

Underwriter:	Citigroup Global Markets Inc.	Coupon Barrier:⁶	25.00%
CUSIP:	17330RD85	Principal Buffer or Barrier:⁹	Barrier
Description:	Callable Contingent Coupon Equity Linked Securities	Principal Buffer/Barrier Level:	50.00%
Index (Indices)⁵:	Lesser Performing of Dow Jones Industrial Average, Nasdaq 100 and S&P 500	Funding Deadline Date:	October 4, 2022
Annualized Coupon:¹	At least 10.00% (paid quarterly)	Execution Date:	October 7, 2022
Maturity:	36 months	Valuation Date:	October 7, 2025
Call Provision:¹⁰	Issuer callable after 1 year	Settlement Date:	October 10, 2025

1. The final coupon rate for the offering is determined on the execution date and disclosed on the final prospectus. The final coupon rate for the offering will be at or above the stated coupon rate and dependent upon market conditions during the offering period.
2. Liquidation prior to maturity is subject to a 0.25% discount to net asset value (NAV).
3. Structured Notes are intended to be held until maturity. Intra-period pricing may not directly correlate with the price return of the index.
4. Structured products are subject to the credit risk of the underwriter.
5. Use of a lesser performing return for multiple indices dictates that the principal return of the offering will be based on the index that provides the lesser return during the pre-determined timeframe. For example, if index A returns 10% and index B returns 5% from execution date to valuation date, the note will mature with full principal returned as both indices are above the buffer threshold. With a second example of a 10% level of buffer protection, if index A returns -15% and index B returns -25% from execution date to valuation date, the note will be subject to principal loss of -15% as the lesser of value (index B) is below the stated buffer protection level.
6. When a coupon barrier is used, coupon payments are subject to protection at or above the stated level and based on initial index value. At the coupon payment date, if the index value is at or above the stated threshold, the coupon payment is made. If the index value is below the stated threshold at the coupon payment date, the coupon is forfeited.
7. Once the offering limit is reached, no new investments will be accepted. If demand for the offering size is not met, the offering is subject to cancellation.
8. Investments in structured products (in total) must be limited to 25% of a client's Liquid Net Worth.
9. Buffer versus Barrier risk of principal loss (AT MATURITY ONLY):
 - At or above the pre-defined level: Full return of principal
 - Below pre-defined level:
 - Buffer: Investor participates in loss 1 for 1 in loss after buffered level of protection
 - Barrier: Investor participates in FULL decline of the index if below barrier level
 - Example: 25% Buffer versus a 25% Barrier
 - Index decline of 20% at maturity: Above both Buffer and Barrier and return full principal
 - Index decline of 30% at maturity: Below Buffer level, loss: -5%, Below Barrier level, loss: -30%
 - Index decline of 40% at maturity: Below Buffer level, loss: -15%, Below Barrier level, loss: -40%
10. Offerings may be subject to early redemption, or a call provision. Auto callable notes are subject to mandatory call if pre-determined criteria are met. Issuer call notes can be called at issuer discretion. Notes with call features are only callable on coupon payment dates. If called, the position expires, and full principal is returned.

Please check this box if you are currently invested in a structured note that is maturing and you will be using the proceeds to invest in this current offering.

Account#	Account Type	\$ Amount

By signing below, Client acknowledges receipt of this structured note pre-pricing document and that their investment is no more than 25% of their Liquid Net Worth. Liquid Net Worth defined as net worth minus assets that cannot be quickly and easily converted into cash, including but not limited to, real estate, business equity, personal property, automobiles, expected inheritances, assets earmarked for other purposes, and investments or accounts subject to substantial penalties, fees or charges due to early sale or withdrawal.

Accepted and agreed to as of:

Client's Name: _____ Signature: _____ Date: _____

2nd Client's Name: _____ Signature: _____ Date: _____

Citigroup Global Markets Holdings Inc.

October 7, 2022
 Medium-Term Senior Notes, Series N
 Pricing Supplement No. 2022-USNCH[]
 Filed Pursuant to Rule 424(b)(2)
 Registration Statement Nos. 333-255302 and 333-255302-03

Callable Contingent Coupon Equity Linked Securities Linked to the Worst Performing of the Dow Jones Industrial Average™, the Nasdaq-100 Index® and the S&P 500® Index Due October 10, 2025

- The securities offered by this pricing supplement are unsecured debt securities issued by Citigroup Global Markets Holdings Inc. and guaranteed by Citigroup Inc. The securities offer the potential for periodic contingent coupon payments at an annualized rate that, if all are paid, would produce a yield that is generally higher than the yield on our conventional debt securities of the same maturity. In exchange for this higher potential yield, you must be willing to accept the risks that (i) your actual yield may be lower than the yield on our conventional debt securities of the same maturity because you may not receive one or more, or any, contingent coupon payments, and (ii) the value of what you receive at maturity may be significantly less than the stated principal amount of your securities, and may be zero. Each of these risks will depend solely on the performance of the **worst performing** of the underlyings specified below.
- We have the right to call the securities for mandatory redemption on any potential redemption date specified below.
- You will be subject to risks associated with each of the underlyings and will be negatively affected by adverse movements in any one of the underlyings. Although you will have downside exposure to the worst performing underlying, you will not receive dividends with respect to any underlying or participate in any appreciation of any underlying.
- Investors in the securities must be willing to accept (i) an investment that may have limited or no liquidity and (ii) the risk of not receiving any payments due under the securities if we and Citigroup Inc. default on our obligations. **All payments on the securities are subject to the credit risk of Citigroup Global Markets Holdings Inc. and Citigroup Inc.**

KEY TERMS

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

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

Underlyings:	Underlying	Initial underlying value*	Coupon barrier value**	Final barrier value***
	Dow Jones Industrial Average™			
	Nasdaq-100 Index®			
	S&P 500® Index			

*For each underlying, its closing value on the pricing date

**For each underlying, 75.00% of its initial underlying value

***For each underlying, 50.00% of its initial underlying value

Stated principal amount: \$1,000 per security

Pricing date: October 7, 2022

Issue date: October 13, 2022

Valuation dates: January 9, 2023, April 10, 2023, July 7, 2023, October 9, 2023, January 8, 2024, April 8, 2024, July 8, 2024, October 7, 2024, January 7, 2025, April 7, 2025, July 7, 2025 and October 7, 2025 (the "final valuation date"), each subject to postponement if such date is not a scheduled trading day or certain market disruption events occur

Maturity date: Unless earlier redeemed, October 10, 2025

Contingent coupon payment dates: The third business day after each valuation date, except that the contingent coupon payment date following the final valuation date will be the maturity date

Contingent coupon: On each contingent coupon payment date, unless previously redeemed, the securities will pay a contingent coupon equal to at least 2.50% of the stated principal amount of the securities (equivalent to a contingent coupon rate of at least 10.00% per annum) (to be determined on the pricing date) **if and only if** the closing value of the worst performing underlying on the immediately preceding valuation date is greater than or equal to its coupon barrier value. **If the closing value of the worst performing underlying on any valuation date is less than its coupon barrier value, you will not receive any contingent coupon payment on the immediately following contingent coupon payment date.**

Payment at maturity: If the securities are not redeemed prior to maturity, you will receive at maturity for each security you then hold (in addition to the final contingent coupon payment, if applicable):

- If the final underlying value of the worst performing underlying on the final valuation date is **greater than or equal to** its final barrier value: \$1,000
- If the final underlying value of the worst performing underlying on the final valuation date is **less than** its final barrier value: \$1,000 + (\$1,000 × the underlying return of the worst performing underlying on the final valuation date)

If the securities are not redeemed prior to maturity and the final underlying value of the worst performing underlying on the final valuation date is less than its final barrier value, you will receive significantly less than the stated principal amount of your securities, and possibly nothing, at maturity, and you will not receive any contingent coupon payment at maturity.

Listing: The securities will not be listed on any securities exchange

Underwriter: Citigroup Global Markets Inc. ("CGMI"), an affiliate of the issuer, acting as principal

Underwriting fee and issue price:	Issue price ⁽¹⁾	Underwriting fee ⁽²⁾	Proceeds to issuer ⁽³⁾
Per security:	\$1,000.00	\$1.50	\$998.50
Total:	\$	\$	\$

(Key Terms continued on next page)

(1) Citigroup Global Markets Holdings Inc. currently expects that the estimated value of the securities on the pricing date will be at least \$931.00 per security, which will be less than the issue price. The estimated value of the securities is based on CGMI's proprietary pricing models and our internal funding rate. It is not an indication of actual profit to CGMI or other of our affiliates, nor is it an indication of the price, if any, at which CGMI or any other person may be willing to buy the securities from you at any time after issuance. See "Valuation of the Securities" in this pricing supplement.

(2) CGMI will receive an underwriting fee of up to \$1.50 for each security sold in this offering. The total underwriting fee and proceeds to issuer in the table above give effect to the actual total underwriting fee. For more information on the distribution of the securities, see "Supplemental Plan of Distribution" in this pricing supplement. In addition to the underwriting fee, CGMI and its affiliates may profit from expected hedging activity related to this offering, even if the value of the securities declines. See "Use of Proceeds and Hedging" in the accompanying prospectus.

(3) The per security proceeds to issuer indicated above represent the minimum per security proceeds to issuer for any security, assuming the maximum per security underwriting fee. As noted above, the underwriting fee is variable.

Investing in the securities involves risks not associated with an investment in conventional debt securities. See "Summary Risk Factors" beginning on page PS-6.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of the securities or determined that this pricing supplement and the accompanying product supplement, underlying supplement, prospectus supplement and prospectus are truthful or complete. Any representation to the contrary is a criminal offense. **You should read this pricing supplement together with the accompanying product supplement, underlying supplement, prospectus supplement and prospectus, which can be accessed via the hyperlinks below:**

[Product Supplement No. EA-04-09 dated May 11, 2021](#) [Underlying Supplement No. 10 dated May 11, 2021](#)
[Prospectus Supplement and Prospectus each dated May 11, 2021](#)

The securities are not bank deposits and are not insured or guaranteed by the Federal Deposit Insurance Corporation or any other governmental agency, nor are they obligations of, or guaranteed by, a bank.

KEY TERMS (continued)

Redemption:	We may call the securities, in whole and not in part, for mandatory redemption on any potential redemption date upon not less than three business days' notice. Following an exercise of our call right, you will receive for each security you then hold an amount in cash equal to \$1,000.00 plus the related contingent coupon payment, if any.
Potential redemption dates:	The contingent coupon payment dates related to the valuation dates scheduled to occur on October 9, 2023, January 8, 2024, April 8, 2024, July 8, 2024, October 7, 2024, January 7, 2025, April 7, 2025 and July 7, 2025
Final underlying value:	For each underlying, its closing value on the final valuation date
Worst performing underlying:	For any valuation date, the underlying with the lowest underlying return determined as of that valuation date
Underlying return:	For each underlying on any valuation date, (i) its closing value on that valuation date <i>minus</i> its initial underlying value, <i>divided by</i> (ii) its initial underlying value
CUSIP / ISIN:	17330RD85 / US17330RD851

Additional Information

The terms of the securities are set forth in the accompanying product supplement, prospectus supplement and prospectus, as supplemented by this pricing supplement. The accompanying product supplement, prospectus supplement and prospectus contain important disclosures that are not repeated in this pricing supplement. For example, the accompanying product supplement contains important information about how the closing value of each underlying will be determined and about adjustments that may be made to the terms of the securities upon the occurrence of market disruption events and other specified events with respect to each underlying. The accompanying underlying supplement contains information about each underlying that is not repeated in this pricing supplement. It is important that you read the accompanying product supplement, underlying supplement, prospectus supplement and prospectus together with this pricing supplement in deciding whether to invest in the securities. Certain terms used but not defined in this pricing supplement are defined in the accompanying product supplement.

Hypothetical Examples

The examples in the first section below illustrate how to determine whether a contingent coupon will be paid following a valuation date. The examples in the second section below illustrate how to determine the payment at maturity on the securities, assuming the securities are not redeemed prior to maturity. The examples are solely for illustrative purposes, do not show all possible outcomes and are not a prediction of any payment that may be made on the securities.

The examples below are based on the following hypothetical values and do not reflect the actual initial underlying values, coupon barrier values or final barrier values of the underlyings. For the actual initial underlying value, coupon barrier value and final barrier value of each underlying, see the cover page of this pricing supplement. We have used these hypothetical values, rather than the actual values, to simplify the calculations and aid understanding of how the securities work. However, you should understand that the actual payments on the securities will be calculated based on the actual initial underlying value, coupon barrier value and final barrier value of each underlying, and not the hypothetical values indicated below. For ease of analysis, figures below have been rounded. The examples below assume that the contingent coupon rate is set at the lowest value indicated on the cover page of this pricing supplement. The actual contingent coupon rate will be determined on the pricing date.

Underlying	Hypothetical initial underlying value	Hypothetical coupon barrier value	Hypothetical final barrier value
Dow Jones Industrial Average™	100.00	75.00 (75.00% of its hypothetical initial underlying value)	50.00 (50.00% of its hypothetical initial underlying value)
Nasdaq-100 Index®	100.00	75.00 (75.00% of its hypothetical initial underlying value)	50.00 (50.00% of its hypothetical initial underlying value)
S&P 500® Index	100.00	75.00 (75.00% of its hypothetical initial underlying value)	50.00 (50.00% of its hypothetical initial underlying value)

Hypothetical Examples of Contingent Coupon Payments Following a Valuation Date

The three hypothetical examples below illustrate how to determine whether a contingent coupon will be paid following a hypothetical valuation date, assuming that the closing values of the underlyings on the hypothetical valuation date are as indicated below.

	Hypothetical closing value of the Dow Jones Industrial Average™ on hypothetical valuation date	Hypothetical closing value of the Nasdaq-100 Index® on hypothetical valuation date	Hypothetical closing value of the S&P 500® Index on hypothetical valuation date	Hypothetical payment per \$1,000.00 security on related contingent coupon payment date
Example 1	120 (underlying return = $(120 - 100) / 100 = 20\%$)	85 (underlying return = $(85 - 100) / 100 = -15\%$)	150 (underlying return = $(150 - 100) / 100 = 50\%$)	\$25.00 (contingent coupon is paid)
Example 2	45 (underlying return = $(45 - 100) / 100 = -55\%$)	120 (underlying return = $(120 - 100) / 100 = 20\%$)	130 (underlying return = $(130 - 100) / 100 = 30\%$)	\$0.00 (no contingent coupon)
Example 3	30 (underlying return = $(30 - 100) / 100 = -70\%$)	40 (underlying return = $(40 - 100) / 100 = -60\%$)	10 (underlying return = $(10 - 100) / 100 = -90\%$)	\$0.00 (no contingent coupon)

Example 1: On the hypothetical valuation date, the Nasdaq-100 Index® has the lowest underlying return and, therefore, is the worst performing underlying on the hypothetical valuation date. In this scenario, the closing value of the worst performing underlying on the hypothetical valuation date is greater than its coupon barrier value. As a result, investors in the securities would receive the contingent coupon payment on the related contingent coupon payment date.

Example 2: On the hypothetical valuation date, the Dow Jones Industrial Average™ has the lowest underlying return and, therefore, is the worst performing underlying on the hypothetical valuation date. In this scenario, the closing value of the worst performing underlying on the hypothetical valuation date is less than its coupon barrier value. As a result, investors would not receive any payment on the related contingent coupon payment date.

Investors in the securities will not receive a contingent coupon on the contingent coupon payment date following a valuation date if the closing value of the worst performing underlying on that valuation date is less than its coupon barrier value. Whether a contingent coupon is paid following a valuation date depends solely on the closing value of the worst performing underlying on that valuation date.

Example 3: On the hypothetical valuation date, the S&P 500® Index has the lowest underlying return and, therefore, is the worst performing underlying on the hypothetical valuation date. In this scenario, the closing value of the worst performing underlying on the hypothetical valuation date is less than its coupon barrier value. As a result, investors would not receive any payment on the related contingent coupon payment date.

Hypothetical Examples of the Payment at Maturity on the Securities

The next four hypothetical examples illustrate the calculation of the payment at maturity on the securities, assuming that the securities have not been earlier redeemed and that the final underlying values of the underlyings are as indicated below.

	Hypothetical final underlying value of the Dow Jones Industrial Average™	Hypothetical final underlying value of the Nasdaq-100 Index®	Hypothetical final underlying value of the S&P 500® Index	Hypothetical payment at maturity per \$1,000.00 security
Example 4	110 (underlying return = (110 - 100) / 100 = 10%)	120 (underlying return = (120 - 100) / 100 = 20%)	135 (underlying return = (135 - 100) / 100 = 35%)	\$1,025.00 (contingent coupon is paid)
Example 5	130 (underlying return = (130 - 100) / 100 = 30%)	60 (underlying return = (60 - 100) / 100 = -40%)	130 (underlying return = (130 - 100) / 100 = 30%)	\$1,000.00
Example 6	110 (underlying return = (110 - 100) / 100 = 10%)	120 (underlying return = (120 - 100) / 100 = 20%)	40 (underlying return = (40 - 100) / 100 = -60%)	\$400.00
Example 7	20 (underlying return = (20 - 100) / 100 = -80%)	45 (underlying return = (45 - 100) / 100 = -55%)	55 (underlying return = (55 - 100) / 100 = -45%)	\$200.00

Example 4: On the final valuation date, the Dow Jones Industrial Average™ has the lowest underlying return and, therefore, is the worst performing underlying on the final valuation date. In this scenario, the final underlying value of the worst performing underlying on the final valuation date is greater than its final barrier value and its coupon barrier value. Accordingly, at maturity, you would receive the stated principal amount of the securities *plus* the contingent coupon payment due at maturity, but you would not participate in the appreciation of any of the underlyings.

Example 5: On the final valuation date, the Nasdaq-100 Index® has the lowest underlying return and, therefore, is the worst performing underlying on the final valuation date. In this scenario, the final underlying value of the worst performing underlying on the final valuation date is less than its coupon barrier value but greater than its final barrier value. Accordingly, at maturity, you would receive the stated principal amount of the securities, but would not receive any contingent coupon payment at maturity.

Example 6: On the final valuation date, the S&P 500® Index has the lowest underlying return and, therefore, is the worst performing underlying on the final valuation date. In this scenario, the final underlying value of the worst performing underlying on the final valuation date is less than its final barrier value. Accordingly, at maturity, you would receive a payment per security calculated as follows:

$$\begin{aligned}
 \text{Payment at maturity} &= \$1,000.00 + (\$1,000.00 \times \text{the underlying return of the worst performing underlying on the final valuation date}) \\
 &= \$1,000.00 + (\$1,000.00 \times -60.00\%) \\
 &= \$1,000.00 + -\$600.00 \\
 &= \$400.00
 \end{aligned}$$

In this scenario, because the final underlying value of the worst performing underlying on the final valuation date is less than its final barrier value, you would lose a significant portion of your investment in the securities. In addition, because the final underlying value of the worst performing underlying on the final valuation date is below its coupon barrier value, you would not receive any contingent coupon payment at maturity.

Example 7: On the final valuation date, the Dow Jones Industrial Average™ has the lowest underlying return and, therefore, is the worst performing underlying on the final valuation date. In this scenario, the final underlying value of the worst performing underlying on the final valuation date is less than its final barrier value. Accordingly, at maturity, you would receive a payment per security calculated as follows:

$$\begin{aligned}
 \text{Payment at maturity} &= \$1,000.00 + (\$1,000.00 \times \text{the underlying return of the worst performing underlying on the final valuation date}) \\
 &= \$1,000.00 + (\$1,000.00 \times -80.00\%) \\
 &= \$1,000.00 + -\$800.00 \\
 &= \$200.00
 \end{aligned}$$

In this scenario, because the final underlying value of the worst performing underlying on the final valuation date is less than its final barrier value, you would lose a significant portion of your investment in the securities. In addition, because the final underlying value of the worst performing underlying on the final valuation date is below its coupon barrier value, you would not receive any contingent coupon payment at maturity.

It is possible that the closing value of the worst performing underlying will be less than its coupon barrier value on each valuation date and less than its final barrier value on the final valuation date, such that you will not receive any contingent coupon payments over the term of the securities and will receive significantly less than the stated principal amount of your securities, and possibly nothing, at maturity.

Summary Risk Factors

An investment in the securities is significantly riskier than an investment in conventional debt securities. The securities 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 securities, and are also subject to risks associated with each underlying. Accordingly, the securities are suitable only for investors who are capable of understanding the complexities and risks of the securities. You should consult your own financial, tax and legal advisors as to the risks of an investment in the securities and the suitability of the securities in light of your particular circumstances.

The following is a summary of certain key risk factors for investors in the securities. You should read this summary together with the more detailed description of risks relating to an investment in the securities contained in the section "Risk Factors Relating to the Securities" beginning on page EA-7 in the accompanying product supplement. You should also carefully read 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.

Citigroup Inc. will release quarterly earnings on October 12, 2022, which is after the pricing date but before the issue date of these securities.

- **You may lose a significant portion or all of your investment.** Unlike conventional debt securities, the securities do not provide for the repayment of the stated principal amount at maturity in all circumstances. If the securities are not redeemed prior to maturity, your payment at maturity will depend on the final underlying value of the worst performing underlying on the final valuation date. If the final underlying value of the worst performing underlying on the final valuation date is less than its final barrier value, you will lose 1% of the stated principal amount of your securities for every 1% by which the worst performing underlying on the final valuation date has declined from its initial underlying value. There is no minimum payment at maturity on the securities, and you may lose up to all of your investment.
- **You will not receive any contingent coupon on the contingent coupon payment date following any valuation date on which the closing value of the worst performing underlying on that valuation date is less than its coupon barrier value.** A contingent coupon payment will be made on a contingent coupon payment date if and only if the closing value of the worst performing underlying on the immediately preceding valuation date is greater than or equal to its coupon barrier value. If the closing value of the worst performing underlying on any valuation date is less than its coupon barrier value, you will not receive any contingent coupon payment on the immediately following contingent coupon payment date. If the closing value of the worst performing underlying on each valuation date is below its coupon barrier value, you will not receive any contingent coupon payments over the term of the securities.
- **Higher contingent coupon rates are associated with greater risk.** The securities offer contingent coupon payments at an annualized rate that, if all are paid, would produce a yield that is generally higher than the yield on our conventional debt securities of the same maturity. This higher potential yield is associated with greater levels of expected risk as of the pricing date for the securities, including the risk that you may not receive a contingent coupon payment on one or more, or any, contingent coupon payment dates and the risk that the value of what you receive at maturity may be significantly less than the stated principal amount of your securities and may be zero. The volatility of, and correlation between, the closing values of the underlyings are important factors affecting these risks. Greater expected volatility of, and lower expected correlation between, the closing values of the underlyings as of the pricing date may result in a higher contingent coupon rate, but would also represent a greater expected likelihood as of the pricing date that the closing value of the worst performing underlying on one or more valuation dates will be less than its coupon barrier value, such that you will not receive one or more, or any, contingent coupon payments during the term of the securities and that the final underlying value of the worst performing underlying on the final valuation date will be less than its final barrier value, such that you will not be repaid the stated principal amount of your securities at maturity.
- **The securities are subject to heightened risk because they have multiple underlyings.** The securities are more risky than similar investments that may be available with only one underlying. With multiple underlyings, there is a greater chance that any one underlying will perform poorly, adversely affecting your return on the securities.
- **The securities are subject to the risks of each of the underlyings and will be negatively affected if any one underlying performs poorly.** You are subject to risks associated with each of the underlyings. If any one underlying performs poorly, you will be negatively affected. The securities are not linked to a basket composed of the underlyings, where the blended performance of the underlyings would be better than the performance of the worst performing underlying alone. Instead, you are subject to the full risks of whichever of the underlyings is the worst performing underlying.
- **You will not benefit in any way from the performance of any better performing underlying.** The return on the securities depends solely on the performance of the worst performing underlying, and you will not benefit in any way from the performance of any better performing underlying.
- **You will be subject to risks relating to the relationship between the underlyings.** It is preferable from your perspective for the underlyings to be correlated with each other, in the sense that their closing values tend to increase or decrease at similar times and by similar magnitudes. By investing in the securities, you assume the risk that the underlyings will not exhibit this relationship. The less correlated the underlyings, the more likely it is that any one of the underlyings will perform poorly over the term of the securities. All that is necessary for the securities to perform poorly is for one of the underlyings to perform poorly. It is impossible to predict what the relationship between the underlyings will be over the term of the securities. The underlyings differ in significant ways and, therefore, may not be correlated with each other.
- **You may not be adequately compensated for assuming the downside risk of the worst performing underlying.** The potential contingent coupon payments on the securities are the compensation you receive for assuming the downside risk of the worst performing underlying, as well as all the other risks of the securities. That compensation is effectively "at risk" and may, therefore, be less than you currently anticipate. First, the actual yield you realize on the securities could be lower than you anticipate because the coupon is

“contingent” and you may not receive a contingent coupon payment on one or more, or any, of the contingent coupon payment dates. Second, the contingent coupon payments are the compensation you receive not only for the downside risk of the worst performing underlying, but also for all of the other risks of the securities, including the risk that the securities may be redeemed prior to maturity, interest rate risk and our and Citigroup Inc.’s credit risk. If those other risks increase or are otherwise greater than you currently anticipate, the contingent coupon payments may turn out to be inadequate to compensate you for all the risks of the securities, including the downside risk of the worst performing underlying.

- **We may redeem the securities at our option, which will limit your ability to receive the contingent coupon payments.** We may redeem the securities on any potential redemption date. In the event that we redeem the securities, you will receive the stated principal amount of your securities and the related contingent coupon payment, if any. Thus, the term of the securities may be limited. If we redeem the securities prior to maturity, you will not receive any additional contingent coupon payments. Moreover, you may not be able to reinvest your funds in another investment that provides a similar yield with a similar level of risk. If we redeem the securities prior to maturity, it is likely to be at a time when the underlyings are performing in a manner that would otherwise have been favorable to you. By contrast, if the underlyings are performing unfavorably from your perspective, we are less likely to redeem the securities. If we redeem the securities, we will do so at a time that is advantageous to us and without regard to your interests.
- **The securities offer downside exposure to the worst performing underlying, but no upside exposure to any underlying.** You will not participate in any appreciation in the value of any underlying over the term of the securities. Consequently, your return on the securities will be limited to the contingent coupon payments you receive, if any, and may be significantly less than the return on any underlying over the term of the securities. In addition, as an investor in the securities, you will not receive any dividends or other distributions or have any other rights with respect to any of the underlyings.
- **The performance of the securities will depend on the closing values of the underlyings solely on the valuation dates, which makes the securities particularly sensitive to volatility in the closing values of the underlyings on or near the valuation dates.** Whether the contingent coupon will be paid on any given contingent coupon payment date will depend on the closing values of the underlyings solely on the applicable valuation dates, regardless of the closing values of the underlyings on other days during the term of the securities. If the securities are not redeemed prior to maturity, what you receive at maturity will depend solely on the closing value of the worst performing underlying on the final valuation date, and not on any other day during the term of the securities. Because the performance of the securities depends on the closing values of the underlyings on a limited number of dates, the securities will be particularly sensitive to volatility in the closing values of the underlyings on or near the valuation dates. You should understand that the closing value of each underlying has historically been highly volatile.
- **The securities are subject to the credit risk of Citigroup Global Markets Holdings Inc. and Citigroup Inc.** If we default on our obligations under the securities and Citigroup Inc. defaults on its guarantee obligations, you may not receive anything owed to you under the securities.
- **The securities will not be listed on any securities exchange and you may not be able to sell them prior to maturity.** The securities will not be listed on any securities exchange. Therefore, there may be little or no secondary market for the securities. CGMI currently intends to make a secondary market in relation to the securities and to provide an indicative bid price for the securities on a daily basis. Any indicative bid price for the securities provided by CGMI will be determined in CGMI’s sole discretion, taking into account prevailing market conditions and other relevant factors, and will not be a representation by CGMI that the securities can be sold at that price, or at all. CGMI may suspend or terminate making a market and providing indicative bid prices without notice, at any time and for any reason. If CGMI suspends or terminates making a market, there may be no secondary market at all for the securities because it is likely that CGMI will be the only broker-dealer that is willing to buy your securities prior to maturity. Accordingly, an investor must be prepared to hold the securities until maturity.
- **The estimated value of the securities on the pricing date, based on CGMI’s proprietary pricing models and our internal funding rate, is less than the issue price.** The difference is attributable to certain costs associated with selling, structuring and hedging the securities that are included in the issue price. These costs include (i) any selling concessions or other fees paid in connection with the offering of the securities, (ii) hedging and other costs incurred by us and our affiliates in connection with the offering of the securities and (iii) the expected profit (which may be more or less than actual profit) to CGMI or other of our affiliates in connection with hedging our obligations under the securities. These costs adversely affect the economic terms of the securities because, if they were lower, the economic terms of the securities would be more favorable to you. The economic terms of the securities are also likely to be adversely affected by the use of our internal funding rate, rather than our secondary market rate, to price the securities. See “The estimated value of the securities would be lower if it were calculated based on our secondary market rate” below.
- **The estimated value of the securities was determined for us by our affiliate using proprietary pricing models.** CGMI derived the estimated value disclosed on the cover page of this pricing supplement from its proprietary pricing models. In doing so, it may have made discretionary judgments about the inputs to its models, such as the volatility of, and correlation between, the closing values of the underlyings, dividend yields on the underlyings and interest rates. CGMI’s views on these inputs may differ from your or others’ views, and as an underwriter in this offering, CGMI’s interests may conflict with yours. Both the models and the inputs to the models may prove to be wrong and therefore not an accurate reflection of the value of the securities. Moreover, the estimated value of the securities set forth on the cover page of this pricing supplement may differ from the value that we or our affiliates may determine for the securities for other purposes, including for accounting purposes. You should not invest in the securities because of the estimated value of the securities. Instead, you should be willing to hold the securities to maturity irrespective of the initial estimated value.
- **The estimated value of the securities would be lower if it were calculated based on our secondary market rate.** The estimated value of the securities included in this pricing supplement is calculated based on our internal funding rate, which is the rate at which we are willing to borrow funds through the issuance of the securities. Our internal funding rate is generally lower than our secondary market rate, which is the rate that CGMI will use in determining the value of the securities for purposes of any purchases of the securities from

you in the secondary market. If the estimated value included in this pricing supplement were based on our secondary market rate, rather than our internal funding rate, it would likely be lower. We determine our internal funding rate based on factors such as the costs associated with the securities, which are generally higher than the costs associated with conventional debt securities, and our liquidity needs and preferences. Our internal funding rate is not an interest rate that is payable on the securities.

Because there is not an active market for traded instruments referencing our outstanding debt obligations, CGMI determines our secondary market rate based on the market price of traded instruments referencing the debt obligations of Citigroup Inc., our parent company and the guarantor of all payments due on the securities, but subject to adjustments that CGMI makes in its sole discretion. As a result, our secondary market rate is not a market-determined measure of our creditworthiness, but rather reflects the market's perception of our parent company's creditworthiness as adjusted for discretionary factors such as CGMI's preferences with respect to purchasing the securities prior to maturity.

- **The estimated value of the securities is not an indication of the price, if any, at which CGMI or any other person may be willing to buy the securities from you in the secondary market.** Any such secondary market price will fluctuate over the term of the securities based on the market and other factors described in the next risk factor. Moreover, unlike the estimated value included in this pricing supplement, any value of the securities determined for purposes of a secondary market transaction will be based on our secondary market rate, which will likely result in a lower value for the securities than if our internal funding rate were used. In addition, any secondary market price for the securities will be reduced by a bid-ask spread, which may vary depending on the aggregate stated principal amount of the securities to be purchased in the secondary market transaction, and the expected cost of unwinding related hedging transactions. As a result, it is likely that any secondary market price for the securities will be less than the issue price.
- **The value of the securities prior to maturity will fluctuate based on many unpredictable factors.** The value of your securities prior to maturity will fluctuate based on the closing values of the underlyings, the volatility of, and correlation between, the closing values of the underlyings, dividend yields on the underlyings, interest rates generally, the time remaining to maturity and our and Citigroup Inc.'s creditworthiness, as reflected in our secondary market rate, among other factors described under "Risk Factors Relating to the Securities—Risk Factors Relating to All Securities—The value of your securities prior to maturity will fluctuate based on many unpredictable factors" in the accompanying product supplement. Changes in the closing values of the underlyings may not result in a comparable change in the value of your securities. You should understand that the value of your securities at any time prior to maturity may be significantly less than the issue price.
- **Immediately following issuance, any secondary market bid price provided by CGMI, and the value that will be indicated on any brokerage account statements prepared by CGMI or its affiliates, will reflect a temporary upward adjustment.** The amount of this temporary upward adjustment will steadily decline to zero over the temporary adjustment period. See "Valuation of the Securities" in this pricing supplement.
- **Our offering of the securities is not a recommendation of any underlying.** The fact that we are offering the securities does not mean that we believe that investing in an instrument linked to the underlyings is likely to achieve favorable returns. In fact, as we are part of a global financial institution, our affiliates may have positions (including short positions) in the underlyings or in instruments related to the underlyings, and may publish research or express opinions, that in each case are inconsistent with an investment linked to the underlyings. These and other activities of our affiliates may affect the closing values of the underlyings in a way that negatively affects the value of and your return on the securities.
- **The closing value of an underlying may be adversely affected by our or our affiliates' hedging and other trading activities.** We expect to hedge our obligations under the securities through CGMI or other of our affiliates, who may take positions in the underlyings or in financial instruments related to the underlyings and may adjust such positions during the term of the securities. Our affiliates also take positions in the underlyings or in financial instruments related to the underlyings on a regular basis (taking long or short positions or both), for their accounts, for other accounts under their management or to facilitate transactions on behalf of customers. These activities could affect the closing values of the underlyings in a way that negatively affects the value of and your return on the securities. They could also result in substantial returns for us or our affiliates while the value of the securities declines.
- **We and our affiliates may have economic interests that are adverse to yours as a result of our affiliates' business activities.** Our affiliates engage in business activities with a wide range of companies. These activities include extending loans, making and facilitating investments, underwriting securities offerings and providing advisory services. These activities could involve or affect the underlyings in a way that negatively affects the value of and your return on the securities. They could also result in substantial returns for us or our affiliates while the value of the securities declines. In addition, in the course of this business, we or our affiliates may acquire non-public information, which will not be disclosed to you.
- **The calculation agent, which is an affiliate of ours, will make important determinations with respect to the securities.** If certain events occur during the term of the securities, such as market disruption events and other events with respect to an underlying, CGMI, as calculation agent, will be required to make discretionary judgments that could significantly affect your return on the securities. In making these judgments, the calculation agent's interests as an affiliate of ours could be adverse to your interests as a holder of the securities. See "Risk Factors Relating to the Securities—Risk Factors Relating to All Securities—The calculation agent, which is an affiliate of ours, will make important determinations with respect to the securities" in the accompanying product supplement.
- **Changes that affect the underlyings may affect the value of your securities.** The sponsors of the underlyings may at any time make methodological changes or other changes in the manner in which they operate that could affect the values of the underlyings. We are not affiliated with any such underlying sponsor and, accordingly, we have no control over any changes any such sponsor may make. Such changes could adversely affect the performance of the underlyings and the value of and your return on the securities.
- **The U.S. federal tax consequences of an investment in the securities are unclear.** There is no direct legal authority regarding the proper U.S. federal tax treatment of the securities, 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 securities are uncertain, and the IRS or a court might not agree with the treatment of the securities as described in “United States Federal Tax Considerations” below. If the IRS were successful in asserting an alternative treatment of the securities, the tax consequences of the ownership and disposition of the securities might be materially and adversely affected. Moreover, future legislation, Treasury regulations or IRS guidance could adversely affect the U.S. federal tax treatment of the securities, possibly retroactively.

Non-U.S. investors should note that persons having withholding responsibility in respect of the securities may withhold on any coupon payment paid to a non-U.S. investor, generally at a rate of 30%. To the extent that we have withholding responsibility in respect of the securities, we intend to so withhold.

You should read carefully the discussion under “United States Federal Tax Considerations” and “Risk Factors Relating to the Securities” in the accompanying product supplement and “United States Federal Tax Considerations” in this pricing supplement. You should also consult your tax adviser regarding the U.S. federal tax consequences of an investment in the securities, as well as tax consequences arising under the laws of any state, local or non-U.S. taxing jurisdiction.

- **The tax disclosure is subject to confirmation.** The information set forth under “United States Federal Tax Considerations” in this pricing supplement remains subject to confirmation by our counsel following the pricing of the securities. If that information cannot be confirmed by our counsel, you may be asked to accept revisions to that information in connection with your purchase. Under these circumstances, if you decline to accept revisions to that information, your purchase of the securities will be canceled.

Information About the Dow Jones Industrial Average™

The Dow Jones Industrial Average™ is a price-weighted index rather than a market capitalization-weighted index. The Dow Jones Industrial Average™ consists of 30 common stocks chosen as representative of the broad market of U.S. industry. It is calculated and maintained by S&P Dow Jones Indices LLC.

Please refer to the section “Equity Index Descriptions— The Dow Jones Industrial Average™” in the accompanying underlying supplement for additional information.

We have derived all information regarding the Dow Jones Industrial Average™ from publicly available information and have not independently verified any information regarding the Dow Jones Industrial Average™. This pricing supplement relates only to the securities and not to the Dow Jones Industrial Average™. We make no representation as to the performance of the Dow Jones Industrial Average™ over the term of the securities.

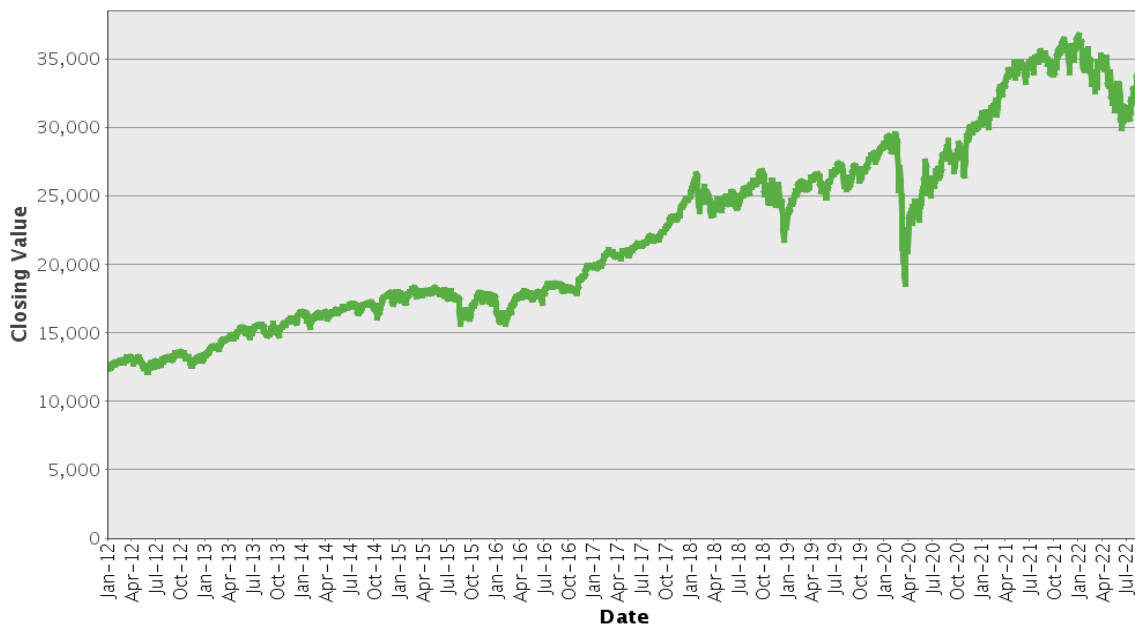
The securities represent obligations of Citigroup Global Markets Holdings Inc. (guaranteed by Citigroup Inc.) only. The sponsor of the Dow Jones Industrial Average™ is not involved in any way in this offering and has no obligation relating to the securities or to holders of the securities.

Historical Information

The closing value of the Dow Jones Industrial Average™ on August 26, 2022 was 32,283.40.

The graph below shows the closing value of the Dow Jones Industrial Average™ for each day such value was available from January 3, 2012 to August 26, 2022. We obtained the closing values from Bloomberg L.P., without independent verification. You should not take historical closing values as an indication of future performance.

**Dow Jones Industrial Average™ – Historical Closing Values
January 3, 2012 to August 26, 2022**



Information About the Nasdaq-100 Index®

The Nasdaq-100 Index® is a modified market capitalization-weighted index of stocks of the 100 largest non-financial companies listed on the Nasdaq Stock Market. All stocks included in the Nasdaq-100 Index® are traded on a major U.S. exchange. The Nasdaq-100 Index® was developed by the Nasdaq Stock Market, Inc. and is calculated, maintained and published by Nasdaq, Inc.

Please refer to the section “Equity Index Descriptions— The NASDAQ-100 Index®” in the accompanying underlying supplement for additional information.

We have derived all information regarding the Nasdaq-100 Index® from publicly available information and have not independently verified any information regarding the Nasdaq-100 Index®. This pricing supplement relates only to the securities and not to the Nasdaq-100 Index®. We make no representation as to the performance of the Nasdaq-100 Index® over the term of the securities.

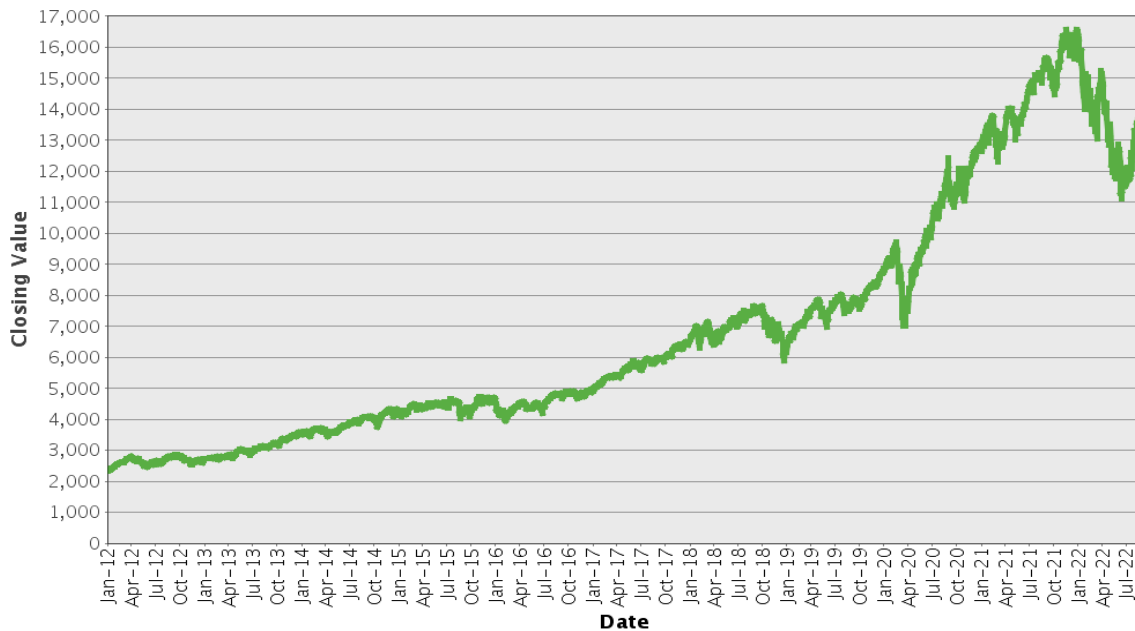
The securities represent obligations of Citigroup Global Markets Holdings Inc. (guaranteed by Citigroup Inc.) only. The sponsor of the Nasdaq-100 Index® is not involved in any way in this offering and has no obligation relating to the securities or to holders of the securities.

Historical Information

The closing value of the Nasdaq-100 Index® on August 26, 2022 was 12,605.17.

The graph below shows the closing value of the Nasdaq-100 Index® for each day such value was available from January 3, 2012 to August 26, 2022. We obtained the closing values from Bloomberg L.P., without independent verification. You should not take historical closing values as an indication of future performance.

Nasdaq-100 Index® – Historical Closing Values
January 3, 2012 to August 26, 2022



Information About the S&P 500® Index

The S&P 500® Index consists of the common stocks of 500 issuers selected to provide a performance benchmark for the large capitalization segment of the U.S. equity markets. It is calculated and maintained by S&P Dow Jones Indices LLC.

Please refer to the section “Equity Index Descriptions— The S&P U.S. Indices” in the accompanying underlying supplement for additional information.

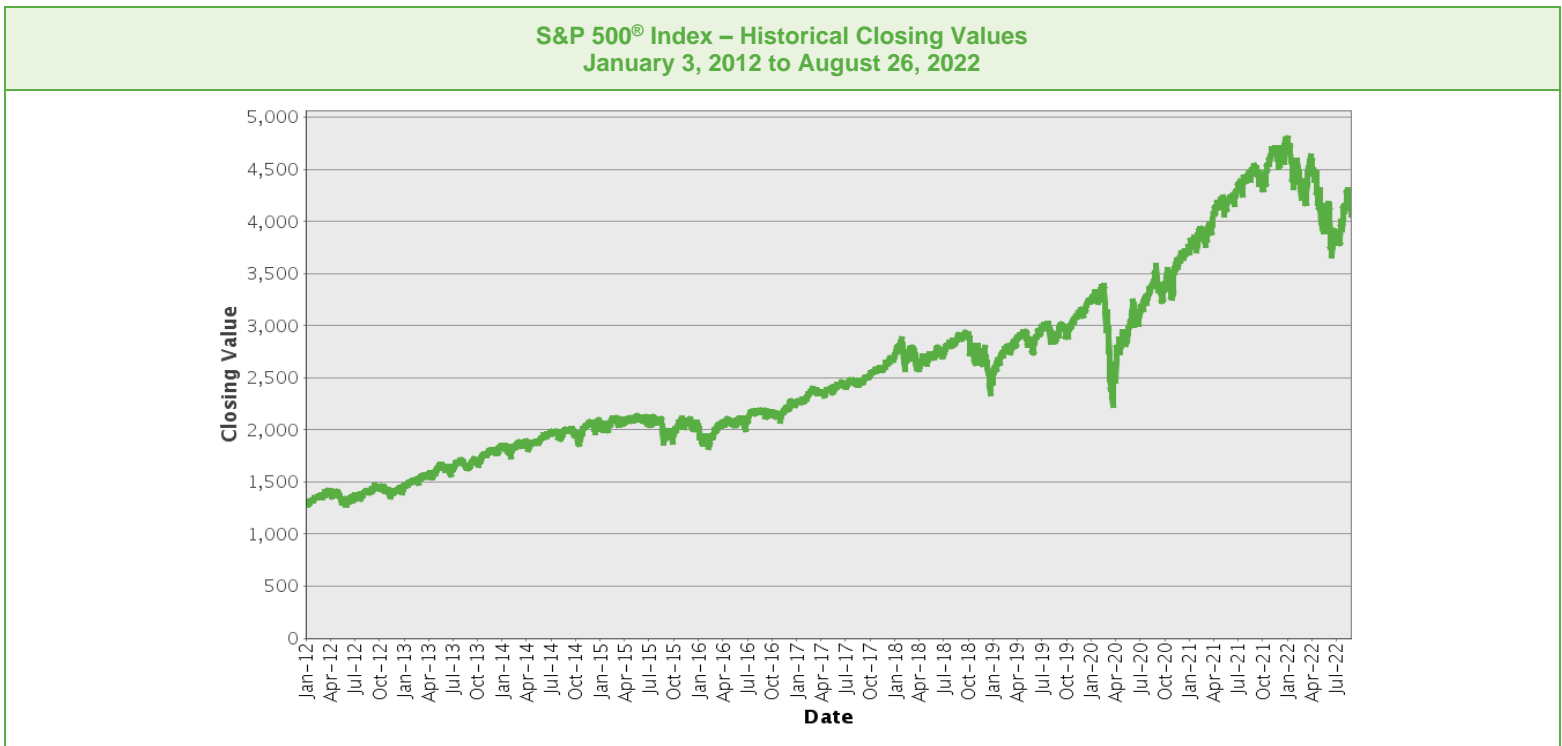
We have derived all information regarding the S&P 500® Index from publicly available information and have not independently verified any information regarding the S&P 500® Index. This pricing supplement relates only to the securities and not to the S&P 500® Index. We make no representation as to the performance of the S&P 500® Index over the term of the securities.

The securities represent obligations of Citigroup Global Markets Holdings Inc. (guaranteed by Citigroup Inc.) only. The sponsor of the S&P 500® Index is not involved in any way in this offering and has no obligation relating to the securities or to holders of the securities.

Historical Information

The closing value of the S&P 500® Index on August 26, 2022 was 4,057.66.

The graph below shows the closing value of the S&P 500® Index for each day such value was available from January 3, 2012 to August 26, 2022. We obtained the closing values from Bloomberg L.P., without independent verification. You should not take historical closing values as an indication of future performance.



United States Federal Tax Considerations

You should read carefully the discussion under “United States Federal Tax Considerations” and “Risk Factors Relating to the Securities” in the accompanying product supplement and “Summary Risk Factors” in this pricing supplement.

Due to the lack of any controlling legal authority, there is substantial uncertainty regarding the U.S. federal tax consequences of an investment in the securities. In connection with any information reporting requirements we may have in respect of the securities under applicable law, we intend (in the absence of an administrative determination or judicial ruling to the contrary) to treat the securities for U.S. federal income tax purposes as prepaid forward contracts with associated coupon payments that will be treated as gross income to you at the time received or accrued in accordance with your regular method of tax accounting. We expect that our counsel will advise us that, based on current market conditions, this treatment of the securities is reasonable under current law, but that it is unable to conclude affirmatively that this treatment is more likely than not to be upheld, and that alternative treatments are possible. The information set forth under this section remains subject to confirmation by our counsel following the pricing of the securities. If that information cannot be confirmed by our counsel, you may be asked to accept revisions to that information in connection with your purchase. Under these circumstances, if you decline to accept revisions to that information, your purchase of the securities will be canceled.

Assuming this treatment of the securities is respected and subject to the discussion in “United States Federal Tax Considerations” in the accompanying product supplement, the following U.S. federal income tax consequences should result under current law:

- Any coupon payments on the securities should be taxable as ordinary income to you at the time received or accrued in accordance with your regular method of accounting for U.S. federal income tax purposes.
- Upon a sale or exchange of a security (including retirement at maturity), you should recognize capital gain or loss equal to the difference between the amount realized and your tax basis in the security. For this purpose, the amount realized does not include any coupon paid on retirement and may not include sale proceeds attributable to an accrued coupon, which may be treated as a coupon payment. Such gain or loss should be long-term capital gain or loss if you held the security for more than one year.

We do not plan to request a ruling from the IRS regarding the treatment of the securities. An alternative characterization of the securities could materially and adversely affect the tax consequences of ownership and disposition of the securities, including the timing and character of income recognized. In addition, 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. Furthermore, 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 securities, possibly with retroactive effect. You should consult your tax adviser regarding possible alternative tax treatments of the securities and potential changes in applicable law.

Withholding Tax on Non-U.S. Holders. Because significant aspects of the tax treatment of the securities are uncertain, persons having withholding responsibility in respect of the securities may withhold on any coupon payment paid to Non-U.S. Holders (as defined in the accompanying product supplement), generally at a rate of 30%. To the extent that we have (or an affiliate of ours has) withholding responsibility in respect of the securities, we intend to so withhold. In order to claim an exemption from, or a reduction in, the 30% withholding, you may need to comply with certification requirements to establish that you are not a U.S. person and are eligible for such an exemption or reduction under an applicable tax treaty. You should consult your tax adviser regarding the tax treatment of the securities, including the possibility of obtaining a refund of any amounts withheld and the certification requirement described above.

As discussed under “United States Federal Tax Considerations—Tax Consequences to Non-U.S. Holders” in the accompanying product supplement, Section 871(m) of the Code and Treasury regulations promulgated thereunder (“Section 871(m)”) generally impose a 30% withholding tax on dividend equivalents paid or deemed paid to Non-U.S. Holders with respect to certain financial instruments linked to U.S. equities (“U.S. Underlying Equities”) or indices that include U.S. Underlying Equities. Section 871(m) generally applies to instruments that substantially replicate the economic performance of one or more U.S. Underlying Equities, as determined based on tests set forth in the applicable Treasury regulations. However, the regulations, as modified by an IRS notice, exempt financial instruments issued prior to January 1, 2025 that do not have a “delta” of one. Based on the terms of the securities and market conditions as of the date of this preliminary pricing supplement, we expect that the securities will not be treated as transactions that have a “delta” of one within the meaning of the regulations with respect to any U.S. Underlying Equity and, therefore, should not be subject to withholding tax under Section 871(m). However, the final determination regarding the treatment of the securities under Section 871(m) will be made as of the pricing date for the securities, and it is possible that the securities will be subject to withholding tax under Section 871(m) based on the circumstances as of that date.

A determination that the securities are not subject to Section 871(m) is not binding on the IRS, and the IRS may disagree with this treatment. Moreover, Section 871(m) is complex and its application may depend on your particular circumstances, including your other transactions. You should consult your tax adviser regarding the potential application of Section 871(m) to the securities.

We will not be required to pay any additional amounts with respect to amounts withheld.

You should read the section entitled “United States Federal Tax Considerations” in the accompanying product supplement.

You should also consult your tax adviser regarding all aspects of the U.S. federal income and estate tax consequences of an investment in the securities and any tax consequences arising under the laws of any state, local or non-U.S. taxing jurisdiction.

Supplemental Plan of Distribution

CGMI, an affiliate of Citigroup Global Markets Holdings Inc. and the underwriter of the sale of the securities, is acting as principal and will receive an underwriting fee of up to \$1.50 for each security sold in this offering. The actual underwriting fee will be equal to the selling concession provided to selected dealers, as described in this paragraph. From this underwriting fee, CGMI will pay selected dealers not affiliated with CGMI a variable

selling concession of up to \$1.50 for each security they sell. For the avoidance of doubt, any fees or selling concessions described in this pricing supplement will not be rebated if we redeem the securities prior to maturity.

See “Plan of Distribution; Conflicts of Interest” in the accompanying product supplement and “Plan of Distribution” in each of the accompanying prospectus supplement and prospectus for additional information.

Valuation of the Securities

CGMI calculated the estimated value of the securities set forth on the cover page of this pricing supplement based on proprietary pricing models. CGMI's proprietary pricing models generated an estimated value for the securities by estimating the value of a hypothetical package of financial instruments that would replicate the payout on the securities, which consists of a fixed-income bond (the “bond component”) and one or more derivative instruments underlying the economic terms of the securities (the “derivative component”). CGMI calculated the estimated value of the bond component using a discount rate based on our internal funding rate. CGMI calculated the estimated value of the derivative component based on a proprietary derivative-pricing model, which generated a theoretical price for the instruments that constitute the derivative component based on various inputs, including the factors described under “Summary Risk Factors—The value of the securities prior to maturity will fluctuate based on many unpredictable factors” in this pricing supplement, but not including our or Citigroup Inc.'s creditworthiness. These inputs may be market-observable or may be based on assumptions made by CGMI in its discretionary judgment.

The estimated value of the securities is a function of the terms of the securities and the inputs to CGMI's proprietary pricing models. As of the date of this preliminary pricing supplement, it is uncertain what the estimated value of the securities will be on the pricing date because certain terms of the securities have not yet been fixed and because it is uncertain what the values of the inputs to CGMI's proprietary pricing models will be on the pricing date.

For a period of approximately three months following issuance of the securities, the price, if any, at which CGMI would be willing to buy the securities from investors, and the value that will be indicated for the securities on any brokerage account statements prepared by CGMI or its affiliates (which value CGMI may also publish through one or more financial information vendors), will reflect a temporary upward adjustment from the price or value that would otherwise be determined. This temporary upward adjustment represents a portion of the hedging profit expected to be realized by CGMI or its affiliates over the term of the securities. The amount of this temporary upward adjustment will decline to zero on a straight-line basis over the three-month temporary adjustment period. However, CGMI is not obligated to buy the securities from investors at any time. See “Summary Risk Factors—The securities will not be listed on any securities exchange and you may not be able to sell them prior to maturity.”

Contact

Clients may contact their local brokerage representative. Third-party distributors may contact Citi Structured Investment Sales at (212) 723-7005.

© 2022 Citigroup Global Markets Inc. All rights reserved. Citi and Citi and Arc Design are trademarks and service marks of Citigroup Inc. or its affiliates and are used and registered throughout the world.