the most recently published intraday level of the Index.

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The ETNs' leveraged exposure to the Index is reset on each Index Business Day based on the Closing Indicative Value on that day, which in turn is based on the closing level of the Index, and which in turn is based on the daily settlement price of NYMEX light sweet crude oil futures contracts determined as of 2:30 p.m. Therefore, the ETNs' leveraged exposure is effectively reset based on futures trading at 2:30 p.m. on each Index Business Day. However, between 2:30 p.m. and the close of trading on the NYSE Arca, because the closing level of the Index will not yet be available, the Intraday Indicative Value will be calculated without reflecting the reset of leveraged exposure (*i.e.*, as if the leveraged exposure based on the prior day's closing level were still in effect). The Intraday Indicative Value that is published during this period is likely to be different than it would be if it reflected the reset of leveraged exposure based on the daily settlement price at 2:30 p.m. Furthermore, because the real-time calculation of the intraday level of the Index will be suspended during the latter portion of this time period, the Intraday Indicative Value will not reflect trading in NYMEX light sweet crude oil futures contracts that takes place during that time. For these reasons, between 2:30 p.m. and the close of trading on the NYSE Arca, the Intraday Indicative Value is likely to differ from the value of the ETNs that would be determined if complete and fully up-to-date information were available and used in the calculation. As a result, we expect there to be uncertainty about the intrinsic value of the ETNs during this time period, and the trading price of the ETNs is likely to diverge from the Intraday Indicative Value during this time period. Investors should exercise caution in connection with any trading in this time period, particularly if there is a significant move in futures prices during this time period.

**We and CGMI are under no obligation to issue or sell additional ETNs of any series at any time, and if we and CGMI do sell additional ETNs of any series, we or CGMI may limit or restrict such sales, and we or CGMI may stop and subsequently resume selling additional ETNs of such series at any time.**

In our sole discretion, we may decide to issue and sell additional ETNs of any series from time to time to CGMI, and in CGMI's sole discretion, it may decide to sell additional ETNs of any series to investors or to dealers. However, we and CGMI are under no obligation to issue or sell additional ETNs of any series at any time, and if we and CGMI do sell additional ETNs of any series, we or CGMI may limit or restrict such sales, and we or CGMI may stop and subsequently resume selling additional ETNs of such series at any time. If we and CGMI start selling additional ETNs of any series, we or CGMI may stop selling additional ETNs of such series for any reason, which could materially and adversely affect the price and liquidity of such ETNs in the secondary market. Furthermore, the stated principal amount of each series of ETNs stated at the top of the cover page of this pricing supplement is the maximum amount of each series of ETNs that we have currently authorized for issuance. Although we have the right to increase the authorized amount of either series of ETNs at any time, it is our current intention not to issue more than the current maximum authorized amount of each series of ETNs, even if there is substantial market demand for additional ETNs of such series. We may also reduce the maximum authorized amount of each series of ETNs at any time and have no obligation to issue up to the maximum authorized amount.

Unless we indicate otherwise, if we or CGMI suspend selling additional ETNs, we and CGMI reserve the right to resume selling additional ETNs at any time, which might result in the reduction or elimination of any premium in the trading price that may have developed. Before trading in the secondary market, you should compare the Closing Indicative Value and Intraday Indicative Value with the then-prevailing trading price of the ETNs. Any premium may be reduced or eliminated at any time.

Suspension of additional issuances of the ETNs can also result in a significant reduction in the number of outstanding ETNs, if investors subsequently exercise their right to have the ETNs redeemed by us. If the total number of outstanding ETNs has fallen to a level that is close to or below the Minimum Redemption Amount, you may not be able to purchase enough ETNs to meet the minimum size requirement in order to exercise your early redemption right. The unavailability of the redemption right can result in the ETNs trading in the secondary market at discounted prices below the Intraday Indicative Value. Having to sell your ETNs at a discounted sale price below the Intraday Indicative Value of the ETNs could lead to significant losses. Prior to making an investment in the ETNs, you should take into account whether or not the trading price is tracking the Intraday Indicative Value of the ETNs.

**Any limitation or suspension on the issuance or sale of the ETNs may impact the trading price of the ETNs, including by creating a premium over the Indicative Value of the ETNs that may be reduced or eliminated at any time.**

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Because our obligations under the ETNs are hedged through one or more of our affiliates, increases in the number of ETNs outstanding create corresponding increases in our exposure to the futures contracts included in the Index. In order to manage the risk of this exposure, we may impose a limitation or suspension on the number of ETNs of any series to be issued. Any limitation or suspension on the issuance of the ETNs may materially and adversely affect the price and liquidity of the ETNs in the secondary market. Alternatively, the decrease in supply may cause an imbalance in the market supply and demand, which may cause the ETNs to trade at a premium over the Indicative Value of the ETNs. In addition, any decrease in the supply of the ETNs due to any limitation or suspension on issuance may cause the ETNs to appear on NYSE Arca's "threshold securities list," indicating repeated delivery failure (which may be a sign of supply shortage) and requiring an actual borrowing of or a bona fide arrangement to borrow the ETNs in connection with a short sale. If arbitrageurs are unable to locate ETNs to sell short, the ETNs may trade at a premium, which may be significant, in relation to their Indicative Value.

Any premium may be reduced or eliminated at any time. Paying a premium purchase price over the Indicative Value of the ETNs could lead to significant losses in the event the investor sells such ETNs at a time when such premium is no longer present in the marketplace or such ETNs are accelerated, including at our option, which we have the discretion to do at any time. If we accelerate the ETNs of any series at our option, investors will receive a cash payment in an amount equal to the Closing Indicative Value on the final Valuation Date of the Optional Acceleration Valuation Period, which will not include any premium. Investors should consult their financial advisors before purchasing or selling the ETNs, especially ETNs trading at a premium over their Indicative Value.

**Trading and other transactions by us, our affiliates or third parties with whom we transact in securities or financial instruments related to the ETNs and the Index may impair the value of the ETNs.**

We expect to hedge our obligations relating to the ETNs by purchasing or selling short the futures contracts included in the Index, listed or over-the-counter futures contracts, swaps, or other derivative instruments relating to the Index or the futures contracts included in the Index, or other instruments linked to the Index or the futures contracts included in the Index, including certain exchange traded notes issued by us, and adjust the hedge by, among other things, purchasing or selling any of the foregoing, at any time and from time to time, and to unwind the hedge by selling any of the foregoing, perhaps on or before the applicable Valuation Date or during the applicable Valuation Period. We, our affiliates, or third parties with whom we transact may also enter into, adjust and unwind hedging transactions relating to other securities whose returns are linked to the Index. Any of these hedging activities may adversely affect the level of the Index—directly or indirectly by affecting the price of the futures contracts included in the Index or listed or over-the-counter options, futures contracts, swaps or other derivative instruments relating to the Index or the futures contracts included in the Index—and therefore, the market value of the ETNs and the amount we will pay on the ETNs on the applicable Early Redemption Date, Optional Acceleration Date, Automatic Acceleration Date or the Maturity Date. It is possible that we, our affiliates or third parties with whom we transact could receive substantial returns with respect to these hedging activities while the value of the ETNs declines or becomes zero. Any profit in connection with such hedging activities will be in addition to any other compensation that our affiliates receive for the sale of the ETNs, which may create an additional incentive to sell the ETNs to you.



We, our affiliates or third parties with whom we transact may also engage in trading in the futures contracts included in the Index, or listed or over-the-counter options, futures contracts, swaps or other derivative instruments relating to the Index or the futures contracts included in the Index, or instruments whose returns are linked to the Index or the futures contracts included in the Index or listed or over-the-counter options, futures contracts, swaps or other derivative instruments relating to the Index or the futures contracts included in the Index, including certain exchange traded notes issued by us, for our or their proprietary accounts, for other accounts under our or their management or to facilitate transactions, including block transactions, on behalf of customers. Any of these activities could adversely affect the level of the Index—directly or indirectly by affecting the price of the futures contracts included in the Index or listed or over-the-counter futures contracts, swaps or other derivative instruments relating to the Index or the futures contracts included in the Index—and therefore, the market value of the ETNs and the amount we will pay on the ETNs on the applicable Early Redemption Date, Optional Acceleration Date, Automatic Acceleration Date or the Maturity Date. We may also issue, and we, our affiliates or third parties with whom we transact may also issue or underwrite, other ETNs or financial or derivative instruments with returns linked to changes in the level of the Index or the futures contracts included in the Index or listed or over-the-counter

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options, futures contracts, swaps or other derivative instruments relating to the Index or the futures contracts included in the Index. By introducing competing products into the marketplace in this manner, we, our affiliates or third parties with whom we transact could adversely affect the market value of the ETNs and the amount we will pay on the ETNs on the applicable Early Redemption Date, Optional Acceleration Date, Automatic Acceleration Date or the Maturity Date.

**There may be conflicts of interest between you and us, the Redemption Agent and the Calculation Agents.**

Our affiliate, CGMI, will act as one of the Calculation Agents for the ETNs. As Calculation Agents, CGMI and JHI will make determinations with respect to the ETNs. Among other things, JHI or one of its affiliates is responsible for computing and disseminating the Closing Indicative Value, subject to CGMI's right to dispute JHI's calculation of the Closing Indicative Value, in which case, if the Calculation Agents are unable to agree, CGMI's determination of the Closing Indicative Value shall be conclusive and binding. Any determinations made by the Calculation Agents may be adverse to you.

As noted above, we, our affiliates or third parties with whom we transact, may engage in trading activities related to the Index and futures contracts included in the Index or listed or over-the-counter options, futures contracts, swaps or other derivative instruments relating to the Index or the futures contracts included in the Index, or instruments whose returns are linked to the Index or the futures contracts included in the Index or listed or over-the-counter options, futures contracts, swaps or other derivative instruments relating to the Index or the futures contracts included in the Index, including certain exchange traded notes issued by us. These trading activities may present a conflict between your interest in the ETNs and the interests we, our affiliates or third parties with whom we transact, will have in our or their proprietary accounts, in facilitating transactions, including block trades, for our or their customers and in accounts under our or their management. These trading activities, if they influence the level of the Index, could be adverse to your interests as a beneficial owner of the ETNs.

We, our affiliates or third parties with whom we transact, the Redemption Agent, the Calculation Agents and their affiliates may have published, and in the future may publish, research reports with respect to the futures contracts included in the Index and with respect to the Index. Any of these activities by us, our affiliates or third parties with whom we transact, the Redemption Agent, the Calculation Agents or any of their affiliates may affect the levels of the Index and, therefore, the market value of the ETNs and the amount we will pay on the ETNs on the applicable Early Redemption Date, Optional Acceleration Date, Automatic Acceleration Date or the Maturity Date.

**If an Index Replacement Event occurs, the Calculation Agents may replace the Index with a Substitute Index.**

If an Index Replacement Event occurs at any time with respect to any series of the ETNs and the Index Sponsor or anyone else publishes an index that the Calculation Agents determine is comparable to the Index (the "**Substitute**

**Index**”), then the Calculation Agents may elect, in their sole discretion, to permanently replace the original Index with the Substitute Index for all purposes under such series of ETNs, and all provisions described in this pricing supplement as applying to the Index will thereafter apply to the Substitute Index instead. If the Calculation Agents elect to replace the original Index with a Substitute Index, then the Calculation Agents will determine the Early Redemption Amount, Optional Acceleration Redemption Amount, Automatic Acceleration Redemption Amount or Maturity Redemption Amount, as applicable, for such series of ETNs by reference to the Substitute Index. In these circumstances, the Calculation Agents may elect to replace the Index with the Substitute Index even if the Index Sponsor continues to publish the Index without modification, replacement or adjustment. Any such replacement of the Index with the Substitute Index will affect the amount you will receive at maturity, upon redemption or upon acceleration and will result in the ETNs having a value different (higher or lower) from the value they would have had if there had been no such replacement.

**The Calculation Agents may perform their own calculation of the level of the Index if the Index is discontinued or if the Calculation Agents determine that there has been a change in the Index or the futures contracts included in the Index.**

The Calculation Agents may perform their own calculation of the level of the Index if they determine that the publication of the Index is discontinued and there is no Successor Index. In that case, the Calculation Agents will determine the level of the Index, and thus the Closing Indicative Value, Intraday Indicative Value and any

applicable Redemption Amount, using a computation methodology that the Calculation Agents determine will as closely as reasonably possible replicate the Index.

Furthermore, if the Calculation Agents determine that the Index, the futures contracts included in the Index or the method of calculating the Index is changed at any time in any respect—including whether the change is made by the Index Sponsor under its existing policies or following a modification of those policies, is due to the publication of a Successor Index, is due to events affecting the futures contracts included in the Index, or is due to any other reason—and is not otherwise reflected in the level of the Index by the Index Sponsor pursuant to the methodology described herein, then the Calculation Agents will be permitted (but not required) to make such adjustments in the Index level or the method of its calculation as they believe are appropriate to ensure that the applicable closing level of the Index used to determine the Closing Indicative Value, Intraday Indicative Value or any applicable Redemption Amount is equitable. The Calculation Agents may make any such modification or adjustment even if the Index Sponsor continues to publish the Index without a similar modification or adjustment.

Any modification to the Index level or adjustment to its method of calculation will affect the Closing Indicative Value and any amount you will receive upon redemption, upon acceleration or at maturity and will result in the ETNs having a value different (higher or lower) from the value they would have had if there had been no such modification or adjustment.

**The policies of the Index Sponsor or the Primary Exchange and changes that affect the Index could affect the applicable Redemption Amount of the ETNs and their market value.**

The policies of the Index Sponsor or the Primary Exchange concerning the calculation of the level of the Index and the manner in which changes affecting the futures contracts included in the Index are reflected in the level of the Index could affect the applicable Redemption Amount of the ETNs on the applicable Early Redemption Date, Optional Acceleration Date, Automatic Acceleration Date or the Maturity Date and the market value of the ETNs prior to that date. The applicable Redemption Amount of the ETNs and their market value could also be affected if the Index Sponsor or the Primary Exchange changes these policies, for example by changing the manner in which it calculates the level of the Index, by adding, deleting or substituting the futures contracts comprising the Index, or if the Index Sponsor or the Primary Exchange discontinues or suspends calculation or publication of the level of the Index, in which case it may become difficult to determine the market value of the ETNs. If events such as these occur, or if the level of the Index is not available because of a Market Disruption Event or for any other reason, the Calculation Agents for the ETNs may determine the level of the Index on the Valuation Date or during the Valuation Period, as the case may be.

A futures contract underlying the Index may be replaced if such futures contract is terminated or replaced on the exchange where it is traded.

The Index is composed of NYMEX light sweet crude oil futures contracts. If any such contract were to be terminated or replaced by the NYMEX, a comparable futures contract, if available, would be selected by the Index Sponsor to replace that contract. The termination or replacement of any contract may have an adverse impact on the level of the Index and, therefore, the value of the ETNs.

**We and our affiliates have no affiliation with the Index Sponsor and are not responsible for its public disclosure of information.**

We and our affiliates are not affiliated with the Index Sponsor in any way and have no ability to control the Index Sponsor, including errors in or discontinuation of disclosure regarding its methods or policies relating to the calculation of the Index. The Index Sponsor is under no obligation to continue to calculate the Index nor is it required to calculate any successor index. If the Index Sponsor discontinues or suspends the calculation of the Index, it may become difficult to determine the market value of the ETNs or the amount payable at maturity or upon redemption or acceleration. If the Calculation Agents determine in their sole discretion that no successor index to the Index exists, the Calculation Agents will determine the applicable level of the Index in their sole discretion.

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**You will have no rights against the entities with discretion over the Index.**

As owner of the ETNs, you will have no rights against the Index Sponsor, even though the amount you receive at maturity or upon redemption or acceleration will depend on the level of the Index. By investing in the ETNs, you will not acquire any interest in the futures contracts included in the Index. The ETNs will be paid in cash, and you will have no right to receive delivery of crude oil or of any futures contract included in the Index. The Index Sponsor is not in any way involved in this offering and has no obligations relating to the ETNs or to the holders of the ETNs.

**The payments we owe under the ETNs may be delayed in certain circumstances.**

If any Valuation Date (or, in the case of any Valuation Period other than an Automatic Acceleration Valuation Period, the last Valuation Date in such Valuation Period) is postponed, due to a Market Disruption Event or otherwise, the Maturity Date, the corresponding Early Redemption Date or the Optional Acceleration Date, as the case may be, will be postponed until the date three Business Days following such Valuation Date, as postponed. No interest or additional payment will accrue or be payable as a result of any postponement of the Maturity Date, any Early Redemption Date or the Optional Acceleration Date. See “Specific Terms of the ETNs—Market Disruption Events” in this pricing supplement.

You will not have any rights in any crude oil or in the commodity futures contracts included in the Index.

As an owner of the ETNs, you will not have rights that holders of crude oil or the commodity futures contracts included in the Index may have. The ETNs will be paid in cash, and you will have no right to receive delivery of any component of the Index. You will have no right to receive any payment or delivery of amounts in respect of the futures contracts included in the Index.

**The ETNs are linked to an excess return index, and not a total return index.**

The ETNs are linked to an excess return index, and not a total return index. Because the Index is an excess return index, it is calculated based solely on the changes in the settlement prices of the relevant NYMEX light sweet crude oil futures contracts and, unlike a direct investment in futures contracts or a total return index based on futures contracts, does not reflect interest that could be earned on funds committed to the trading of the underlying futures contracts. Investing in the ETNs will therefore not generate the same return as would be generated from investing directly in the relevant futures contracts or in a total return index related to such futures contracts.

The ETNs do not offer direct exposure to the spot price of crude oil.

The Index is linked to crude oil futures contracts, not the spot price of crude oil. The price of a futures contract on a commodity is the price of the commodity for delivery on a specified date or during a specified period in the future, whereas the spot price of a commodity reflects the immediate delivery value of the commodity. A variety of factors can lead to a disparity between the futures price of a commodity and the spot price at a given point in time, such as the cost of storing the commodity for the term of the futures contract, interest charges incurred to finance the purchase of the commodity and expectations concerning supply and demand for the commodity. The price movements of a futures contract are typically correlated with the movements of the spot price of the referenced commodity, but the correlation is generally imperfect and price movements in the spot market may not be reflected in the futures market (and vice versa). Accordingly, the ETNs may underperform a similar investment that is linked to the spot price of crude oil.

Higher futures prices of crude oil relative to the current spot price, or “contango,” may adversely affect the Closing Indicative Value of the Leveraged Long ETNs.

The Index tracks the value of a hypothetical position in the nearest-to-expiration NYMEX light sweet crude oil futures contract, where the position is notionally “rolled” periodically out of the current futures contract as its expiration month approaches and into another NYMEX light sweet crude oil futures contract with a later expiration month. Unlike stocks, which entitle the holder to a continuing stake in a corporation, a commodity futures contract specifies a certain future date (or period of dates within a future month) for the physical delivery of the commodity. In order to avoid physical delivery and maintain continuing exposure to NYMEX light sweet crude oil futures

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contracts, the Index unwinds its hypothetical position in the current futures contract before its expiration month arrives and replaces that futures contract with a hypothetical position in another NYMEX light sweet crude oil futures contract with a later expiration month. For example, a hypothetical futures contract entered into in early January may specify a February expiration month. As the beginning of February approaches, the hypothetical futures contract expiring in February may be replaced with a futures contract expiring in March. We refer to this process as “rolling” exposure to an expiring futures contract into another futures contract with a later expiration month. Through this rolling process, the Index is able to reflect continuing exposure to NYMEX light sweet crude oil futures contracts.

The “rolling” feature of the Index creates the potential for a significant negative effect on the level of the Index—which we refer to as a “negative roll yield”—that is independent of the performance of the spot price of crude oil. The Index would be expected to experience a negative roll yield if the price of the NYMEX light sweet crude oil futures contract underlying the Index tends to be greater than the spot price for crude oil. A market where the futures price is greater than the spot price is referred to as a “contango” market. As any commodity futures contract approaches expiration, its value will approach the spot price of the underlying physical commodity, because by expiration it will effectively represent a contract to buy or sell the physical commodity for immediate (or “spot”) delivery. Therefore, if the market for the relevant NYMEX light sweet crude oil futures contract is in contango, then the value of the futures contract would tend to decline over time (assuming the spot price for crude oil remains unchanged), because the higher futures price would fall as it converges to the lower spot price by expiration. If the market for the relevant NYMEX light sweet crude oil futures contract is in contango and the spot price for crude oil remains constant, the Index would enter into a hypothetical position in the futures contract at the higher contango futures price and then unwind that position closer to the lower spot price, and then enter into a hypothetical position in a new futures contract at the higher contango futures price and unwind that position closer to the lower spot price, and so on over time, all the while accumulating losses from the erosion in value that results as the higher contango price declines toward the lower spot price.

The Leveraged Long ETNs will be adversely affected by any negative roll yield that results from a contango market for NYMEX light sweet crude oil futures contracts. Any negative roll yield with respect to NYMEX light sweet crude oil futures contracts will offset any gains in the spot price of crude oil that may occur over the time you hold the Leveraged Long ETNs, exacerbate any decline and cause a steady erosion in value if the spot price of the crude oil remains relatively constant.

Lower futures prices of crude oil relative to the current spot price, or “backwardation,” may adversely affect the Closing Indicative Value of the Leveraged Inverse ETNs.

As described in the preceding risk factor, the Index tracks the value of a hypothetical position in the nearest-to-expiration NYMEX light sweet crude oil futures contract, where the position is notionally “rolled” periodically out of the current futures contract as its expiration month approaches and into another NYMEX light sweet crude oil futures contract with a later expiration month. The “rolling” feature of the Index creates the potential for a significant positive effect on the level of the Index—which we refer to as a “positive roll yield”—that is independent of the performance of the spot price of crude oil. The Index would be expected to experience a positive roll yield if the price of the NYMEX light sweet crude oil futures contract underlying the Index tends to be lower than the spot price for



crude oil. A market where the futures price is lower than the spot price is referred to as a “backwardated” market. As any commodity futures contract approaches expiration, its value will approach the spot price of the underlying physical commodity, because by expiration it will effectively represent a contract to buy or sell the physical commodity for immediate (or “spot”) delivery. Therefore, if the market for the relevant NYMEX light sweet crude oil futures contract is in backwardation, then the value of the futures contract would tend to increase over time (assuming the spot price for crude oil remains unchanged), because the lower futures price would increase as it converges to the higher spot price by expiration. If the market for the relevant NYMEX light sweet crude oil futures contract is in backwardation and the spot price for crude oil remains constant, the Index would enter into a hypothetical position in the futures contract at the lower backwardated futures price and then unwind that position closer to the higher spot price, and then enter into a hypothetical position in a new futures contract at the lower backwardated futures price and unwind that position closer to the higher spot price, and so on over time, all the while accumulating gains from the increase in value that results as the lower backwardated price increases toward the higher spot price.

The Leveraged Inverse ETNs will be adversely affected by any positive roll yield that results from a

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backwardated market for NYMEX light sweet crude oil futures contracts. Any positive roll yield with respect to NYMEX light sweet crude oil futures contracts will offset any declines in the spot price of crude oil that may occur over the time you hold the Leveraged Inverse ETNs, exacerbate any increase and cause a steady increase in value if the spot price of the crude oil remains relatively constant.

**There is concentration risk associated with the ETNs.**

The ETNs reflect a leveraged long or leveraged inverse position, as applicable, in the Index, which tracks a futures contract on a single commodity, and thus are much less diversified than funds, investment portfolios or indices investing in or tracking a broader range of products and, therefore, could experience greater volatility. You will not benefit, with respect to the ETNs, from any of the advantages of a diversified investment and will bear the risks of a highly concentrated investment.

**The Index may be more volatile and will be more susceptible to fluctuations in the price of a single commodity than a broader commodities index.**

The Index may be more volatile and will be more susceptible to fluctuations in the price of a single commodity (namely, crude oil) than a broader commodities index. The Index is composed of contracts covering only a single physical commodity. As a result, price volatility in the contracts included in the Index will have a greater impact on the Index than it would on a broader commodities index, and the Index will be more susceptible to fluctuations in the value of crude oil. In addition, the Index may be less representative of the economy and commodity markets as a whole and might therefore not serve as a reliable benchmark for commodity market performance generally.

**The price of crude oil futures can exhibit high and unpredictable volatility, which could lead to high and unpredictable volatility in the Index.**

Market prices of NYMEX light sweet crude oil futures contracts can be highly volatile. Commodity market prices are not related to the value of a future income or earnings stream, as tends to be the case with fixed-income and equity investments, but may be subject to rapid fluctuations based on numerous factors, including changes in supply and demand relationships, governmental programs and policies, national and international monetary, trade, political and economic events, changes in interest and exchange rates, speculation and trading activities in commodities and related contracts, weather, and trade, fiscal and exchange control policies. Many commodities are also highly cyclical. These factors may have a larger impact on commodity prices and commodity-linked instruments than on traditional fixed-income and equity securities and may create additional investment risks that cause the value of the ETNs to be more volatile than the values of traditional securities. These and other factors may affect the level of the Index, and thus the value of the ETNs, in unpredictable or unanticipated ways. The potential for high volatility and the cyclical nature of commodity markets may render an investment in crude oil futures inappropriate as the focus of an

investment portfolio.

The prices of crude oil are primarily affected by the global demand for and supply of crude oil, but are also influenced significantly from time to time by speculative actions and by currency exchange rates. Crude oil prices are generally more volatile and subject to dislocation than prices of other commodities. Demand for refined petroleum products by consumers, as well as the agricultural, manufacturing and transportation industries, affects the price of crude oil. Crude oil's end-use as a refined product is often as transport fuel, industrial fuel and in-home heating fuel. Potential for substitution in most areas exists, although considerations including relative cost often limit substitution levels. Because the precursors of demand for petroleum products are linked to economic activity, demand will tend to reflect economic conditions. Demand is also influenced by government regulations, such as environmental or consumption policies. In addition to general economic activity and demand, prices for crude oil are affected by political events, labor activity and, in particular, direct government intervention (such as embargos) or supply disruptions in major oil producing regions of the world. Such events tend to affect oil prices worldwide, regardless of the location of the event, although regional factors may disproportionately impact the NYMEX light sweet crude oil futures compared to other crude oil futures contracts. Supply for crude oil may increase or decrease depending on many factors. These include production decisions by the Organization of the Petroleum Exporting Countries ("OPEC") and other crude oil producers. Crude oil prices are determined with significant influence by OPEC. OPEC has the potential to influence oil prices worldwide because its members possess a significant portion of the world's oil supply. In the event of sudden disruptions in the supplies of oil, such as those caused by war,

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natural events, accidents or acts of terrorism, prices of oil futures contracts could become extremely volatile and unpredictable. Also, sudden and dramatic changes in the futures market may occur, for example, upon a cessation of hostilities that may exist in countries producing oil, the introduction of new or previously withheld supplies into the market or the introduction of substitute products or commodities. Crude oil prices may also be affected by short-term changes in supply and demand because of trading activities in the oil market and seasonality (e.g., weather conditions such as hurricanes). It is not possible to predict the aggregate effect of all or any combination of these factors.

**The NYMEX light sweet crude oil futures contracts tracked by the Index may perform differently than other crude oil futures contracts.**

The NYMEX light sweet crude oil futures contracts tracked by the Index are contracts to buy and sell light sweet crude oil, as defined under NYMEX rules. Other types of crude oil and other futures contracts on crude oil exist in the marketplace, most notably Brent crude oil and futures contracts on Brent crude oil. The market price of the light sweet crude oil underlying the NYMEX light sweet crude oil futures contracts will defer from the market price of Brent crude oil or any other type of crude oil, and the price of the NYMEX light sweet crude oil futures contracts underlying the Index will differ from the price of Brent crude oil futures contracts or other crude oil futures contracts. An investor should consider the difference between the light sweet crude oil underlying the NYMEX futures contracts tracked by the Index and other types of crude oil before invest in the ETNs. The ETNs may perform less favorably than other instruments linked to Brent crude oil or another type of crude oil or crude oil futures contract.

**The ETNs are not regulated by the Commodity Futures Trading Commission.**

The proceeds to be received by us from the sale of the ETNs will not be used to purchase or sell any commodities futures contracts or options on futures contracts for your benefit. An investment in the ETNs thus does not constitute either an investment in futures contracts, options on futures contracts or in a collective investment vehicle that trades in these futures contracts (*i.e.*, the ETNs will not constitute a direct or indirect investment by you in futures contracts), and you will not benefit from the regulatory protections of the Commodity Futures Trading Commission, commonly referred to as the "CFTC." The issuer of the ETNs is not registered with the CFTC as a futures commission merchant and you will not benefit from the CFTC's or any other non-U.S. regulatory authority's regulatory protections afforded to persons who trade in futures contracts on a regulated futures exchange through a registered futures commission merchant. Unlike an investment in the ETNs, an investment in a collective investment vehicle that invests in futures contracts on behalf of its participants may be subject to regulation as a commodity pool and its operator may be required to be registered with and regulated by the CFTC as a commodity pool operator, or qualify for an exemption from the registration requirement. Because the ETNs will not be interests in a commodity pool, the ETNs will not be regulated by the CFTC as a commodity pool, we will not be registered with the CFTC as a commodity pool operator, and you will not benefit from the CFTC's or any non-U.S. regulatory authority's regulatory protections afforded to persons who invest in regulated commodity pools.

The effects of any regulatory change on the value of the ETNs are impossible to predict, but could be substantial and adverse to the interests of holders of the ETNs.

The markets for futures contracts and options on futures contracts, including those future contracts related to crude oil, are subject to extensive statutes, regulations, and margin requirements. The CFTC and the exchange on which such futures contracts trade are authorized to take extraordinary actions in the event of a market emergency, including, for example, the retroactive implementation of speculative position limits or higher margin requirements, the establishment of daily limits and the suspension of trading. Furthermore, the NYMEX has regulations that limit the amount of fluctuations in futures contract prices which may occur. These limits could adversely affect the market prices of relevant futures contracts. The regulation of commodity transactions in the U.S. and other countries is subject to ongoing modification by government and judicial action. In addition, various national governments have expressed concern regarding the disruptive effects of speculative trading in the commodity markets and the need to regulate the derivative markets in general. The effects of any future regulatory change on the value of the ETNs are impossible to predict, but could be substantial and adverse to the interests of securityholders.

For example, on November 5, 2013, the CFTC proposed rules to establish new position limits that would apply to a party's combined futures, options and swaps position in any one of 28 physical commodities, including

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crude oil, and economically equivalent futures, options and swaps. These limits would, among other things, expand existing position limits applicable to options and futures contracts to apply to swaps and apply them across certain affiliated and controlled entities and accounts. If position limit rules or substantially similar rules are ultimately adopted and implemented by the CFTC, such rules could interfere with our ability to enter into or maintain hedge positions to hedge our obligations under the ETNs.

Such restrictions may have the effect of making the markets for futures contracts and options on futures contracts, including those future contracts related to crude oil, less liquid and more volatile. We or our affiliates may be unable, as a result of such restrictions, to effect transactions necessary to hedge our obligations under the ETNs, in which case we may, in our sole and absolute discretion, accelerate the payment on the ETNs. If the payment on the ETNs is accelerated, your investment may result in a loss and you may not be able to reinvest your money in a comparable investment. Please refer to “Specific Terms of the ETNs—Acceleration at Our Option” herein for more information.

A decision by an exchange on which the futures contracts included in the Index are traded to increase margin requirements may affect the level of the Index.

If the exchange on which the futures contracts included in the Index are traded increases the amount of collateral required to be posted to hold positions in such futures contracts (*i.e.*, the margin requirement), market participants who are unwilling or unable to post additional collateral may liquidate their positions, which may cause the level of the Index to decline significantly.

**The Daily Accrual is based on the 3-month U.S. Treasury rate and therefore the value of the ETNs may be adversely impacted by decreases in this rate.**

The Daily Accrual is an amount that accrues at the 3-month U.S. Treasury rate on each Index Business Day’s Closing Indicative Value. This rate fluctuates and, accordingly, the lower this rate is, the lower the Daily Accrual on the ETNs will be.

**The U.S. federal tax consequences of an investment in the ETNs are uncertain.**

There is no direct legal authority regarding the proper U.S. federal tax treatment of the ETNs, and we do not plan to request a ruling from the Internal Revenue Service (the “IRS”). Consequently, significant aspects of the tax treatment of the ETNs are uncertain, and the IRS or a court might not agree with the treatment of the ETNs as prepaid forward contracts. If the IRS were successful in asserting an alternative treatment for the ETNs, the tax consequences of ownership and disposition of the ETNs might be materially and adversely affected. Moreover, even if the ETNs are

treated as prepaid forward contracts, certain possible taxable events could cause a holder to recognize gain on an ETN prior to maturity or earlier disposition. As described below under “United States Federal Tax Considerations,” the U.S. Treasury Department and the IRS have requested comments on various issues regarding the U.S. federal income tax treatment of “prepaid forward contracts” and similar financial instruments, and have indicated that such transactions may be the subject of future regulations or other guidance. In addition, members of Congress have proposed legislative changes to the tax treatment of derivative contracts. Any legislation, Treasury regulations or other guidance promulgated after consideration of these issues could materially and adversely affect the tax consequences of an investment in the ETNs, possibly with retroactive effect. You should review carefully the section of this pricing supplement entitled “United States Federal Tax Considerations.” You should also consult your tax adviser regarding the U.S. federal tax consequences of an investment in the ETNs, as well as tax consequences arising under the laws of any state, local or non-U.S. taxing jurisdiction.

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## DESCRIPTION OF THE INDEX

### General

We have derived all information regarding the S&P GSCI<sup>®</sup> Crude Oil Index ER (the “**Index**”) contained in this pricing supplement, including, without limitation, its makeup, method of calculation and changes to its components, from publicly available information, and we have not participated in the preparation of, or verified, such publicly available information. Such information reflects the policies of, and is subject to change by, S&P Dow Jones Indices LLC (“**S&P**” or the “**Index Sponsor**”). We have derived all information regarding the NYMEX light sweet crude oil futures contracts contained in this pricing supplement from publicly available information published by CME Group, which owns the NYMEX, without independent verification.

The Index tracks a hypothetical position in the nearest-to-expiration New York Mercantile Exchange (“**NYMEX**”) light sweet crude oil futures contract, where that position is rolled each month into the futures contract expiring in the next month. Because the Index is an excess return index, its official settlement price each day is calculated based solely on changes in the daily settlement price(s) of the relevant NYMEX futures contract(s) and, unlike a direct investment in futures contracts or a total return index based on futures contracts, does not reflect interest that could be earned on funds committed to the trading of the underlying futures contract(s).

The level of the Index is calculated on each S&P GSCI Business Day. An “**S&P GSCI Business Day**” is a day on which the S&P GSCI indices are calculated, as determined by the NYSE Euronext Holiday and Hours schedule.

The Index is published by the Index Sponsor and is determined and calculated by the Index Sponsor without regard to the ETNs. This section contains only a summary description of the Index. A more detailed description of the Index methodology may be found in publicly available information published by the Index Sponsor on its website.

### NYMEX Light Sweet Crude Oil Futures Contracts

A NYMEX light sweet crude oil futures contract is an agreement to buy or sell 1,000 barrels of light sweet crude oil (as defined under the NYMEX’s rules) within a specified expiration month in the future at a price specified at the time of entering into the contract. At any given time, the NYMEX lists light sweet crude oil futures contracts with expiration months occurring in each month over the next five years (and less frequently thereafter).



The price of a NYMEX light sweet crude oil futures contract is quoted in dollars per barrel. For example, if a NYMEX light sweet crude oil futures contract is entered into at a settlement price of \$50, that would mean that the buyer is obligated to buy, and the seller is obligated to sell, 1,000 barrels of light sweet crude oil for a total of \$50,000, for delivery in the delivery month of the contract.

The NYMEX determines a daily settlement price for NYMEX light sweet crude oil futures contracts on each Index Business Day as of 2:30 p.m., New York City time. The daily settlement price of the nearest-to-expiration NYMEX light sweet crude oil futures contract is the volume-weighted average price of all trades in that contract that are executed between 2:28:00 and 2:30:00 p.m., New York City time. The daily settlement price of the next expiring NYMEX light sweet crude oil futures contract is the price implied from the volume-weighted average price of all trades executed in the spread between the nearest-to-expiration contract and the next expiring contract between 2:28:00 and 2:30:00 p.m., New York City time, using the daily settlement price of the nearest-to-expiration contract as the anchor price and adding to it the spread.

### **Index Calculation**

The official settlement price of the Index on each Index Business Day is determined based on that day's daily settlement price of the relevant NYMEX light sweet crude oil futures contract(s). Accordingly, the official settlement price of the Index on each Index Business Day is based on trading in the relevant NYMEX light sweet crude oil futures contract(s) that occurs between 2:28 and 2:30 p.m., New York City time, on that day. There is typically a time lag in the publication of the daily settlement price, and the official settlement price of the Index based on the daily settlement price is typically not published until after 4:00 p.m., New York City time.

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NYMEX light sweet crude oil futures contracts trade 23 hours a day, six days a week, including continuously before and after the time at which the daily settlement price is determined. However, the official settlement price of the Index on a given Index Business Day will not reflect any trading after 2:30 p.m., New York City time, on that day.

The change in the official settlement price of the Index from one day to the next reflects the hypothetical return that an investor would realize on a position in the NYMEX light sweet crude oil futures contract (or, during a roll period, contracts) then tracked by the Index over that one-day period if the position were entered into at the prior day's daily settlement price and unwound at the current day's daily settlement price. That return would be equal to the percentage change in the daily settlement price from the prior day to the current day (based on the appropriate proportionate weighting between the two relevant NYMEX light sweet crude oil futures contracts during a roll period).

If the NYMEX fails to make available a daily settlement price on an S&P GSCI Business Day, or if the Index Sponsor determines the available daily settlement price reflects a manifest error, the relevant calculation is delayed until such time as such price is made available or corrected. If a daily settlement price has not been made available or the error has not been corrected by the NYMEX by 4:00 p.m., New York City time, the Index Sponsor may determine the appropriate daily settlement price for purposes of calculating the Index.

## **Rolling**

The Index seeks to reflect continuing hypothetical exposure to the nearest-to-expiration NYMEX light sweet crude oil futures contract, subject to the roll procedure described below. Because the NYMEX light sweet crude oil futures contracts expire monthly, each month the Index must "roll" its exposure out of the nearest-to-expiration contract and into the contract expiring in the next month. The Index achieves this by reducing its exposure to the nearest-to-expiration contract by 20% each day, and increasing its exposure to the next month's contract by 20% each day, during a "roll period" consisting of five S&P GSCI Business Days commencing on the fifth S&P GSCI Business Day of each month. The change in exposure is effected at the end of each day in the roll period, so that the performance of the Index will reflect the change on the first S&P GSCI Business Day after that change is effected.

For example, during the first five S&P GSCI Business Days of January (including the first day of the roll period), the performance of the Index will reflect a hypothetical position solely in the NYMEX light sweet crude oil futures contract expiring in February. During the next four S&P GSCI Business Days, the Index will track a hypothetical position in a basket of two NYMEX light sweet crude oil futures contracts, consisting of the contract expiring in February and the contract expiring in March, where the exposure to the contract expiring in February is reduced by 20% on each day and the exposure to the contract expiring in March is increased by 20% on each day of the roll period. After the end of the roll period and for the remainder of January, the Index will track a hypothetical position in the NYMEX light sweet crude oil futures contract expiring in March. The same process repeats for succeeding months.

On any S&P GSCI Business Day, the occurrence of any of the following circumstances will result in an adjustment of a roll period:

i. if such S&P GSCI Business Day is not a Contract Business Day with respect to any NYMEX light sweet crude oil futures contract then tracked by the Index;

ii. the applicable daily settlement price of any such futures contract on such S&P GSCI Business Day is a limit price;

iii. the Index Sponsor determines the daily settlement price published by the NYMEX reflects manifest error and such error is not corrected by 4:00 p.m., or the NYMEX for any reason fails to publish a daily settlement price by 4:00 p.m., New York City time. If the day is otherwise a Contract Business Day and the circumstances described in clauses (ii) and (iv) do not exist with respect to such futures contract on the relevant day, the Index Sponsor may determine the appropriate daily settlement price for the relevant contract and determine the rolling of the Index based on such daily settlement price. If the NYMEX makes available a daily settlement price or corrected daily settlement price for such

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contract prior to the opening of trading in such contract on the next Contract Business Day, then the rolling of the portion of the Index implemented on the prior S&P GSCI Business Day will be revised based on such daily settlement price; or

trading in the relevant contract for such S&P GSCI Business Day is terminated prior to the time at which, as of the opening of trading on such day (as defined under the rules or policies of the NYMEX), trading in such contract was iv. scheduled to close, and trading in such contract does not resume at least 10 minutes prior to, and continue until, the scheduled closing time (or the rescheduled closing time if such closing time was rescheduled as a result of the termination).

In any such event, the portion of the roll that would otherwise have taken place on such S&P GSCI Business Day will take place on the next Contract Business Day (provided that such day is also a S&P GSCI Business Day) on which none of the circumstances identified above exist.

If on any day during a roll period the daily settlement price of any applicable futures contract is a limit price, no daily settlement price is available, or trading in the relevant contract is terminated earlier than scheduled (and does not resume within the specified time period), the portion of the roll that would otherwise have taken place on that day will be deferred until the next day on which such circumstances do not exist.

Under this procedure, if any of the enumerated circumstances exists on the first day of the roll period, then no portion of the roll will be performed and 40% of the roll will be implemented on the next S&P GSCI Business Day. If such circumstances also exist on the second S&P GSCI Business Day of the roll period, then 60% of the roll will be performed on the third day, and so forth. If such circumstances exist throughout the five S&P GSCI Business Days initially designated as the roll period, then the entire roll will be performed on the next succeeding S&P GSCI Business Day on which none of these circumstances exist.

The only exception to the foregoing is that if the NYMEX makes available a daily settlement price that reflects manifest error, and such error is not corrected by 4:00 p.m., New York City time, or if the NYMEX fails to make available any daily settlement price by 4:00 p.m., New York City time, on a day on which trading otherwise occurred (and none of the other conditions specified above exist), the Index Sponsor may determine the daily settlement price to be used in implementing that day's roll. If the NYMEX, then, makes available a daily settlement price or a corrected daily settlement price prior to the opening of trading on the next Contract Business Day, the Index Sponsor will revise the calculation accordingly.

A "**Contract Business Day**" for any NYMEX light sweet crude oil futures contract is a day on which (i) the NYMEX is scheduled to be open for trading for at least three hours, (ii) the applicable NYMEX light sweet crude oil futures contract is available for trading during the hours referred to in clause (i) (as defined by the rules or policies of the NYMEX, or if not so defined, as defined by the Index Sponsor) and (iii) a daily settlement price for such Contract

Expiration is published by the NYMEX. An early closing of the NYMEX or an early closing of trading in such contract will not affect the characterization of a day as a Contract Business Day, provided that the circumstances set forth in (i) through (iii) exist.

### **The Index Committee and the Index Advisory Panel**

The Index Sponsor has established an index committee (the “**Index Committee**”) to oversee the daily management and operations of the Index, and is responsible for all analytical methods and calculation of the Index. The Index Committee consists of full-time professional members of the Index Sponsor’s staff. At each meeting, the Index Committee reviews any issues that may affect the Index constituents and any significant market events. In addition, the Index Committee may revise index policy.

The Index Sponsor considers information about changes to its indices and related matters to be potentially market-moving and material. Therefore, all Index Committee discussions are confidential.

The Index Sponsor has established an index advisory panel (the “**Advisory Panel**”) to assist it in connection with the operation of the Index. The Advisory Panel meets on an annual basis and at other times at the request of the Index Committee. The principal purpose of the Advisory Panel is to advise the Index Committee and the Index Sponsor with respect to, among other things, the calculation of the Index, the effectiveness of the Index as

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a measure of commodity futures market performance and the need for changes in the composition or in the methodology of the Index. The Advisory Panel acts solely in an advisory and consultative capacity; all decisions with respect to the composition, calculation and operation of the Index are made by the Index Committee.

### **Historical Information**

The chart below shows the daily closing levels of the S&P GSCI® Crude Oil Index ER from January 1, 2006 through February 25, 2019. We obtained the levels below from Bloomberg, without independent verification. **The historical performance of the Index should not be taken as an indication of future performance, and no assurance can be given as to the level of the Index on any given date.**

The actual level of the Index as of February 25, 2019 was 167.15.

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## License Agreement

We or our affiliates have entered into a non-exclusive license agreement with the Index Sponsor providing for the license to us, in exchange for a fee, of the right to use the Index, which is owned by the Index Sponsor, in connection with certain securities, including the ETNs.

“Standard & Poor<sup>®</sup>”, “S&P”, “S&P GS<sup>®</sup>T” and “S&P GS<sup>®</sup>ICrude Oil” are trademarks of Standard & Poor’s Financial Services LLC (“Standard & Poor’s”) and have been licensed for use by us. The Index is not owned, endorsed, or approved by or associated with Goldman Sachs & Co. or its affiliated companies.

The ETNs are not sponsored, endorsed, sold or promoted by S&P Dow Jones Indices LLC, Dow Jones, S&P, any of their respective affiliates (collectively, “S&P Dow Jones Indices”). S&P Dow Jones Indices make no representation or warranty, express or implied, to the owners of the ETNs or any member of the public regarding the advisability of investing in securities generally or in the ETNs particularly or the ability of the Index to track general market performance. S&P Dow Jones Indices’ only relationship to the licensee with respect to the Index is the licensing of the Index and certain trademarks, service marks and/or trade names of S&P Dow Jones Indices and/or its third party licensors. The Index is determined, composed and calculated by S&P Dow Jones Indices without regard to the licensee or the ETNs. S&P Dow Jones Indices have no obligation to take the licensee’s needs or the needs of the owners of the ETNs into consideration in determining, composing or calculating the Index. S&P Dow Jones Indices are not responsible for and have not participated in the determination of the prices, and number of the ETNs or the timing of the issuance or sale of the ETNs or in the determination or calculation of the equation by which the ETNs are to be converted into cash. S&P Dow Jones Indices have no obligation or liability in connection with the administration, marketing or trading of the ETNs. There is no assurance that investment products based on the Index will accurately track Index performance or provide positive investment returns. S&P Dow Jones Indices LLC is not an investment advisor. Inclusion of a security within the Index is not a recommendation by S&P Dow Jones Indices to buy, sell, or hold such security, nor is it considered to be investment advice. Notwithstanding the foregoing, CME Group Inc. and its affiliates may independently issue and/or sponsor financial products unrelated to the ETNs currently being issued by the licensee, but which may be similar to and competitive with the ETNs. In addition, CME Group Inc. and its affiliates may trade financial products which are linked to the performance of the Index. It is possible that this trading activity will affect the value of the Index and the ETNs.

S&P Dow Jones Indices LLC, Dow Jones, S&P, any of their respective affiliates (collectively, “S&P Dow Jones Indices”) DO NOT GUARANTEE THE ADEQUACY, ACCURACY, TIMELINESS AND/OR THE COMPLETENESS OF THE INDEX OR ANY DATA RELATED THERETO OR ANY COMMUNICATION, INCLUDING BUT NOT LIMITED TO, ORAL OR WRITTEN COMMUNICATION (INCLUDING ELECTRONIC COMMUNICATIONS) WITH RESPECT THERETO. S&P DOW JONES INDICES SHALL NOT BE SUBJECT TO ANY DAMAGES OR LIABILITY FOR ANY ERRORS, OMISSIONS, OR DELAYS THEREIN. S&P DOW JONES INDICES MAKE NO EXPRESS OR IMPLIED WARRANTIES, AND EXPRESSLY DISCLAIMS ALL WARRANTIES, OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE OR AS TO RESULTS TO BE OBTAINED BY THE LICENSEE, OWNERS OF THE ETNS, OR ANY OTHER PERSON OR ENTITY FROM THE USE OF THE INDEX OR WITH RESPECT TO ANY DATA RELATED THERETO.

WITHOUT LIMITING ANY OF THE FOREGOING, IN NO EVENT WHATSOEVER SHALL S&P DOW JONES INDICES BE LIABLE FOR ANY INDIRECT, SPECIAL, INCIDENTAL, PUNITIVE, OR CONSEQUENTIAL DAMAGES INCLUDING BUT NOT LIMITED TO, LOSS OF PROFITS, TRADING LOSSES, LOST TIME OR GOODWILL, EVEN IF THEY HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES, WHETHER IN CONTRACT, TORT, STRICT LIABILITY, OR OTHERWISE. THERE ARE NO THIRD PARTY BENEFICIARIES OF ANY AGREEMENTS OR ARRANGEMENTS BETWEEN S&P DOW JONES INDICES AND THE LICENSEE, OTHER THAN THE LICENSORS OF S&P DOW JONES INDICES.

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## **JANUS HENDERSON INDICES LLC**

CGMI has entered into a non-exclusive license agreement with Janus Index & Calculation Services LLC, renamed Janus Henderson Indices LLC as of January 1, 2019 (“**JHI**”), to license to us and our affiliates, in exchange for a fee, the right to use certain trade names, trademarks and servicemarks, which are owned by Janus International Holding LLC, in connection with certain securities, including the ETNs.

The license agreement between JHI and CGMI provides that the following language must be set forth in this pricing supplement:

“VelocityShares”, the “V Logo” and the “V VelocityShares Logo” are service marks of Janus Henderson Indices LLC, formerly Janus Index & Calculation Services LLC, and have been licensed for use by us. The ETNs are not sponsored, endorsed or sold by Janus Henderson Indices LLC, nor does Janus Henderson Indices LLC make any representation regarding the advisability of investing in any of the ETNs.

NEITHER JANUS HENDERSON INDICES LLC AND ITS AFFILIATES (TOGETHER, “**JANUS**”) NOR ANY OTHER PARTY MAKES ANY REPRESENTATION OR WARRANTY, EXPRESS OR IMPLIED, TO THE OWNERS OF THE ETNS OR ANY MEMBER OF THE PUBLIC REGARDING THE ADVISABILITY OF INVESTING IN THE ETNS GENERALLY OR THE SIMILARITIES OR VARIATIONS BETWEEN THE PERFORMANCE OF THE ETNS OR THE INDEX AND THE PERFORMANCE OF THE UNDERLYING SECURITIES OR FINANCIAL INSTRUMENTS. JANUS IS THE LICENSOR OF CERTAIN TRADEMARKS, SERVICE MARKS AND TRADE NAMES OF JANUS. NEITHER JANUS NOR ANY OTHER PARTY GUARANTEES THE ACCURACY AND/OR THE COMPLETENESS OF THE INDEX OR ANY DATA INCLUDED THEREIN OR ANY CALCULATIONS MADE WITH RESPECT TO THE ETNS.

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## SPECIFIC TERMS OF THE ETNs

*You should read this pricing supplement together with the accompanying prospectus supplement and prospectus before making your decision to invest in the ETNs. The description in this pricing supplement of the particular terms of the ETNs supplements, and to the extent inconsistent therewith replaces, the descriptions of the general terms and provisions of the debt securities set forth in the accompanying prospectus supplement and prospectus.*

*You may access the prospectus supplement and prospectus on the SEC Web site at [www.sec.gov](http://www.sec.gov) as follows (or if such address has changed, by reviewing our filings for May 14, 2018 on the SEC Web site):*

§ *Prospectus Supplement and Prospectus each dated May 14, 2018:*  
<https://www.sec.gov/Archives/edgar/data/200245/000119312518162183/d583728d424b2.htm>

### General

Each series of ETNs is part of a series of unsecured senior debt securities issued by Citigroup Global Markets Holdings Inc. and designated as its Medium-Term Senior Notes, Series N. We refer to each series of ETNs as a separate “series” to distinguish the Leveraged Long ETNs from the Leveraged Inverse ETNs, but all of the ETNs are part of Citigroup Global Markets Holdings Inc.’s Medium-Term Senior Notes, Series N. Any payments due on the ETNs are fully and unconditionally guaranteed by Citigroup Inc. Each series of ETNs will constitute part of the senior debt of Citigroup Global Markets Holdings Inc. and will rank equally with all other unsecured and unsubordinated debt of Citigroup Global Markets Holdings Inc. The guarantee of payments due on each series of ETNs will constitute part of the senior debt of Citigroup Inc. and will rank equally with all other unsecured and unsubordinated debt of Citigroup Inc.

Unlike ordinary debt securities, the ETNs do not offer interest payments and do not guarantee any return of principal at maturity or upon earlier redemption or acceleration. Instead, each series of ETNs is designed for investors who seek leveraged long or leveraged inverse, as applicable, exposure to the performance of the Index on a daily basis *plus* the Daily Accrual and *minus* the Daily Investor Fee, as described below. At maturity or upon early redemption or acceleration, holders of each ETN will receive an amount in cash that will vary depending on the level of the Index as described below, which can be significantly less than the stated principal amount of the applicable ETNs and could be zero.

You will not have the right to receive physical certificates evidencing your ownership except under limited circumstances. Instead, we will issue each series of ETNs in the form of a global certificate, which will be held by or on behalf of The Depository Trust Company (“DTC”) or its nominee. Direct and indirect participants in DTC will

record beneficial ownership of the ETNs by individual investors. Accountholders in the Euroclear or Clearstream Banking clearance systems may hold beneficial interests in the ETNs through the accounts those systems maintain with DTC. You should refer to the section “Description of Debt Securities—Book-Entry Procedures and Settlement” in the accompanying prospectus.

Reference is made to the accompanying prospectus supplement and prospectus for a detailed summary of additional provisions of the ETNs and of the senior debt indenture under which the ETNs will be issued.

The “**Inception Date**” for each series of ETNs was December 8, 2016.

### **Coupon**

We will not make any coupon or interest payment on the ETNs during the term of the ETNs.

### **Denomination**

The denomination and stated principal amount per ETN is \$25.00.

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## Closing Indicative Value

Any payment on the ETNs, whether upon early redemption at your option, acceleration at our option or at maturity (but excluding payment upon Automatic Acceleration), will be based on the Closing Indicative Value of the applicable series of ETNs on one or more Valuation Dates. The Closing Indicative Value, in turn, will depend on the performance of the Index, *plus* the Daily Accrual and *minus* the Daily Investor Fee.

The “**Closing Indicative Value**” for any series of ETNs on any given calendar day will be calculated in the following manner: The Closing Indicative Value on the Inception Date was \$25.00. The Closing Indicative Value on each calendar day following the Inception Date for each series of ETNs will equal:

For each calendar day prior to the Final Valuation Period or any Optional Acceleration Valuation Period for such series of ETNs, (1)(a) the Closing Indicative Value for such series of ETNs on the immediately preceding calendar day *times* (b) the Daily ETN Performance for such series of ETNs on such calendar day *minus* (2) the Daily Investor Fee for such series of ETNs on such calendar day.

For each calendar day during the Final Valuation Period or any Optional Acceleration Valuation Period for such series of ETNs, (1) the sum of (a) the Index Exposure and (b) the Notional Cash Amount *minus* (2) the Daily Investor Fee for such series of ETNs on such calendar day.

The Closing Indicative Value will never be less than zero. If any series of ETNs undergoes a split or reverse split, the Closing Indicative Value for such series of ETNs will be adjusted accordingly (see “—Split or Reverse Split of the ETNs” below). Janus Index & Calculation Services LLC, renamed Janus Henderson Indices LLC as of January 1, 2019 (“**JHI**”), or its affiliate is responsible for computing and disseminating the Closing Indicative Value, subject to CGMI’s right to dispute JHI’s calculation of the Closing Indicative Value, in which case, if the Calculation Agents are unable to agree, CGMI’s determination of the Closing Indicative Value shall be conclusive and binding. The Closing Indicative Value for each series of ETNs will be calculated and published each Index Business Day under the following tickers:

<b>ETNs</b>	<b>Indicative Value Ticker</b>
3x Long Crude Oil ETNs	UWTIV
3x Inverse Crude Oil ETNs	DWTIV

The Closing Indicative Value of each series of ETNs on each Index Business Day is based on the closing level of the Index on that Index Business Day. The closing level of the Index on each Index Business Day is determined based on the daily settlement price of NYMEX light sweet crude oil futures contracts, which is determined as of 2:30 p.m., New York City time, on each Index Business Day. Although the daily settlement price is determined as of 2:30 p.m., there is typically a time lag in the publication of the daily settlement price, and the closing level of the Index based on

the daily settlement price is typically not published until after 4:00 p.m., New York City time, which is the close of trading for the ETNs on the NYSE Arca. Accordingly, the Closing Indicative Value of each series of ETNs will also not be published until after the close of trading for the ETNs on the NYSE Arca, but will be based on the daily settlement price of NYMEX light sweet crude oil futures contracts as of 2:30 p.m.

The “**Daily ETN Performance**” for any series of ETNs on any Index Business Day will equal (1) one *plus* (2) the Daily Accrual for such series of ETNs on such Index Business Day *plus* (3) the product of (a) the Daily Index Performance for such series of ETNs on such Index Business Day *times* (b) the Leverage Amount for such series of ETNs. The Daily ETN Performance for any series of ETNs is deemed to equal one on any day that is not an Index Business Day.

An “**Index Business Day**” is a day on which (i) trading is generally conducted on the primary exchange on which futures contracts included in the Index are traded, as determined by the Calculation Agents, which is initially the New York Mercantile Exchange, Inc., (ii) the Index is scheduled to be published by the Index Sponsor and (iii) trading is generally conducted on NYSE Arca, in each case as determined by the Calculation Agents.

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The “**Daily Accrual**” represents the rate of interest that could be earned on a notional capital reinvestment at the three month U.S. Treasury rate as reported on Bloomberg under ticker USB3MTA (or any successor ticker on Bloomberg or any successor service). The Daily Accrual for any series of ETNs on any Index Business Day will equal:

where  $Tbills_{t-1}$  is the three month U.S. Treasury rate reported on Bloomberg on the prior Index Business Day and  $d$  is the number of calendar days from and including the immediately prior Index Business Day to but excluding the date of determination. The Daily Accrual for any series of ETNs is deemed to equal zero on any day that is not an Index Business Day.

The “**Daily Index Performance**” for any series of ETNs on any Index Business Day will equal, except as otherwise provided below, (1)(a) the closing level of the Index on such Index Business Day *divided by* (b) the closing level of the Index on the immediately preceding Index Business Day *minus* (2) one. However, in the following circumstances, the calculation of the Daily Index Performance for a series of ETNs will be modified so that the applicable leverage of the ETNs does not reset for the period described below:

If a Market Disruption Event with respect to any series of ETNs occurs, the calculation of the Daily Index Performance for such series of ETNs will be modified so that the applicable leveraged exposure does not reset until the first Index Business Day on which no Market Disruption Event with respect to such series of ETNs is continuing. Accordingly, if a Market Disruption Event with respect to any series of ETNs occurs or is continuing on any Index Business Day (for purposes of this bullet, the “**date of determination**”) or if a Market Disruption Event with respect to any series of ETNs occurred or was continuing on the Index Business Day immediately preceding the date of determination, then the Daily Index Performance for such series of ETNs on the date of determination will equal:

$$\frac{CL_d - CL_{t-1}}{CL_0 + [L \times (CL_{d-1} - CL_0)]}$$

where:

$CL_d$  =the closing level of the Index on the date of determination;

$CL_{d-1}$ =the closing level of the Index on the Index Business Day immediately preceding the date of determination;

$CL_0$  = the closing level of the Index on the Index Business Day on which no Market Disruption Event occurred or was continuing that most closely precedes the date of determination; and

L =the applicable Leverage Amount.

In addition, if a Market Disruption Event occurs or is continuing on any date of determination or occurred or was continuing on the Index Business Day immediately preceding the date of determination, the Calculation Agents will

determine the Daily Index Performance on such date of determination using an appropriate closing level of the Index for such date of determination and/or such prior Index Business Day taking into account the nature and duration of such Market Disruption Event. Without limiting the generality of the preceding sentence, if a Market Disruption Event occurs during any “roll period” for the Index (as described above under “Description of the Index”), the Calculation Agents may, but are not required to, calculate an appropriate closing level of the Index on each applicable Index Business Day without giving effect to any “rolling” of futures contracts that may take place under the Index rules.

During a Valuation Period for any series of ETNs, the calculation of the Daily Index Performance for such series of ETNs will be modified so that the applicable leveraged exposure does not reset after

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such Valuation Period begins. Accordingly, the Daily Index Performance for any series of ETNs on any Index Business Day during a Valuation Period (for purposes of this bullet, the “**date of determination**”) will equal:

$$\frac{CL_d - CL_{d-1}}{CL_{V0} + [L \times (CL_{d-1} - CL_{V0})]}$$

where:

$CL_d$  = the closing level of the Index on the date of determination;

$CL_{d-1}$  = the closing level of the Index on the Index Business Day immediately preceding the date of determination;

$CL_{V0}$  = the closing level of the Index on the Index Business Day that most closely precedes the beginning of the Valuation Period; and

L = the applicable Leverage Amount.

The Daily Index Performance for any series of ETNs is deemed to equal zero on any day that is not an Index Business Day.

“**Valuation Period**” means the Final Valuation Period, an Optional Acceleration Valuation Period or an Automatic Acceleration Valuation Period, as applicable.

“**Valuation Date**” means each Index Business Day in the Final Valuation Period or any Optional Acceleration Valuation Period and any Early Redemption Valuation Date.

The “**Leverage Amount**” for each series of ETNs is as follows:

3x Long Crude Oil ETNs: 3

3x Inverse Crude Oil ETNs: -3

On any Index Business Day, the “**Daily Investor Fee**” for any series of ETNs will equal the product of (1) the Closing Indicative Value for such series of ETNs on the immediately preceding Index Business Day *times* (2)(a) the Investor Fee Factor for such series of ETNs *times* (b) 1/365 *times* (c) *d*, where *d* is the number of calendar days from and including the immediately prior Index Business Day to but excluding the date of determination. The Daily Investor Fee for any series of ETNs is deemed to equal zero on any day that is not an Index Business Day.



The “**Investor Fee Factor**” for each series of ETNs is as follows:

3x Long Crude Oil ETNs: 1.50%

3x Inverse Crude Oil ETNs: 1.50%

**The Daily Investor Fee reduces the daily return of each series of ETNs. Over the time you hold the ETNs, if the level of the Index decreases or does not increase sufficiently (in the case of the Leveraged Long ETNs), or if it increases or does not decrease sufficiently (in the case of the Leveraged Inverse ETNs), in each case in addition to the Daily Accrual, to offset the effect of the Daily Investor Fee (and, if applicable, the Early Redemption Charge and the creation fee), you will receive less than the amount you paid for them upon sale, at maturity or upon early redemption or acceleration.**

The “**closing level**” of the Index on any Index Business Day will be the official settlement price for the Index reported by the Index Sponsor on the Bloomberg page as set forth in the table below or any successor page on Bloomberg or any successor service, as applicable, as determined by the Calculation Agents, except that in the event a Market Disruption Event with respect to any series of ETNs occurs or is continuing on an Index Business Day or the prior Index Business Day, the Calculation Agents will determine the closing level of the Index for each such Index Business Day according to the methodology described above in the definition of “Daily Index Performance”.

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<b>Index</b>	<b>Bloomberg Page Ticker</b>
S&P GSCI® Crude Oil Index ER	SPGSCLP

“**Index Exposure**” means, for each Valuation Date during the Final Valuation Period or any Optional Acceleration Valuation Period, as applicable, the product of (i) the Index Exposure on the immediately preceding Valuation Date (or, in the case of the first day of such Valuation Period, the Closing Indicative Value on the immediately preceding Index Business Day) *multiplied by* the Daily ETN Performance on the current Valuation Date and (ii) a fraction equal to (a) the number of scheduled Valuation Dates left in the applicable Valuation Period, excluding the current Valuation Date, *divided by* (b) the number of scheduled Valuation Dates left in the applicable Valuation Period, including the current Valuation Date. The Index Exposure on any day that is not a Valuation Date will be deemed to be the same as on the immediately preceding Valuation Date.

“**Notional Cash Amount**” means, for each Valuation Date during the Final Valuation Period or any Optional Acceleration Valuation Period, as applicable, the sum of (i) the Notional Cash Amount on the immediately preceding Valuation Date (or, in the case of the first day of such Valuation Period, \$0.00) and (ii) (a) the Index Exposure on the immediately preceding Valuation Date (or, in the case of the first day of such Valuation Period, the Closing Indicative Value on the immediately preceding Valuation Date) *multiplied by* (b) the Daily ETN Performance on the current Valuation Date *multiplied by* (c) 1 *divided by* the number of scheduled Valuation Dates left in the applicable Valuation Period, including the current Valuation Date. The Notional Cash Amount on any day that is not a Valuation Date will be deemed to be the same as on the immediately preceding Valuation Date.

During the Final Valuation Period or any Optional Acceleration Valuation Period, the Closing Indicative Value is calculated in a manner that results in a proportional reduction of exposure to the Index on each Valuation Date in that Valuation Period. In other words, on each Valuation Date over the course of the applicable Valuation Period, a portion of each ETN’s value will be converted into notional cash exposure (and thereby crystallized) based on the level of the Index on that day, and on each subsequent Valuation Date a progressively smaller portion of the ETNs’ value will be exposed to changes in the Index on that day and a progressively greater amount will be converted into notional cash exposure, until at the end of the Valuation Period the full amount of the ETNs’ exposure has been converted into notional cash exposure. The cumulative amount of that notional cash exposure (*less* the Daily Investor Fee) is the Closing Indicative Value on the last Valuation Date of the applicable Valuation Period.

Any payment you will be entitled to receive is subject to the credit risk of Citigroup Global Markets Holdings Inc. and Citigroup Inc.

### **Payment at Maturity**

The maturity date of each series of ETNs is December 15, 2031 (the “**Maturity Date**”). Persons who hold the ETNs of any series on the Maturity Date will receive a payment on that date equal to the Closing Indicative Value of such

series of ETNs on the final Valuation Date of the Final Valuation Period, as calculated by the Calculation Agents. As described above under “—Closing Indicative Value”, the Daily Index Performance will be calculated on each day during the Final Valuation Period so that the leverage of the applicable ETNs does not reset after the Final Valuation Period begins. We refer to the amount of such payment as the “**Maturity Redemption Amount.**” The ETNs are intended to be daily trading tools and are not intended to be held to maturity.

The “**Final Valuation Period**” shall be the period of five consecutive Index Business Days commencing on December 4, 2031, each such day subject to postponement as described in the next paragraph.

If the scheduled Maturity Date is not a Business Day, the Maturity Date will be postponed to the first Business Day following the scheduled Maturity Date. If any scheduled Valuation Date in the Final Valuation Period for any series of ETNs is not an Index Business Day, such Valuation Date and each subsequent Valuation Date in the Final Valuation Period for such series of ETNs will be postponed to the next following Index Business Day, in which case the Maturity Date will be postponed to the third Business Day following the last Valuation Date in the Valuation Period as so postponed. In addition, if a Market Disruption Event with respect to any series of ETNs

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occurs or is continuing on any Valuation Date during the Final Valuation Period for such series of ETNs, such Valuation Date and each subsequent Valuation Date in the Final Valuation Period for such ETNs will be postponed (up to five Index Business Days, as described under “—Market Disruption Events” below) and the Maturity Date for such series of ETNs will be postponed until the date three Business Days following the last Valuation Date of the Valuation Period for such series of ETNs, as postponed. No interest or additional payment will accrue or be payable as a result of any postponement of the Maturity Date. Any payment on the ETNs is subject to the credit risk of Citigroup Global Markets Holdings Inc. and Citigroup Inc.

### **Payment Upon Early Redemption**

Prior to maturity or earlier acceleration, you may, subject to certain restrictions described below, offer at least the applicable Minimum Redemption Amount or more of the ETNs to us for redemption on an Early Redemption Date during the term of the ETNs. If you elect to offer the ETNs for redemption, and the requirements for acceptance by us are met, you will receive a cash payment per ETN on the Early Redemption Date equal to the Early Redemption Amount. Any payment on the ETNs is subject to the credit risk of Citigroup Global Markets Holdings Inc. and Citigroup Inc.

You may exercise your early redemption right by causing your broker or other person with whom you hold the ETNs to deliver a Redemption Notice to the Redemption Agent. If your Redemption Notice is delivered prior to 4:00 p.m., New York City time, on any Business Day, the immediately following Index Business Day will be the applicable “**Early Redemption Valuation Date**”. Otherwise, the second following Index Business Day will be the applicable Early Redemption Valuation Date. For an exercise of the early redemption right to be effective, the applicable Early Redemption Valuation Date must be on or before the first day of any Valuation Period. In addition, if a Trigger Event occurs or an Automatic Acceleration Valuation Period is continuing on any date that would otherwise be an Early Redemption Valuation Date, you will not be entitled to receive the Early Redemption Amount and instead will receive the Automatic Acceleration Redemption Amount. See “—Redemption Procedures.”

You must offer for redemption at least 25,000 ETNs of any one series, or an integral multiple of 25,000 ETNs of such series in excess thereof, at one time in order to exercise your right to cause us to redeem the ETNs on any Early Redemption Date (the “**Minimum Redemption Amount**”), except that we or CGMI as one of the Calculation Agents may from time to time reduce, in part or in whole, the Minimum Redemption Amount. Any such reduction will be applied on a consistent basis for all holders of the relevant series of ETNs at the time the reduction becomes effective. If the ETNs undergo a split or reverse split, the minimum number of ETNs needed to exercise your right to redeem will remain the same.

The “**Early Redemption Date**” is the third Business Day following an Early Redemption Valuation Date. An Early Redemption Date will be postponed if a Market Disruption Event occurs or is continuing on the applicable Early Redemption Valuation Date. No interest or additional payment will accrue or be payable as a result of any postponement of any Early Redemption Date. See “—Market Disruption Events” below.

The “**Early Redemption Charge**” for any series of ETNs is equal to 0.08% *times* the Closing Indicative Value for such series of ETNs on the Early Redemption Valuation Date.

The “**Early Redemption Amount**” is a cash payment per ETN equal to the greater of (A) zero and (B)(1) the Closing Indicative Value for such series of ETNs on the Early Redemption Valuation Date *minus* (2) the Early Redemption Charge and will be calculated by the Calculation Agents.

### **Redemption Procedures**

If you wish to offer the ETNs to us for redemption, your broker must follow the following procedures:

Deliver a notice of redemption, in substantially the form of Annex A (the “**Redemption Notice**”), to Janus Distributors LLC doing business as Janus Henderson Distributors (“**JHD**”) (the “**Redemption Agent**”) via email or other electronic delivery as requested by the Redemption

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Agent. If your Redemption Notice is delivered prior to 4:00 p.m., New York City time, on any Business Day, the immediately following Index Business Day will be the applicable “**Early Redemption Valuation Date**”. Otherwise, the second following Index Business Day will be the applicable Early Redemption Valuation Date. If the Redemption Agent receives your Redemption Notice no later than 4:00 p.m., New York City time, on any Business Day, the Redemption Agent will respond by sending your broker an acknowledgment of the Redemption Notice accepting your redemption request by 7:30 p.m., New York City time, on the Business Day prior to the applicable Early Redemption Valuation Date. The Redemption Agent or its affiliate must acknowledge to your broker acceptance of the Redemption Notice (the “**Confirmation**”) in order for your redemption request to be effective;

Cause your DTC custodian to book a delivery vs. payment trade with respect to the ETNs on the applicable Early Redemption Valuation Date, facing Citigroup Global Markets Inc., DTC #0418, or such other DTC account as specified in the Confirmation; and

Cause your DTC custodian to deliver the trade as booked for settlement via DTC at or prior to 10:00 a.m. New York City time, on the applicable Early Redemption Date (the third Business Day following the Early Redemption Valuation Date).

You are responsible for (i) instructing or otherwise causing your broker to provide the Redemption Notice and (ii) your broker satisfying the additional requirements as set forth in the second and third bullets above in order for the redemption to be effected. Different brokerage firms may have different deadlines for accepting instructions from their customers. Accordingly, you should consult the brokerage firm through which you own your interest in the ETNs in respect of such deadlines. If the Redemption Agent does not (i) receive the Redemption Notice from your broker by 4:00 p.m. and (ii) deliver an acknowledgment of such Redemption Notice to your broker accepting your redemption request by 7:30 p.m., on the Business Day prior to the applicable Early Redemption Valuation Date, such notice will not be effective for such Business Day and the Redemption Agent will treat such Redemption Notice as if it was received on the next Business Day. Any redemption instructions for which the Redemption Agent receives a valid Redemption Notice in accordance with the procedures described above will be irrevocable.

If the Redemption Agent ceases to perform its role described in this pricing supplement, we will either, at our sole discretion, perform such role or appoint another party to do so.

When you submit your ETNs for redemption in accordance with the redemption procedures described above, CGMI may repurchase the ETNs from you at the Early Redemption Amount instead of our redeeming the ETNs, and if CGMI does not repurchase the ETNs, then we will redeem them. Any ETNs repurchased by CGMI may remain outstanding (and be resold by CGMI) or may be submitted to us for cancellation.

Because the Early Redemption Amount you will receive for each ETN will not be calculated until the Index Business Day (or the second following Index Business Day) immediately following the Business Day you offer your ETNs for redemption, you will not know the applicable Early Redemption Amount at the time you exercise your early

redemption right and will bear the risk that your ETNs will decline in value between the time of your exercise and the time at which the Early Redemption Amount is determined.

### **Acceleration at Our Option**

We will have the right to accelerate the ETNs of any series in whole but not in part on any Business Day occurring on or after the Inception Date (an “**Optional Acceleration**”). Upon an Optional Acceleration, the holders of such ETNs will receive a cash payment per ETN in an amount (the “**Optional Acceleration Redemption Amount**”) equal to the Closing Indicative Value of such series of ETNs on the final Valuation Date of the Optional Acceleration Valuation Period. As described above under “—Closing Indicative Value” in the definition of Daily Index Performance, the Daily Index Performance will be calculated on each day during the Optional Acceleration Valuation Period so that the applicable leverage of the affected ETNs does not reset after the Optional Acceleration Valuation Period begins.

In the case of an Optional Acceleration of the ETNs of any series, the “**Optional Acceleration Valuation Period**” shall be a period of five consecutive Index Business Days specified in our notice of Optional Acceleration, the first Index Business Day of which shall be at least two Business Days after the date on which we give you notice of such Optional Acceleration. The Optional Acceleration Redemption Amount will be payable on the third Business Day following the last such Index Business Day in the Optional Acceleration Valuation Period (such third Business Day the “**Optional Acceleration Date**”). The Optional Acceleration Date will be postponed if the last

scheduled Valuation Date in the Optional Acceleration Valuation Period is postponed. No interest or additional payment will accrue or be payable as a result of any postponement of the Optional Acceleration Date. See “—Market Disruption Events” below. We will give you notice of any Optional Acceleration of the ETNs through customary channels used to deliver notices to holders of exchange traded notes.

Any payment you will be entitled to receive is subject to the credit risk of Citigroup Global Markets Holdings Inc. and Citigroup Inc.

Any ETNs accelerated in an Optional Acceleration will be cancelled on the Optional Acceleration Date. Consequently, as of such Optional Acceleration Date, the ETNs will no longer be considered outstanding.

### **Automatic Acceleration**

If the Intraday Indicative Value of any series of ETNs at any time during NYSE Arca trading hours and at or prior to the Settlement Time on any scheduled Index Business Day is less than 25% of the Closing Indicative Value of such ETNs on the immediately preceding Index Business Day (meaning that the Intraday Indicative Value has declined by more than 75% from the prior day’s Closing Indicative Value) (such event, a “**Trigger Event**”), such series of ETNs will be automatically accelerated (an “**Automatic Acceleration**”) and the holders of such ETNs will receive a cash payment per ETN equal to the Automatic Acceleration Redemption Amount on the Automatic Acceleration Date. If a Trigger Event occurs, the holders of the ETNs will receive the Automatic Acceleration Redemption Amount as described in this section and not any other amount. For example, if a Trigger Event occurs or an Automatic Acceleration Valuation Period is continuing on any date that would otherwise be an Early Redemption Valuation Date, the applicable holder will not be entitled to receive the Early Redemption Amount and instead will receive the Automatic Acceleration Redemption Amount. In addition, if an Automatic Acceleration occurs following the delivery of a notice of Optional Acceleration or during a Valuation Period, holders will not be entitled to receive the Optional Acceleration Redemption Amount or the Maturity Redemption Amount and instead will receive the Automatic Acceleration Redemption Amount.

In the event of Automatic Acceleration of any series of ETNs, the “**Automatic Acceleration Redemption Amount**” will be equal to the arithmetic average of the Intraday Indicative Value of such series of ETNs as calculated every 15 seconds during the Automatic Acceleration Valuation Period. For purposes of determining the Automatic Acceleration Redemption Amount, the Intraday Indicative Values used to determine the Automatic Acceleration Redemption Amount may be less than zero, if applicable, but the Automatic Acceleration Redemption Amount will in no event be less than zero. As described below under “—Intraday Indicative Value”, if the Automatic Acceleration Valuation Period ends on the scheduled Index Business Day immediately succeeding the scheduled Index Business Day on which the relevant Trigger Event occurs, the Intraday Indicative Value will be calculated on such succeeding scheduled Index Business Day so that the applicable leveraged exposure of the affected ETNs does not reset after the Trigger Event occurs and, if the Trigger Event occurs during a “roll period” for the Index, the roll is not given effect.



If a Trigger Event occurs on any scheduled Index Business Day, the “**Automatic Acceleration Valuation Period**” will commence immediately upon the occurrence of the Trigger Event and will continue during NYMEX Trading Hours until:

if the Trigger Event occurs more than or equal to two hours prior to the time as of which the closing level of the Index is determined (which is currently 2:30 p.m., New York City time) (the “**Settlement Time**”), the Settlement Time on such scheduled Index Business Day; or

if the Trigger Event occurs less than two hours prior to the Settlement Time, the Settlement Time on the immediately succeeding scheduled Index Business Day.

The Automatic Acceleration Redemption Amount will be payable on the third Business Day following the scheduled Index Business Day on which the Automatic Acceleration Valuation Period ends (such third Business Day the “**Automatic Acceleration Date**”).

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“**NYMEX Trading Hours**” are the hours of primary trading in NYMEX light sweet crude oil futures contracts on the NYMEX, as determined by the Calculation Agents, which as of the date hereof are 9:00 a.m. to 2:30 p.m., New York City time.

We will not give you notice of any Automatic Acceleration of the ETNs.

Any payment you will be entitled to receive is subject to the credit risk of Citigroup Global Markets Holdings Inc. and Citigroup Inc.

Any ETNs accelerated in an Automatic Acceleration will be cancelled on the Automatic Acceleration Date. Consequently, as of such Automatic Acceleration Date, the ETNs will no longer be considered outstanding.

### **Market Disruption Events**

A “**Market Disruption Event**” means, with respect to any series of ETNs, any event that, in the determination of the Calculation Agents, could materially interfere with our, our affiliates’, third parties with whom we transact, or similarly situated third party’s ability to establish, maintain or unwind all or a material portion of a hedge that could be effected with respect to such series of ETNs, including, but not limited to, the following (to the extent determined material by the Calculation Agents):

a termination or suspension of, or a material limitation or disruption in trading in, any futures contract included in the Index (an “**index contract**”) or any material futures contract for which the Index is the underlier (a “**reference contract**”);

the published trading price or settlement price for any index contract or reference contract being at or about any then effective limit price established by the relevant exchange;

failure by the applicable exchange or other price source to publish the trading price of any index contract or reference contract during normal trading hours in accordance with normal practice or to announce or publish the settlement price for any index contract or reference contract in accordance with normal practice; or

failure of the sponsor of the Index to publish the level of the Index, subject to certain adjustments described below under “—Discontinuation or Modification of the Index; Substitution of the Index”.

Because we expect that a significant portion of this hedging activity will be carried out at or around 2:30 p.m., New York City time, we expect that events that do not occur or continue at or around that time will likely not be determined to be Market Disruption Events, except in connection with an Automatic Acceleration, in which case we expect this hedging activity to occur during the Automatic Acceleration Valuation Period.

With respect to each series of ETNs, if a Market Disruption Event occurs or is continuing on any Index Business Day or occurred or was continuing on the prior Index Business Day, the Calculation Agents will determine the Daily Index Performance on such Index Business Day using an appropriate closing level of the Index for each such Index Business Day taking into account the nature and duration of such Market Disruption Event. Without limiting the generality of the preceding sentence, if a Market Disruption Event occurs during any “roll period” for the Index (as described above under “Description of the Index”), the Calculation Agents may, but are not required to, calculate an appropriate closing level of the Index on each applicable Index Business Day without giving effect to any “rolling” of futures contracts that may take place under the Index rules.

If a Market Disruption Event occurs or is continuing on any Valuation Date, that Valuation Date will be postponed until the first Index Business Day on which no Market Disruption Event occurs or is continuing, unless a Market Disruption Event occurs or is continuing for each of the five Index Business Days following the applicable scheduled Valuation Date. In that case, the fifth Index Business Day following the applicable scheduled Valuation Date shall be deemed to be the applicable Valuation Date, notwithstanding the fact that a Market Disruption Event occurred or was continuing on such Index Business Day, and the Calculation Agents will determine the applicable Closing Indicative Value using an appropriate closing level of the Index on that deemed Valuation Date taking into

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account the nature and duration of such Market Disruption Event. If any Valuation Date in any Valuation Period is postponed as described above, each subsequent Valuation Date in such Valuation Period will be postponed by the same number of Index Business Days. In addition, if a Valuation Date corresponding to an Early Redemption Date or the last scheduled Valuation Date in any Valuation Period is postponed, the corresponding Early Redemption Date, the Optional Acceleration Date or the Maturity Date, as the case may be, will be postponed until the date three Business Days following such Valuation Date, as postponed.

For the avoidance of doubt, the days occurring during an Automatic Acceleration Valuation Period are not considered Valuation Dates and are not subject to postponement in the event of a Market Disruption Event.

In addition, if a Market Disruption Event with respect to any series of ETNs occurs, the calculation of the Daily Index Performance for such series of ETNs will be modified so that the applicable leveraged exposure does not reset until the first Index Business Day on which no Market Disruption Event with respect to such series of ETNs is continuing, as described above under “—Closing Indicative Value” in the definition of “Daily Index Performance”.

### **Intraday Indicative Value**

The “**Intraday Indicative Value**” for each series of the ETNs will be calculated every 15 seconds on each Index Business Day during NYSE Arca trading hours (and during NYMEX Trading Hours during an Automatic Acceleration Valuation Period) and will be disseminated over the Consolidated Tape, or other major market data vendor, and will equal:

For each Index Business Day prior to the Final Valuation Period or any Optional Acceleration Valuation Period for such series of ETNs, (1)(a) the Closing Indicative Value for such series of ETNs on the immediately preceding calendar day *times* (b) the Intraday ETN Performance at such time on such Index Business Day *minus* (2) the Daily Investor Fee for such series of ETNs on such Index Business Day.

For each Index Business Day during the Final Valuation Period or any Optional Acceleration Valuation Period for such series of ETNs, (1) the sum of (a) the Intraday Index Exposure and (b) the Intraday Notional Cash Amount *minus* (2) the Daily Investor Fee for such series of ETNs on such Index Business Day.

At any time at which a Market Disruption Event with respect to any series of ETNs has occurred and is continuing, there shall be no Intraday Indicative Value for such series of ETNs, except for purposes of determining whether a Trigger Event has occurred and determining the Automatic Acceleration Redemption Amount during an Automatic Acceleration Valuation Period. For purposes of determining whether a Trigger Event has occurred and determining the Automatic Acceleration Redemption Amount during an Automatic Acceleration Valuation Period, the Intraday Indicative Value will be calculated on each scheduled Index Business Day as if such day were an Index Business Day.

As discussed above under “—Closing Indicative Value”, the daily settlement price of NYMEX light sweet crude oil futures contracts is determined as of 2:30 p.m., New York City time, on each Index Business Day. However, because of a time lag in the publication of the daily settlement price, the closing level of the Index, which is based on the daily settlement price, is typically not published until after 4:00 p.m., New York City time. For a portion of the time period between 2:30 p.m. and the time when the closing level of the Index is published (typically from 2:30 p.m. until shortly after 3:00 p.m.), the Index Sponsor continues to publish an intraday level of the Index based on then current trading in NYMEX light sweet crude oil futures contracts (which takes place continuously before and after 2:30 p.m.). For the remainder of that time period (typically from shortly after 3:00 p.m. until after 4:00 p.m.), the Index Sponsor suspends real-time calculation of the intraday level of the Index until it publishes the official closing level after 4:00 p.m. Throughout this full time period, the Intraday Indicative Value will continue to be calculated and disseminated based on the most recently published intraday level of the Index.

The ETNs’ leveraged exposure to the Index is reset on each Index Business Day based on the Closing Indicative Value on that day, which in turn is based on the closing level of the Index, and which in turn is based on the daily settlement price of NYMEX light sweet crude oil futures contracts determined as of 2:30 p.m. Therefore,

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the ETNs' leveraged exposure is effectively reset based on futures trading at 2:30 p.m. on each Index Business Day. However, between 2:30 p.m. and the close of trading on the NYSE Arca, because the closing level of the Index will not yet be available, the Intraday Indicative Value will be calculated without reflecting the reset of leveraged exposure (*i.e.*, as if the leveraged exposure based on the prior day's closing level were still in effect). The Intraday Indicative Value that is published during this period is likely to be different than it would be if it reflected the reset of leveraged exposure based on the daily settlement price at 2:30 p.m. Furthermore, because the real-time calculation of the intraday level of the Index will be suspended during the latter portion of this time period, the Intraday Indicative Value will not reflect trading in NYMEX light sweet crude oil futures contracts that takes place during that time. **For these reasons, between 2:30 p.m. and the close of trading on the NYSE Arca, the Intraday Indicative Value is likely to differ from the value of the ETNs that would be determined if complete and fully up-to-date information were available and used in the calculation. As a result, we expect there to be uncertainty about the intrinsic value of the ETNs during this time period, and the trading price of the ETNs is likely to diverge from the Intraday Indicative Value during this time period. Investors should exercise caution in connection with any trading in this time period, particularly if there is a significant move in futures prices during this time period.**

Although the daily settlement price of NYMEX light sweet crude oil futures contracts (and, in turn, the closing level of the Index) is determined as of 2:30 p.m. on each Index Business Day, this value may differ from the most recent published trading price of NYMEX light sweet crude oil futures contracts (and, in turn, the intraday Index level) at 2:30 p.m. because the daily settlement price is determined according to the procedure described in "Description of the Index" in this pricing supplement. Accordingly, the Closing Indicative Value that is published after 4:00 p.m. based on the closing level of the Index may differ from the Intraday Indicative Value published based on the intraday level of the Index at 2:30 p.m. or from any subsequent Intraday Indicative Value published on that day.

The "**Intraday ETN Performance**" for any series of ETNs at any time on any Index Business Day will equal (1) one *plus* (2) the Daily Accrual for such series of ETNs on such Index Business Day *plus* (3) the product of (a) the Intraday Index Performance for such series of ETNs at such time on such Index Business Day *times* (b) the Leverage Amount for such series of ETNs.

The "**Intraday Index Performance**" for any series of ETNs at any time on any Index Business Day will equal, except as otherwise provided below, (1)(a) the most recent published intraday level of the Index at such time on such Index Business Day *divided by* (b) the closing level of the Index on the immediately preceding Index Business Day *minus* (2) one. However, in the following circumstances, the calculation of the Intraday Index Performance for a series of ETNs will be modified so that the applicable leverage of the ETNs does not reset for the period described below:

If a Market Disruption Event occurs with respect to any series of ETNs, the calculation of the Intraday Index Performance for such series of ETNs will be modified so that the applicable leveraged exposure does not reset until the first Index Business Day on which no Market Disruption Event is continuing. Accordingly, if a Market Disruption Event with respect to any series of ETNs occurs or is continuing on any Index Business Day (for purposes of this bullet, the "**date of determination**") or if a Market Disruption Event with respect to any series of ETNs occurred or was continuing on the Index Business Day immediately preceding the date of determination, then the Intraday Index Performance for such series of ETNs will equal:

$$\frac{IL_d - CL_{d-1}}{CL_0 + [L \times (CL_{d-1} - CL_0)]}$$

where:

$IL_d$  = the most recently published intraday level of the Index at such time on the date of determination;  
 $CL_{d-1}$  = the closing level of the Index on the Index Business Day immediately preceding the date of determination;  
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$CL_0$  = the closing level of the Index on the Index Business Day on which no Market Disruption Event occurred or was continuing that most closely precedes the date of determination; and  
 $L$  = the applicable Leverage Amount.

In addition, (x) if a Market Disruption Event occurred or was continuing on the Index Business Day immediately preceding the date of determination, the Calculation Agents will determine the Intraday Index Performance on such date of determination using an appropriate closing level of the Index for such prior Index Business Day taking into account the nature and duration of such Market Disruption Event and (y) if a Market Disruption Event occurs or is continuing on the date of determination, the Calculation Agents will determine the Intraday Index Performance during the Market Disruption Event on such date of determination using an appropriate intraday level of the Index taking into account the nature and duration of such Market Disruption Event. Without limiting the generality of the preceding sentence, if a Market Disruption Event occurs during any “roll period” for the Index (as described above under “Description of the Index”), the Calculation Agents may, but are not required to, calculate an appropriate intraday and closing level of the Index on each applicable Index Business Day without giving effect to any “rolling” of futures contracts that may take place under the Index rules.

During a Valuation Period for any series of ETNs, the calculation of the Intraday Index Performance for such series of ETNs will be modified so that the applicable leveraged exposure does not reset after such Valuation Period begins. Accordingly, the Intraday Index Performance for any series of ETNs on any Index Business Day during a Valuation Period (for purposes of this bullet, the “**date of determination**”) will equal:

$$\frac{IL_d - CL_{d-1}}{CL_{V0} + [L \times (CL_{d-1} - CL_{V0})]}$$

where:

$IL_d$  = the most recently published intraday level of the Index at such time on the date of determination;  
 $CL_{d-1}$  = the closing level of the Index on the Index Business Day immediately preceding the date of determination;  
 $CL_{V0}$  = the closing level of the Index on the Index Business Day that most closely precedes the beginning of the Valuation Period; and  
 $L$  = the applicable Leverage Amount.

If an Automatic Acceleration occurs and the Automatic Acceleration Valuation Period ends on the Index Business Day immediately succeeding the Index Business Day on which the relevant Trigger Event occurs, and if the first Index Business Day during such Automatic Acceleration Valuation Period falls during a “roll period” for the Index (as described above under “Description of the Index”), the Calculation Agents will calculate an appropriate intraday level of the Index on the second Index Business Day of such Automatic Acceleration Valuation Period without giving effect to any “rolling” of futures contracts that may take place under the Index rules.



**“Intraday Index Exposure”** means, at any time on any Valuation Date during the Final Valuation Period or any Optional Acceleration Valuation Period, as applicable (or any day during an Automatic Acceleration Valuation Period), the product of the Index Exposure on the immediately preceding Valuation Date (or, in the case of the first day of such Valuation Period, the Closing Indicative Value on the immediately preceding Index Business Day) *multiplied by* the Intraday ETN Performance at such time on the current Valuation Date.

**“Intraday Notional Cash Amount”** means, at any time on any Valuation Date during the Final Valuation Period or any Optional Acceleration Valuation Period, as applicable (or any day during an Automatic Acceleration

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Valuation Period), the Notional Cash Amount on the immediately preceding Valuation Date (or, in the case of the first day of such Valuation Period, \$0.00).

If an Automatic Acceleration occurs with respect to any series of ETNs and the Automatic Acceleration Valuation Period ends on the scheduled Index Business Day immediately succeeding the date on which the applicable Trigger Event occurs, the Intraday Indicative Value of such ETNs on such immediately succeeding scheduled Index Business Day will be calculated for purposes of determining the Automatic Acceleration Redemption Amount as though such Intraday Indicative Values were being calculated on the date on which the applicable Trigger Event occurs. Accordingly, the Intraday ETN Performance, Intraday Index Performance, Intraday Index Exposure (if applicable) and Intraday Notional Cash Amount (if applicable) will be calculated on such day in all respects as if the intraday Index levels observed on such day were levels observed on the date on which the applicable Trigger Event occurs (and, for the avoidance of doubt, when the definitions of Intraday ETN Performance, Intraday Index Performance, Intraday Index Exposure and Intraday Notional Cash Amount reference values observed on the immediately preceding Index Business Day or Valuation Date, such values shall be the values observed on the Index Business Day or Valuation Date immediately preceding the date on which the applicable Trigger Event occurs).

The Intraday Indicative Value calculation is not intended as a price or quotation, or as an offer or solicitation for the purchase, sale, redemption, acceleration or termination of the ETNs, nor will it reflect hedging or transaction costs, credit considerations, market liquidity or bid-offer spreads. Published levels of the Index from the Index Sponsor may occasionally be subject to delay or postponement. Any such delays or postponements will affect the current level of the Index for such series of ETNs and therefore the Intraday Indicative Value for such series of ETNs. The actual trading price of the ETNs of any series may be different from their Intraday Indicative Value. JHI or its affiliate is responsible for computing and disseminating the Intraday Indicative Value, except that CGMI has sole discretion to determine the Intraday Indicative Value in connection with an Automatic Acceleration and during an Automatic Acceleration Valuation Period.

**The actual trading prices of the ETNs at any time may vary significantly from their Intraday Indicative Values at such time. The trading price of the ETNs at any time is the price at which you may be able to sell your ETNs in the secondary market at such time, if one exists.**

### **Split or Reverse Split of the ETNs**

The Calculation Agents may initiate a split or reverse split of the ETNs at any time. If the Calculation Agents decide to initiate a split or reverse split, the Calculation Agents will issue a notice to holders of the ETNs and a press release announcing the split or reverse split, specifying the effective date of the split or reverse split. The Calculation Agents will determine the ratio of such split or reverse split, as the case may be, using relevant market indicia, and will adjust the terms of the ETNs accordingly. Any adjustment of the Closing Indicative Value will be rounded to 8 decimal places.

In the case of a reverse split, we reserve the right to address odd numbers of ETNs (commonly referred to as “partials”) in a manner determined by the Calculation Agents in their sole discretion. For example, if the ETNs undergo a 1-for-4 reverse split, holders who own a number of ETNs on the record date that is not evenly divisible by 4 will receive the same treatment as all other holders for the maximum number of ETNs they hold that is evenly divisible by 4, and we will have the right to compensate holders for their remaining or “partial” ETNs in a manner determined by the Calculation Agents in their sole discretion. Our current intention is to provide holders with a cash payment for their partials in an amount equal to the appropriate percentage of the Closing Indicative Value for the ETNs on a specified Index Business Day following the announcement date.

A split or reverse split of the ETNs will not affect the aggregate stated principal amount of ETNs held by an investor, other than to the extent of any “partial” ETNs, but it will affect the stated principal amount per unit of ETNs, the number of ETNs an investor holds and the denominations used for trading purposes on the exchange.

#### Events of Default

In case an event of default (as defined in the accompanying prospectus) with respect to any series of ETNs shall have occurred and be continuing, the amount declared due and payable for each ETN of that series upon

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acceleration of those ETNs will be equal to the Maturity Redemption Amount for that series of ETNs, calculated as though the Final Valuation Period began as of the Index Business Day immediately following the date of acceleration.

If the maturity of the ETNs is accelerated because of an event of default as described above, we shall, or shall cause the Calculation Agents to, provide written notice to the trustee at its New York office, on which notice the trustee may conclusively rely, and to DTC of the amount due with respect to each ETN and the aggregate cash amount due with respect to the ETNs of the applicable series as promptly as possible and in no event later than two Business Days after the end of the period referred to in the immediately preceding paragraph.

Default interest will not accrue either before or after maturity or acceleration of any series of ETNs.

### **Additional Terms of the ETNs**

The section “Description of Debt Securities—Covenants—Limitations on Mergers and Sales of Assets” in the accompanying prospectus shall be amended to read in its entirety as follows:

The indenture provides that neither Citigroup Global Markets Holdings nor Citigroup will merge or consolidate with another entity or sell other than for cash or lease all or substantially all its assets to another entity unless:

either (1) the Citi entity is the continuing entity, or (2) the successor entity, if other than the Citi entity, is a U.S. corporation, partnership or trust and expressly assumes by supplemental indenture the obligations of the Citi entity evidenced by the securities issued pursuant to the indenture; and

immediately after the transaction, there would not be any default in the performance of any covenant or condition of the indenture (*Sections 5.05 and 16.05*).

Other than the restrictions described above, the indenture does not contain any covenants or provisions that would protect holders of the debt securities in the event of a highly leveraged transaction.

### **Further Issuances**

We may, from time to time, without notice to or the consent of the holders of the ETNs, create and issue additional securities having the same terms and conditions as the ETNs offered by this pricing supplement, and ranking on an equal basis with the ETNs in all respects. If there is substantial demand for the ETNs, we may issue additional ETNs frequently. We may sell additional ETNs of any series at different prices but we are under no obligation to issue or sell additional ETNs of any series at any time, and if we do sell additional ETNs of any series, we may limit or restrict such sales, and we may stop and subsequently resume selling additional ETNs of such series at any time. Furthermore, the stated principal amount of each series of ETNs stated at the top of the cover page of this pricing supplement is the maximum amount of each series of ETNs that we have currently authorized for issuance. Although we have the right to increase the authorized amount of either series of ETNs at any time, it is our current intention not to issue more than the current maximum authorized amount of each series of ETNs, even if there is substantial market demand for additional ETNs of such series. We may also reduce the maximum authorized amount of each series of ETNs at any time and have no obligation to issue up to the maximum authorized amount.

Any limitation or suspension on the issuance of the ETNs may materially and adversely affect the price and liquidity of the ETNs in the secondary market. Alternatively, the decrease in supply may cause an imbalance in the market supply and demand, which may cause the ETNs to trade at a premium over the Intraday Indicative Value of the ETNs. Unless we indicate otherwise, if we suspend selling additional ETNs, we reserve the right to resume selling additional ETNs at any time, which might result in the reduction or elimination of any premium in the trading price. Any premium may be reduced or eliminated at any time. We have no obligation to take your interests into account when deciding to issue or not to issue additional ETNs.

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Any further issuances of the ETNs of any series will have the same CUSIP number and will trade interchangeably with the offered ETNs of such series. Any additional ETNs will be consolidated and form a single series with the ETNs of the applicable series.

CGMI may condition its acceptance of a market maker's, other market participant's or investor's offer to purchase the ETNs on its agreeing to purchase certain exchange traded notes issued by us or enter into certain transactions consistent with our hedging strategy, including but not limited to swaps. Any limitation or suspension on the issuance of the ETNs may materially and adversely affect the price and liquidity of the ETNs in the secondary market.

### **Discontinuation or Modification of the Index; Substitution of the Index**

If the Index Sponsor discontinues publication of the Index and the Index Sponsor or anyone else publishes a substitute index that the Calculation Agents determine is comparable to the Index, then the Calculation Agents will permanently replace the original Index with that substitute index (the “**Successor Index**”) for all purposes under each series of ETNs, and all provisions described in this pricing supplement as applying to the Index will thereafter apply to the Successor Index instead. In such event, the Calculation Agents will make such adjustments, if any, to any level of the Index or Successor Index that is used for purposes of the ETNs as they determine are appropriate in the circumstances. If the Calculation Agents replace the original Index for any series of ETNs with a Successor Index, then the Calculation Agents will determine the Early Redemption Amount, Optional Acceleration Redemption Amount, Automatic Acceleration Redemption Amount or Maturity Redemption Amount (each, a “**Redemption Amount**”), as applicable, for each series of ETNs by reference to the Successor Index.

If the Calculation Agents determine that the publication of the Index is discontinued and there is no Successor Index, the Calculation Agents will determine the applicable level of the Index, and thus the applicable Redemption Amount, by a computation methodology that the Calculation Agents determine will as closely as reasonably possible replicate the Index.

In addition, if an Index Replacement Event (as defined below) occurs at any time and the Index Sponsor or anyone else publishes an index that the Calculation Agents determine is comparable to the Index (the “**Substitute Index**”), then the Calculation Agents may elect, in their sole discretion, to permanently replace the original Index with the Substitute Index for all purposes under each series of ETNs, and all provisions described in this pricing supplement as applying to the Index will thereafter apply to the Substitute Index instead. In such event, the Calculation Agents will make such adjustments, if any, to any level of the Index or Substitute Index that is used for purposes of the ETNs as they determine are appropriate in the circumstances. If the Calculation Agents elect to replace the original Index with a Substitute Index, then the Calculation Agents will determine the applicable Redemption Amount for each series of ETNs by reference to the Substitute Index. If the Calculation Agents so elect to replace the original Index with a Substitute Index, the Calculation Agents will, within 10 Index Business Days after the Calculation Agents determine that an Index Replacement Event has occurred, notify you of the Substitute Index through customary channels used to deliver notices to the holders of exchange traded notes.

If the Calculation Agents determine that the Index, the futures contracts included in the Index or the method of calculating the Index is changed at any time in any respect, including whether the change is made by the Index Sponsor under its existing policies or following a modification of those policies, is due to the publication of a Successor Index, is due to events affecting the futures contracts included in the Index or is due to any other reason and is not otherwise reflected in the level of the Index by the Index Sponsor pursuant to the methodology described herein, then the Calculation Agents will be permitted (but not required) to make such adjustments in the Index or the method of its calculation as they believe are appropriate to ensure that the applicable closing level of the Index used to determine the applicable Redemption Amount is equitable.

An “**Index Replacement Event**” means:

an amendment to or change (including any officially announced proposed change) in the laws, regulations or rules of the United States (or any political subdivision thereof), or any jurisdiction in which a Primary Exchange or (a) Related Exchange (each as defined herein) is located that (i) makes it illegal for CGMI or its affiliates to hold, acquire or dispose of the futures contracts included in the Index or options, futures, swaps or other derivatives on the Index or the futures contracts included in the Index (including but not limited to

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exchange-imposed position limits), (ii) materially increases the cost to us, our affiliates, third parties with whom we transact or similarly situated third parties in performing our or their obligations in connection with the ETNs, (iii) has a material adverse effect on any of these parties' ability to perform their obligations in connection with the ETNs or (iv) materially affects our ability to issue or transact in exchange traded notes similar to the ETNs, each as determined the Calculation Agents;

any official administrative decision, judicial decision, administrative action, regulatory interpretation or other official pronouncement interpreting or applying those laws, regulations or rules that is announced on or after the Inception Date that (i) makes it illegal for CGMI or its affiliates to hold, acquire or dispose of the futures contracts included in the Index or options, futures, swaps or other derivatives on the Index or the futures contracts included in the Index (including but not limited to exchange-imposed position limits), (ii) materially increases the cost to us, our affiliates, third parties with whom we transact or similarly situated third parties in performing our or their obligations in connection with the ETNs, (iii) has a material adverse effect on the ability of us, our affiliates, third parties with whom we transact or a similarly situated third party to perform our or their obligations in connection with the ETNs or (iv) materially affects our ability to issue or transact in exchange traded notes similar to the ETNs, each as determined by the Calculation Agents;

any event that occurs on or after the Inception Date that makes it a violation of any law, regulation or rule of the United States (or any political subdivision thereof), or any jurisdiction in which a Primary Exchange or Related Exchange (each as defined herein) is located, or of any official administrative decision, judicial decision, administrative action, regulatory interpretation or other official pronouncement interpreting or applying those laws, regulations or rules, (i) for CGMI to hold, acquire or dispose of the futures contracts included in the Index or options, futures, swaps or other derivatives on the Index or the futures contracts included in the Index (including but not limited to exchange-imposed position limits), (ii) for us, our affiliates, third parties with whom we transact or similarly situated third parties to perform our or their obligations in connection with the ETNs or (iii) for us to issue or transact in exchange traded notes similar to the ETNs, each as determined by the Calculation Agents;

any event, as determined by the Calculation Agents, as a result of which we or any of our affiliates or a similarly situated party would, after using commercially reasonable efforts, be unable to, or would incur a materially increased amount of tax, duty, expense or fee (other than brokerage commissions) to, acquire, establish, re-establish, substitute, maintain, unwind or dispose of any transaction or asset it deems necessary to hedge the risk of the ETNs, or realize, recover or remit the proceeds of any such transaction or asset; or

as determined by the Calculation Agents, the primary exchange or market for trading for the ETNs, if any, announces that pursuant to the rules of such exchange or market, as applicable, the ETNs cease (or will cease) to be listed, traded or publicly quoted on such exchange or market, as applicable, for any reason and are not immediately re-listed, re-traded or re-quoted on an exchange or quotation system located in the same country as such exchange or market, as applicable.

**“Primary Exchange”** means the primary exchange on which futures contracts included in the Index are traded, as determined by the Calculation Agents, which is initially the New York Mercantile Exchange, Inc.



**“Related Exchange”** means each exchange or quotation system where trading has a material effect (as determined by the Calculation Agents) for the overall market for futures or options contracts relating to (i) the Index or (ii) the futures contracts included in the Index.

### **Role of Calculation Agents**

CGMI, an affiliate of ours, and JHI will serve as the Calculation Agents. The Calculation Agents will, in their good faith and commercially reasonable judgment, make all calculations and determinations regarding the value of the ETNs, including at maturity or upon early redemption or acceleration, Market Disruption Events (see

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“—Market Disruption Events”), Business Days and Index Business Days, the Daily Investor Fee amount, the Daily Accrual, the closing level of the Index on any Index Business Day, the Maturity Date, any Early Redemption Dates, any Optional Acceleration Date, any Automatic Acceleration Date, the amount payable in respect of the ETNs at maturity, upon redemption or upon acceleration and any other calculations or determinations to be made by the Calculation Agents as specified herein. CGMI will have the sole ability to make determinations with respect to reduction of the Minimum Redemption Amount, calculation of default amounts and calculations of the Intraday Indicative Value in connection with determining whether a Trigger Event occurs and during an Automatic Acceleration Valuation Period. JHI will have the sole ability to calculate and disseminate the number of ETNs outstanding, the Closing Indicative Value and the Intraday Indicative Value (other than as described in the preceding sentence), subject to CGMI’s right to dispute JHI’s calculation of the Closing Indicative Value, in which case, if the Calculation Agents are unable to agree, CGMI’s determination of the Closing Indicative Value shall be conclusive and binding. All other determinations will be made by the Calculation Agents jointly, except that, if the Calculation Agents are unable to agree following a dispute resolution procedure, CGMI’s calculation shall be conclusive and binding. Absent manifest error, all determinations of the Calculation Agents will be final and binding on you and us, without any liability on the part of the Calculation Agents. You will not be entitled to any compensation from us for any loss suffered as a result of any of the above determinations by the Calculation Agents.

If any of the Calculation Agents cease to perform their respective roles described in this pricing supplement, we will either, at our sole discretion, perform such roles, appoint another party to do so or accelerate the relevant series of ETNs.

CGMI’s agreement with JHI requires the following statement to appear in this pricing supplement:

ALTHOUGH JANUS HENDERSON INDICES LLC, FORMERLY JANUS INDEX & CALCULATION SERVICES LLC, SHALL OBTAIN INFORMATION FOR INCLUSION IN OR FOR USE IN CALCULATIONS RELATED TO THE ETNS AND/OR THE INDEX FROM SOURCES WHICH JANUS HENDERSON INDICES LLC CONSIDERS RELIABLE, NEITHER JANUS HENDERSON INDICES LLC NOR ANY OTHER PARTY GUARANTEES THE ACCURACY AND/OR THE COMPLETENESS OF THE INDEX OR ANY DATA INCLUDED THEREIN OR ANY CALCULATIONS MADE WITH RESPECT TO THE ETNS. NEITHER JANUS HENDERSON INDICES LLC NOR ANY OTHER PARTY MAKES ANY WARRANTY, EXPRESS OR IMPLIED, AS TO RESULTS TO BE OBTAINED BY CITIGROUP GLOBAL MARKETS HOLDINGS INC., ITS CUSTOMERS AND COUNTERPARTIES, HOLDERS OF THE ETNS, OR ANY OTHER PERSON OR ENTITY FROM THE USE OF THE INDEX OR ANY DATA INCLUDED THEREIN OR ANY CALCULATIONS MADE WITH RESPECT TO THE ETNS. NEITHER JANUS HENDERSON INDICES LLC NOR ANY OTHER PARTY MAKES ANY EXPRESS OR IMPLIED WARRANTIES, AND JANUS HENDERSON INDICES LLC HEREBY EXPRESSLY DISCLAIMS ALL WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO THE INDEX OR ANY DATA INCLUDED THEREIN OR ANY CALCULATIONS MADE WITH RESPECT TO THE ETNS. WITHOUT LIMITING ANY OF THE FOREGOING, IN NO EVENT SHALL JANUS HENDERSON INDICES LLC OR ANY OTHER PARTY HAVE ANY LIABILITY FOR ANY DIRECT, INDIRECT, SPECIAL, PUNITIVE, CONSEQUENTIAL OR ANY OTHER DAMAGES (INCLUDING LOST PROFITS) EVEN IF NOTIFIED OF THE POSSIBILITY OF SUCH DAMAGES.

The ETNs are not sponsored, endorsed or sold by Janus Henderson Indices LLC, nor does Janus Henderson Indices LLC make any representation regarding the advisability of investing in any of the ETNs.

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**Historical Data on the ETNs**

The following graphs show the closing prices of the ETNs on each day such prices were available for the limited period from December 8, 2016 to February 25, 2019. The related tables show the high, low and end-of quarter closing prices of the ETNs for each quarter during that same period. We have provided this historical information to help you evaluate the behavior of the ETNs. However, past performance is not indicative of how the ETNs will perform in the future.

The closing price of the 3x Long Crude Oil ETNs on February 25, 2019 was \$14.54 per \$25.00 stated principal amount ETN. The closing price of the 3x Inverse Crude Oil ETNs on February 25, 2019 was \$8.61 per \$25.00 stated principal amount ETN.

**Historical Daily Closing Prices for the 3x Long Crude Oil ETNs  
December 8, 2016 to February 25, 2019**

	<b>High (\$)</b>	<b>Low (\$)</b>	<b>Period End (\$)</b>
<b>2016</b>			
Quarter			
Fourth (beginning December 8, 2016)	27.96	25.13	27.67
<b>2017</b>			
Quarter			
First	27.47	16.59	19.76
Second	22.81	10.26	13.19
Third	17.16	11.51	16.52
Fourth	24.51	14.40	24.51
<b>2018</b>			
Quarter			
First	32.53	23.15	30.31
Second	43.44	26.26	43.44
Third	44.43	30.02	44.43
Fourth	49.34	8.22	8.90
<b>2019</b>			
Quarter			
First (through February 25, 2019)	16.02	9.38	14.54

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**Historical Daily Closing Prices for the 3x Inverse Crude Oil ETNs  
December 8, 2016 to February 25, 2019**

	<b>High (\$)</b>	<b>Low (\$)</b>	<b>Period End (\$)</b>
<b>2016</b>			
Quarter			
Fourth (beginning December 8, 2016)	24.55	21.82	21.96
<b>2017</b>			
Quarter			
First	32.29	21.85	26.76
Second	43.78	23.06	33.65
Third	37.45	22.23	23.02
Fourth	26.04	14.05	14.05
<b>2018</b>			
Quarter			
First	14.22	9.78	10.15
Second	11.59	6.05	6.05
Third	8.09	5.24	5.24
Fourth	19.42	4.67	15.94
<b>2019</b>			
Quarter			
First (through February 25, 2019)	15.06	7.87	8.61

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## UNITED STATES FEDERAL TAX CONSIDERATIONS

**Prospective investors should note that the discussion under the section called “United States Federal Tax Considerations” in the accompanying prospectus supplement does not apply to the ETNs issued under this pricing supplement and is superseded by the following discussion. However, the discussion below is subject to the discussion in “United States Federal Tax Considerations—Assumption by Citigroup” in the accompanying prospectus supplement, and you should read it in conjunction with that discussion.**

The following is a discussion of the material U.S. federal income and certain estate tax consequences of the ownership and disposition of the ETNs. It applies to you only if you purchase an ETN for cash and hold it as a capital asset within the meaning of Section 1221 of the Internal Revenue Code of 1986, as amended (the “Code”).

This discussion does not address all of the tax consequences that may be relevant to you in light of your particular circumstances or if you are a holder subject to special rules, such as:

- a financial institution;
- a “regulated investment company”;
- a tax-exempt entity, including an “individual retirement account” or “Roth IRA”;
- a dealer or trader subject to a mark-to-market method of tax accounting with respect to the ETNs;
- a person holding the ETNs as part of a “straddle” or conversion transaction or one who enters into a “constructive sale” with respect to an ETN;
- a person subject to the alternative minimum tax;
- a U.S. Holder (as defined below) whose functional currency is not the U.S. dollar; or
- an entity classified as a partnership for U.S. federal income tax purposes.

If an entity that is classified as a partnership for U.S. federal income tax purposes holds ETNs, the U.S. federal income tax treatment of a partner will generally depend on the status of the partner and the activities of the partnership. If you are a partnership holding ETNs or a partner in such a partnership, you should consult your tax adviser as to the particular U.S. federal income tax consequences of holding and disposing of ETNs to you.

This discussion is based on the Code, administrative pronouncements, judicial decisions and final, temporary and proposed Treasury regulations, all as of the date of this pricing supplement, changes to any of which subsequent to the date of this pricing supplement may affect the tax consequences described herein, possibly with retroactive effect. This discussion does not address the effects of any applicable state, local or non-U.S. tax laws, the potential application of the Medicare contribution tax or the consequences to taxpayers subject to special tax accounting rules under Section 451(b) of the Code. You should consult your tax adviser about the application of the U.S. federal income and estate tax laws (including the possibility of alternative treatments of the ETNs) to your particular situation, as well as any tax consequences arising under the laws of any state, local or non-U.S. jurisdiction.

### **Tax Treatment of the ETNs**

In the opinion of our counsel, Davis Polk & Wardwell LLP, which is based on current market conditions, it is more likely than not that the ETNs will be treated as prepaid forward contracts for U.S. federal income tax purposes. By purchasing the ETNs, you agree (in the absence of an administrative determination or judicial ruling to the contrary) to this treatment.

**Due to the absence of statutory, judicial or administrative authorities that directly address the U.S. federal tax treatment of the ETNs or similar instruments, significant aspects of the treatment of an investment in the ETNs are uncertain. We do not plan to request a ruling from the IRS, and the IRS or a court might not agree with the treatment described below. Accordingly, you should consult your tax adviser regarding all aspects of the U.S. federal income and estate tax consequences of an investment in the ETNs and with respect to any tax consequences arising under the laws of any state, local or non-U.S. taxing jurisdiction. Unless otherwise indicated, the following discussion is based on the treatment of the ETNs as prepaid forward contracts.**

## **Tax Consequences to U.S. Holders**

This section applies only to U.S. Holders. You are a “U.S. Holder” if for U.S. federal income tax purposes you are a beneficial owner of an ETN that is:

a citizen or individual resident of the United States;

a corporation created or organized in or under the laws of the United States, any state thereof or the District of Columbia; or

an estate or trust the income of which is subject to U.S. federal income taxation regardless of its source.

*Tax Treatment Prior to Maturity.* Subject to the discussion under “*Possible Taxable Event*” below, you should not be required to recognize taxable income over the term of the ETNs prior to maturity, other than pursuant to a sale, exchange or retirement of the ETNs as described below.

*Taxable Disposition of the ETNs.* Upon a taxable disposition (including a sale, exchange or retirement) of an ETN, you should recognize gain or loss equal to the difference between the amount realized and your tax basis in the relevant ETN. Subject to the discussion under “*Possible Taxable Event*” below, (i) your tax basis in an ETN should generally equal the amount you paid to acquire it, and (ii) this gain or loss should be long-term capital gain or loss if at the time of the taxable disposition you have held the ETN for more than one year, and short-term capital gain or loss otherwise. Long-term capital gains recognized by non-corporate U.S. Holders are generally subject to taxation at reduced rates. The deductibility of capital losses is subject to limitations.

### ***Possible Taxable Event***

In the event of a rebalancing of the Index or other change in its composition, or a change in the methodology by which the Index is calculated, it is possible that the ETNs could be treated, in whole or part, as terminated and reissued for U.S. federal income tax purposes. In such a case, you might be required to recognize gain or loss (subject to the possible application of the wash sale rules) with respect to the ETNs. In addition, your tax basis and holding period for your ETNs would be affected.

### ***Possible Alternative Tax Treatments of an Investment in the ETNs***



Alternative U.S. federal income tax treatments of the ETNs are possible that, if applied, could materially and adversely affect the timing and/or character of income, gain or loss with respect to the ETNs. It is possible, for example, that the ETNs could be treated as debt instruments issued by us. Under this treatment, the ETNs would be subject to Treasury regulations relating to the taxation of contingent payment debt instruments. In this case, regardless of your method of tax accounting for U.S. federal income tax purposes, you would generally be required to accrue income based on our comparable yield for similar non-contingent debt, determined as of the time of issuance of the ETNs, in each year that you held the ETNs, even though we are not required to make any payment with respect to the ETNs until retirement. In addition, any gain on the sale, exchange or retirement of the ETNs would be treated as ordinary income.

It is also possible that an ETN could be treated in whole or in part as subject to the mark-to-market rules of Section 1256 of the Code. Section 1256 applies to, among others, "regulated futures contracts" as well as certain options listed on or subject to the rules of a qualified board or exchange. If Section 1256 were to apply to an ETN, a U.S. Holder would be required (i) to recognize gain or loss on all, or a portion, of the ETN as if it were sold at its fair market value on the last business day of each year it is held, and (ii) to treat such gain or loss as 40% short-term capital gain or loss and 60% long-term capital gain or loss. You should consult your tax adviser regarding the potential application of Section 1256 to the ETNs.

Other possible U.S. federal income tax treatments of the ETNs could also affect the timing and character of income or loss with respect to the ETNs. Moreover, the U.S. Treasury Department and the IRS have requested

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comments on various issues regarding the U.S. federal income tax treatment of “prepaid forward contracts” and similar financial instruments and have indicated that such transactions may be the subject of future regulations or other guidance. In addition, members of Congress have proposed legislative changes to the tax treatment of derivative contracts. Any legislation, Treasury regulations or other guidance promulgated after consideration of these issues could materially and adversely affect the tax consequences of an investment in the ETNs, possibly with retroactive effect. You should consult your tax adviser regarding possible alternative tax treatments of the ETNs and potential changes in applicable law.

### **Tax Consequences to Non-U.S. Holders**

This section applies only to Non-U.S. Holders. You are a “Non-U.S. Holder” if for U.S. federal income tax purposes you are a beneficial owner of an ETN that is:

· an individual who is classified as a nonresident alien;

· a foreign corporation; or

· a foreign trust or estate.

You are not a Non-U.S. Holder for purposes of this discussion if you are (i) an individual who is present in the United States for 183 days or more in the taxable year of disposition and who is not otherwise a resident of the United States for U.S. federal income tax purposes or (ii) a former citizen or resident of the United States. If you are or may become such a person, you should consult your tax adviser regarding the U.S. federal tax consequences of an investment in the ETNs.

*Taxable Disposition of the ETNs.* Subject to the discussion below under “*FATCA*,” you generally should not be subject to U.S. federal withholding or income tax in respect of the ETNs, *provided* that (i) income in respect of the ETNs is not effectively connected with your conduct of a trade or business in the United States, and (ii) you comply with the applicable certification requirements.

If you are engaged in a U.S. trade or business, and if income from the ETNs is effectively connected with the conduct of that trade or business, you generally will be subject to regular U.S. federal income tax with respect to that income in the same manner as if you were a U.S. Holder, unless an applicable income tax treaty provides otherwise. If you are such a holder and you are a corporation, you should also consider the potential application of a 30% (or lower treaty rate) branch profits tax.

*Tax Consequences Under Possible Alternative Treatments.* Subject to the discussion below under “*FATCA*,” if all or any portion of an ETN were recharacterized as a debt instrument, any payment made to you with respect to the ETN generally would not be subject to U.S. federal withholding or income tax, *provided* that: (i) income or gain in respect of the ETN is not effectively connected with your conduct of a trade or business in the United States, and (ii) you provide to the applicable withholding agent an appropriate IRS Form W-8 certifying under penalties of perjury that you are not a United States person.

Other U.S. federal income tax treatments of the ETNs are also possible. Moreover, as discussed above under “*Tax Consequences to U.S. Holders – Possible Alternative Tax Treatments of an Investment in the ETNs*,” the U.S. Treasury Department and the IRS have requested comments on various issues regarding the U.S. federal income tax treatment of “prepaid forward contracts” and similar financial instruments and have indicated that such transactions may be the subject of future regulations or other guidance. In addition, members of Congress have proposed legislative changes to the tax treatment of derivative contracts. Any legislation, Treasury regulations or other guidance promulgated after consideration of these issues might materially and adversely affect the withholding tax consequences of an investment in the ETNs, possibly with retroactive effect. You should consult your tax adviser regarding possible alternative tax treatments of the ETNs and potential changes in applicable law. If withholding applies to the ETNs, we will not be required to pay any additional amounts with respect to amounts withheld.

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### *U.S. Federal Estate Tax*

If you are an individual Non-U.S. Holder or an entity the property of which is potentially includible in such an individual's gross estate for U.S. federal estate tax purposes (for example, a trust funded by such an individual and with respect to which the individual has retained certain interests or powers), you should note that, absent an applicable treaty exemption, the ETNs may be treated as U.S.-situs property subject to U.S. federal estate tax. If you are such an individual or entity, you should consult your tax adviser regarding the U.S. federal estate tax consequences of an investment in the ETNs.

### **Information Reporting and Backup Withholding**

The payment of the proceeds of a taxable disposition of the ETNs may be subject to information reporting and, if you fail to provide certain identifying information (such as an accurate taxpayer identification number if you are a U.S. Holder) or meet certain other conditions, may also be subject to backup withholding at the rate specified in the Code. If you are a Non-U.S. Holder that provides an appropriate IRS Form W-8, you will generally establish an exemption from backup withholding. Amounts withheld under the backup withholding rules are not additional taxes and may be refunded or credited against your U.S. federal income tax liability, provided the relevant information is timely furnished to the IRS.

### **FATCA**

Legislation commonly referred to as "FATCA" generally imposes a withholding tax of 30% on payments to certain non-U.S. entities (including financial intermediaries) with respect to certain financial instruments, unless various U.S. information reporting and due diligence requirements have been satisfied. An intergovernmental agreement between the United States and the non-U.S. entity's jurisdiction may modify these requirements. This legislation generally applies to certain financial instruments that are treated as paying U.S.-source interest or other U.S.-source "fixed or determinable annual or periodical" income ("**FDAP income**"). Withholding (if applicable) applies to payments of U.S.-source FDAP income. While existing Treasury regulations would also require withholding on payments of gross proceeds of the disposition (including upon retirement) of certain financial instruments treated as paying U.S.-source interest or dividends, the U.S. Treasury Department has indicated in subsequent proposed regulations its intent to eliminate this requirement. The U.S. Treasury Department has stated that taxpayers may rely on these proposed regulations pending their finalization. If the ETNs were recharacterized as debt instruments, this legislation would apply to the ETNs. If withholding applies to the ETNs, we will not be required to pay any additional amounts with respect to amounts withheld. You should consult your tax adviser regarding the potential application of FATCA to the ETNs.

**The preceding discussion, when read in conjunction with "United States Federal Tax Considerations—Assumption by Citigroup" in the accompanying prospectus supplement, constitutes the full opinion of Davis Polk &**

**Wardwell LLP regarding the material U.S. federal tax consequences of owning and disposing of the ETNs.**

**Prospective investors in the ETNs should consult their tax advisers regarding all aspects of the U.S. federal income and estate tax consequences of an investment in the ETNs and any tax consequences arising under the laws of any state, local or non-U.S. taxing jurisdiction.**

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SUPPLEMENTAL PLAN OF DISTRIBUTION (CONFLICTS OF INTEREST)

The terms and conditions set forth in the Amended and Restated Global Selling Agency Agreement dated April 7, 2017, among Citigroup Global Markets Holdings Inc., Citigroup Inc. and the Agents listed on Schedule I thereto, including Citigroup Global Markets Inc. (“**CGMI**”), govern the sale and purchase of the ETNs.

CGMI, an affiliate of ours, is the agent for this offering. We issued and sold a portion of the ETNs to CGMI on the Initial Settlement Date and received proceeds equal to 100% of their Closing Indicative Value as of the Inception Date. After the Initial Settlement Date, we may issue and sell additional ETNs of each series to CGMI based on their Indicative Value at that time. For any ETNs we issue and sell after the Initial Settlement Date, we expect to receive proceeds equal to 100% of their Indicative Value at the time we price the sale of the ETNs to CGMI. CGMI may offer and sell ETNs from time to time as principal to investors and to dealers at a price based on the Indicative Value at the time of sale. Dealers may in turn offer and sell ETNs to investors at market prices prevailing at the time of sale, at prices related to market prices or at negotiated prices. CGMI may lend the ETNs to broker-dealers and other market participants who may have made short sales of such ETNs and who may cover such short positions by purchasing such ETNs from CGMI.

We are not obligated to issue and sell additional ETNs at any time to CGMI, and CGMI is not obligated to sell additional ETNs to investors or dealers at any time. The stated principal amount of each series of ETNs stated at the top of the cover page of this pricing supplement is the maximum amount of each series of ETNs that we have currently authorized for issuance. Although we have the right to increase the authorized amount of either series of ETNs at any time, it is our current intention not to issue more than the current maximum authorized amount of each series of ETNs, even if there is substantial market demand for additional ETNs of such series. We may also reduce the maximum authorized amount of each series of ETNs at any time and have no obligation to issue up to the maximum authorized amount. If we discontinue issuances and sales of the ETNs of any series, or if CGMI discontinues sales of the ETNs of any series, the price and liquidity of those ETNs may be subject to significant distortions. See “Risk Factors—We and CGMI are under no obligation to issue or sell additional ETNs of any series at any time, and if we and CGMI do sell additional ETNs of any series, we or CGMI may limit or restrict such sales, and we or CGMI may stop and subsequently resume selling additional ETNs of such series at any time” and “—Any limitation or suspension on the issuance or sale of the ETNs may impact the trading price of the ETNs, including by creating a premium over the Indicative Value of the ETNs that may be reduced or eliminated at any time.”

We will not pay any commissions or underwriting fees to CGMI or any other dealer. For any ETNs it sells, CGMI is expected to charge to purchasers a creation fee of up to approximately 0.15% *times* the Indicative Value at which CGMI prices the sale of such ETNs, *provided however* that CGMI may from time to time increase or decrease the creation fee. In exchange for providing certain services relating to the distribution of the ETNs, CGMI, a member of the Financial Industry Regulatory Authority (“**FINRA**”), or another FINRA member may receive all or a portion of the Daily Investor Fee. In addition, CGMI will charge investors a redemption charge of 0.08% *times* the Closing Indicative Value on the Early Redemption Valuation Date of any ETN that is redeemed at the investor’s option. CGMI and its affiliates may also profit from expected hedging activity related to these offerings, even if the value of the ETNs declines.

CGMI may from time to time purchase outstanding ETNs of any series in the open market, in connection with early redemptions or in other transactions, and CGMI may use this pricing supplement together with the accompanying prospectus supplement and prospectus in connection with resales of some or all of the purchased ETNs in the secondary market. Broker-dealers, including CGMI, may make a market in the ETNs of any series, although none of them are obligated to do so and any of them may stop doing so at any time without notice. This pricing supplement (including the accompanying prospectus supplement and prospectus) may be used by CGMI or any other dealer in connection with market-making transactions. In these transactions, CGMI or such dealers may resell an ETN covered by this pricing supplement that they acquire from us, CGMI or other holders after the original offering and sale of the ETNs, or they may sell an ETN covered by this pricing supplement in short sale transactions. This pricing supplement (including the accompanying prospectus supplement and prospectus) will be deemed to cover any short sales of the ETNs by market participants who borrow ETNs from us or our affiliates or who cover their short positions with ETNs acquired from us or our affiliates.

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In order to hedge our obligations under the ETNs, we have entered into and will enter into one or more swaps or other derivatives transactions with one or more of our affiliates. You should refer to the section “Risk Factors—Trading and other transactions by us, our affiliates or third parties with whom we transact in securities or financial instruments related to the ETNs and the Index may impair the value of the ETNs” in this pricing supplement and the section “Use of Proceeds and Hedging” in the accompanying prospectus. CGMI may condition its acceptance of an offer to purchase any series of the ETNs on such purchaser’s agreement to purchase certain exchange traded notes issued by us or enter into certain transactions consistent with our affiliates’ hedging strategy.

Broker-dealers and other market participants are cautioned that some of their activities, including borrowing ETNs from one of our affiliates for purposes of short sales or covering short sales with ETNs acquired from one of our affiliates, may result in their being deemed participants in the distribution of the ETNs of any series in a manner that would render them statutory underwriters and subject them to the prospectus delivery and liability provisions of the Securities Act of 1933. A determination of whether a particular market participant is an underwriter must take into account all the facts and circumstances pertaining to the activities of the participant in the particular case, and the example mentioned above should not be considered a complete description of all the activities that would lead to designation as an underwriter and subject a market participant to the prospectus-delivery and liability provisions of the Securities Act. This pricing supplement (including the accompanying prospectus supplement and prospectus) will be deemed to cover any short sales of the ETNs by market participants who borrow ETNs from us or our affiliates or who cover their short positions with ETNs acquired from us or our affiliates.

We have retained Janus Distributors LLC doing business as Janus Henderson Distributors (“**JHD**”), a member of FINRA, to provide certain services relating to the placement and marketing of the ETNs of each series. JHD will receive all or a portion of the Daily Investor Fee in consideration for its role in marketing and placing the ETNs. The actual amount received by JHD in a given year will accrue on a daily basis based on the number of then outstanding ETNs of any series held by investors. CGMI has agreed to indemnify JHD against liabilities relating to material misstatements and omissions. From time to time, JHD (or its predecessor) and its affiliates have, and in the future may, engage in transactions with or perform services for us for which they have been, and may be, paid customary fees. Janus Index & Calculation Services LLC, renamed Janus Henderson Indices LLC as of January 1, 2019, or its affiliates are responsible for computing and disseminating the Closing Indicative Value and Intraday Indicative Value, except as otherwise described herein.

CGMI may deliver ETNs against payment therefor on a date that is greater than two Business Days following the date of sale of such ETNs. Under Rule 15c6-1 of the Securities Exchange Act of 1934, trades in the secondary market generally are required to settle in two Business Days, unless parties to any such trade expressly agree otherwise. Accordingly, purchasers who wish to trade ETNs that are to be issued more than two Business Days after the related pricing date will be required to specify alternative settlement arrangements to prevent a failed settlement.

No action has been or will be taken by us or our affiliates or any underwriter, dealer or agent that would permit a public offering of the ETNs or possession or distribution of this pricing supplement (including the prospectus supplement and prospectus) or any free writing prospectus in any jurisdiction, other than the United States, where action for that purpose is required. No offers, sales or deliveries of the ETNs, or distribution of this pricing



supplement (including the prospectus supplement and prospectus) or any other offering material relating to the ETNs may be made in or from any jurisdiction outside the United States, except in circumstances that will result in compliance with any applicable laws and regulations and will not impose any obligations on us or our affiliates, any underwriter, dealer or agent. You should refer to the section “Plan of Distribution—Certain Selling Restrictions” in the accompanying prospectus supplement.

CGMI is an affiliate of ours. Accordingly, these offerings will conform to the requirements addressing conflicts of interest when distributing the securities of an affiliate set forth in Rule 5121 of the Conduct Rules adopted by FINRA. Client accounts over which Citigroup Inc., its subsidiaries or affiliates of its subsidiaries have investment discretion are not permitted to purchase the ETNs, either directly or indirectly, without the prior written consent of the client.

### **Prohibition of Sales to EEA Retail Investors**

The ETNs may not be offered, sold or otherwise made available to any retail investor in the European Economic Area. For the purposes of this provision:

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(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 2002/92/EC, 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 Directive 2003/71/EC; 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 ETNs offered so as to enable an investor to decide to purchase or subscribe the ETNs.

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## BENEFIT PLAN INVESTOR CONSIDERATIONS

A fiduciary of a pension, profit-sharing or other employee benefit plan subject to the Employee Retirement Income Security Act of 1974, as amended (“**ERISA**”), including entities such as collective investment funds, partnerships and separate accounts whose underlying assets include the assets of such plans (collectively, “**ERISA Plans**”), should consider the fiduciary standards of ERISA in the context of the ERISA Plan’s particular circumstances before authorizing an investment in the ETNs. Among other factors, the fiduciary should consider whether the investment would satisfy the prudence and diversification requirements of ERISA and would be consistent with the documents and instruments governing the ERISA Plan.

Section 406 of ERISA and Section 4975 of the Internal Revenue Code of 1986, as amended, (the “**Code**”) prohibit ERISA Plans, as well as plans (including individual retirement accounts and Keogh plans) subject to Section 4975 of the Code (together with ERISA Plans, “**Plans**”), from engaging in certain transactions involving the “plan assets” with persons who are “parties in interest” under ERISA or “disqualified persons” under Section 4975 of the Code (in either case, “**Parties in Interest**”) with respect to such Plans. As a result of our business, we, and our current and future affiliates, may be Parties in Interest with respect to many Plans. Where we (or our affiliate) are a Party in Interest with respect to a Plan (either directly or by reason of our ownership interests in our directly or indirectly owned subsidiaries), the purchase and holding of the ETNs by or on behalf of the Plan could be a prohibited transaction under Section 406 of ERISA and/or Section 4975 of the Code, unless exemptive relief were available under an applicable exemption (as described below).

Certain prohibited transaction class exemptions (“**PTCEs**”) issued by the U.S. Department of Labor may provide exemptive relief for direct or indirect prohibited transactions resulting from the purchase or holding of the ETNs. Those class exemptions are PTCE 96-23 (for certain transactions determined by in-house asset managers), PTCE 95-60 (for certain transactions involving insurance company general accounts), PTCE 91-38 (for certain transactions involving bank collective investment funds), PTCE 90-1 (for certain transactions involving insurance company separate accounts) and PTCE 84-14 (for certain transactions determined by independent qualified asset managers). In addition, ERISA Section 408(b)(17) and Section 4975(d)(20) of the Code may provide a limited exemption for the purchase and sale of the ETNs and related lending transactions, *provided* that neither the issuer of the ETNs nor any of its affiliates have or exercise any discretionary authority or control or render any investment advice with respect to the assets of the Plan involved in the transaction and *provided further* that the Plan pays no more, and receives no less, than adequate consideration in connection with the transaction (the so-called “service provider exemption”). There can be no assurance that any of these statutory or class exemptions will be available with respect to transactions involving the ETNs.

Accordingly, the ETNs may not be purchased or held by any Plan, any entity whose underlying assets include “plan assets” by reason of any Plan’s investment in the entity (a “**Plan Asset Entity**”) or any person investing “plan assets” of any Plan, unless such purchaser or holder is eligible for the exemptive relief available under PTCE 96-23, 95-60, 91-38, 90-1 or 84-14 or the service provider exemption or there is some other basis on which the purchase and holding of the ETNs will not constitute a non-exempt prohibited transaction under ERISA or Section 4975 of the Code. Each purchaser or holder of the ETNs or any interest therein will be deemed to have represented by its purchase or holding

of the ETNs that (a) it is not a Plan and its purchase and holding of the ETNs is not made on behalf of or with “plan assets” of any Plan or (b) its purchase and holding of the ETNs will not result in a non-exempt prohibited transaction under Section 406 of ERISA or Section 4975 of the Code.

Certain governmental plans (as defined in Section 3(32) of ERISA), church plans (as defined in Section 3(33) of ERISA) and non-U.S. plans (as described in Section 4(b)(4) of ERISA) (“**Non-ERISA Arrangements**”) are not subject to these “prohibited transaction” rules of ERISA or Section 4975 of the Code, but may be subject to similar rules under other applicable laws or regulations (“**Similar Laws**”). Accordingly, each such purchaser or holder of the ETNs shall be required to represent (and deemed to have represented by its purchase of the ETNs) that such purchase and holding is not prohibited under applicable Similar Laws.

Due to the complexity of these rules, it is particularly important that fiduciaries or other persons considering purchasing the ETNs on behalf of or with “plan assets” of any Plan consult with their counsel regarding the relevant provisions of ERISA, the Code or any Similar Laws and the availability of exemptive relief under PTCE 96-23, 95-60, 91-38, 90-1, 84-14, the service provider exemption or some other basis on which the acquisition and holding will

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not constitute a non-exempt prohibited transaction under ERISA or Section 4975 of the Code or a violation of any applicable Similar Laws.

The ETNs are contractual financial instruments. The financial exposure provided by the ETNs is not a substitute or proxy for, and is not intended as a substitute or proxy for, individualized investment management or advice for the benefit of any purchaser or holder of the ETNs. The ETNs have not been designed and will not be administered in a manner intended to reflect the individualized needs and objectives of any purchaser or holder of the ETNs.

Each purchaser or holder of any ETNs acknowledges and agrees that:

the purchaser or holder or its fiduciary has made and shall make all investment decisions for the purchaser or holder and the purchaser or holder has not relied and shall not rely in any way upon us or our affiliates to act as a fiduciary (i) or adviser of the purchaser or holder with respect to (A) the design and terms of the ETNs, (B) the purchaser or holder's investment in the ETNs, or (C) the exercise of or failure to exercise any rights we have under or with respect to the ETNs;

(ii) we and our affiliates have acted and will act solely for our own account in connection with (A) all transactions relating to the ETNs and (B) all hedging transactions in connection with our obligations under the ETNs;

(iii) any and all assets and positions relating to hedging transactions by us or our affiliates are assets and positions of those entities and are not assets and positions held for the benefit of the purchaser or holder;

(iv) our interests are adverse to the interests of the purchaser or holder; and

(v) neither we nor any of our affiliates is a fiduciary or adviser of the purchaser or holder in connection with any such assets, positions or transactions, and any information that we or any of our affiliates may provide is not intended to be impartial investment advice.

Each purchaser and holder of the ETNs has exclusive responsibility for ensuring that its purchase, holding and subsequent disposition of the ETNs does not violate the fiduciary or prohibited transaction rules of ERISA, the Code or any applicable Similar Laws. The sale of any ETNs to any Plan is in no respect a representation by us or any of our affiliates or representatives that such an investment meets all relevant legal requirements with respect to investments by Plans or Non-ERISA Arrangements generally or any particular Plan or Non-ERISA Arrangement, or that such an investment is appropriate for Plans or Non-ERISA Arrangements generally or any particular Plan or Non-ERISA Arrangement.

However, individual retirement accounts, individual retirement annuities and Keogh plans, as well as employee benefit plans that permit participants to direct the investment of their accounts, will not be permitted to purchase or hold the ETNs if the account, plan or annuity is for the benefit of an employee of Citigroup Global Markets or a family member and the employee receives any compensation (such as, for example, an addition to bonus) based on the purchase of ETNs by the account, plan or annuity.

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## VALIDITY OF THE ETNS

Restated below are the opinions of Davis Polk & Wardwell LLP, as our special products counsel, Scott L. Flood, General Counsel and Secretary of Citigroup Global Markets Holdings Inc. and Barbara Politi, Assistant General Counsel—Capital Markets of Citigroup Inc., included in Pricing Supplement No. 2016—USNCH0277/A/3 and 2016—USNCH0278/A/3 dated April 19, 2018 relating to the ETNs, which includes all of the ETNs offered by this pricing supplement:

In the opinion of Davis Polk & Wardwell LLP, as special products counsel to Citigroup Global Markets Holdings Inc., when the ETNs offered by this pricing supplement have been executed and issued by Citigroup Global Markets Holdings Inc. and authenticated by the trustee pursuant to the indenture, and delivered against payment therefor, such ETNs and the related guarantee of Citigroup Inc. will be valid and binding obligations of Citigroup Global Markets Holdings Inc. and Citigroup Inc., respectively, enforceable in accordance with their respective terms, subject to applicable bankruptcy, insolvency and similar laws affecting creditors' rights generally, concepts of reasonableness and equitable principles of general applicability (including, without limitation, concepts of good faith, fair dealing and the lack of bad faith), provided that such counsel expresses no opinion as to the effect of fraudulent conveyance, fraudulent transfer or similar provision of applicable law on the conclusions expressed above. This opinion is given as of the date of this pricing supplement and is limited to the laws of the State of New York, except that such counsel expresses no opinion as to the application of state securities or Blue Sky laws to the ETNs.

In giving this opinion, Davis Polk & Wardwell LLP has assumed the legal conclusions expressed in the opinions set forth below of Scott L. Flood, General Counsel and Secretary of Citigroup Global Markets Holdings Inc., and Barbara Politi, Assistant General Counsel—Capital Markets of Citigroup Inc. In addition, this opinion is subject to the assumptions set forth in the letter of Davis Polk & Wardwell LLP dated April 7, 2017, which has been filed as an exhibit to a Current Report on Form 8-K filed by Citigroup Inc. on April 7, 2017, that the indenture has been duly authorized, executed and delivered by, and is a valid, binding and enforceable agreement of, the trustee and that none of the terms of the ETNs nor the issuance and delivery of the ETNs and the related guarantee, nor the compliance by Citigroup Global Markets Holdings Inc. and Citigroup Inc. with the terms of the ETNs and the related guarantee respectively, will result in a violation of any provision of any instrument or agreement then binding upon Citigroup Global Markets Holdings Inc. or Citigroup Inc., as applicable, or any restriction imposed by any court or governmental body having jurisdiction over Citigroup Global Markets Holdings Inc. or Citigroup Inc., as applicable.

In the opinion of Scott L. Flood, Secretary and General Counsel of Citigroup Global Markets Holdings Inc., (i) the terms of the ETNs offered by this pricing supplement have been duly established under the indenture and the Board of Directors (or a duly authorized committee thereof) of Citigroup Global Markets Holdings Inc. has duly authorized the issuance and sale of such ETNs and such authorization has not been modified or rescinded; (ii) Citigroup Global Markets Holdings Inc. is validly existing and in good standing under the laws of the State of New York; (iii) the indenture has been duly authorized, executed and delivered by Citigroup Global Markets Holdings Inc.; and (iv) the execution and delivery of such indenture and of the ETNs offered by this pricing supplement by Citigroup Global Markets Holdings Inc., and the performance by Citigroup Global Markets Holdings Inc. of its obligations thereunder, are within its corporate powers and do not contravene its certificate of incorporation or bylaws or other constitutive

documents. This opinion is given as of the date of this pricing supplement and is limited to the laws of the State of New York.

Scott L. Flood, or other internal attorneys with whom he has consulted, has examined and is familiar with originals, or copies certified or otherwise identified to his satisfaction, of such corporate records of Citigroup Global Markets Holdings Inc., certificates or documents as he has deemed appropriate as a basis for the opinions expressed above. In such examination, he or such persons has assumed the legal capacity of all natural persons, the genuineness of all signatures (other than those of officers of Citigroup Global Markets Holdings Inc.), the authenticity of all documents submitted to him or such persons as originals, the conformity to original documents of all documents submitted to him or such persons as certified or photostatic copies and the authenticity of the originals of such copies.

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In the opinion of Barbara Politi, Assistant General Counsel—Capital Markets of Citigroup Inc., (i) the Board of Directors (or a duly authorized committee thereof) of Citigroup Inc. has duly authorized the guarantee of such ETNs by Citigroup Inc. and such authorization has not been modified or rescinded; (ii) Citigroup Inc. is validly existing and in good standing under the laws of the State of Delaware; (iii) the indenture has been duly authorized, executed and delivered by Citigroup Inc.; and (iv) the execution and delivery of such indenture, and the performance by Citigroup Inc. of its obligations thereunder, are within its corporate powers and do not contravene its certificate of incorporation or bylaws or other constitutive documents. This opinion is given as of the date of this pricing supplement and is limited to the General Corporation Law of the State of Delaware.

Barbara Politi, or other internal attorneys with whom she has consulted, has examined and is familiar with originals, or copies certified or otherwise identified to her satisfaction, of such corporate records of Citigroup Inc., certificates or documents as she has deemed appropriate as a basis for the opinions expressed above. In such examination, she or such persons has assumed the legal capacity of all natural persons, the genuineness of all signatures (other than those of officers of Citigroup Inc.), the authenticity of all documents submitted to her or such persons as originals, the conformity to original documents of all documents submitted to her or such persons as certified or photostatic copies and the authenticity of the originals of such copies.

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**ANNEX A**

**FORM OF OFFER FOR REDEMPTION**

Email: ETNOrders@velocityshares.com

The undersigned holder of VelocityShares™ Exchange Traded Notes due December 15, 2031 issued by Citigroup Global Markets Holdings Inc. and guaranteed by Citigroup Inc., CUSIP No. (the “**VelocityShares™ ETNs**”) hereby irrevocably offers to Citigroup Global Markets Holdings Inc. for redemption the VelocityShares™ ETNs in the amounts and on the date set forth below as described in the pricing supplement relating to the VelocityShares™ ETNs (the “**Pricing Supplement**”). Terms not defined herein have the meanings given to such terms in the Pricing Supplement.

**Name:**

**DTC Account Number:**

**Ticker:**

**Number of VelocityShares™ ETNs offered for redemption:**

**Desired Valuation Date:**

In addition to any other requirements specified in the Pricing Supplement being satisfied, the undersigned acknowledges that the VelocityShares™ ETNs specified above will not be redeemed unless (i) this offer for redemption is delivered to Janus Henderson Distributors on a Business Day, (ii) the Redemption Agent has responded by sending an acknowledgment of the Redemption Notice accepting the redemption request, (iii) the DTC Participant has booked a “delivery vs. payment” (“**DVP**”) trade on the applicable Early Redemption Valuation Date facing Citigroup Global Markets Inc., DTC #0418, and (iv) the DTC Participant instructs DTC to deliver the DVP trade for settlement via DTC at or prior to 10:00 a.m. New York City time on the applicable Early Redemption Date (the third Business Day following the Early Redemption Valuation Date, subject to postponement if such Early Redemption Valuation

Date is not an Index Business Day or if a Market Disruption Event occurs or is continuing on such date).

The undersigned acknowledges that the redemption obligation is solely an obligation of Citigroup Global Markets Holdings Inc. (guaranteed by Citigroup Inc.) and Janus Henderson Distributors is acting only to facilitate the redemption.

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