

CITIGROUP GLOBAL MARKETS HOLDINGS INC.

HALF-YEARLY FINANCIAL REPORT

FOR THE SIX MONTHS ENDED JUNE 30, 2022

August 31, 2022

Responsibility Statement

The below named authorized officers of Citigroup Global Markets Holdings Inc., a New York corporation (the “Company”), confirm that to the best of their knowledge: (i) the accompanying financial statements (a) were prepared in accordance with Generally Accepted Accounting Principles in the United States of America and (b) give a true and fair view of the assets, liabilities, financial position and income or loss of the Company and the undertakings included in the consolidation taken as a whole; and (ii) the accompanying Management Report includes (a) a fair review of the development and performance of the business and position of the Company and the undertakings included in the consolidation taken as a whole and (b) a description of the principal risks and uncertainties that they face.

CITIGROUP GLOBAL MARKETS HOLDINGS INC.

By: /s/ Shawn K. Feeney
Shawn K. Feeney
Chairman and
Chief Executive Officer

By: /s/ Daniel S. Palomaki
Daniel S. Palomaki
Chief Financial Officer

CITIGROUP GLOBAL MARKETS HOLDINGS INC.

MANAGEMENT REPORT

CITIGROUP GLOBAL MARKETS HOLDINGS INC.

Citigroup Global Markets Holdings Inc. (**CGMHI**), operating through its subsidiaries, engages in full-service investment banking and securities brokerage business. Throughout these disclosures, “CGMHI” and the “Company” refer to Citigroup Global Markets Holdings Inc. and its consolidated subsidiaries. CGMHI is managed in the *Institutional Clients Group (ICG)* operating segment.

CGMHI's parent, Citigroup Inc. (**Citigroup**, or **Citi**), is a global diversified financial services holding company whose businesses provide consumers, corporations, governments and institutions with a broad, yet focused, range of financial products and services, including consumer banking and credit, corporate and investment banking, securities brokerage, trade and securities services and wealth management. Citi has approximately 200 million customer accounts and does business in more than 160 countries and jurisdictions.

As of the first quarter of 2022, Citigroup implemented changes in its operating segments and reporting units to reflect its recent strategic refresh (for additional information, see “Strategic Refresh—Market Exit and Planned Revision to Reporting Structure” in Citi’s 2021 Form 10-K). As a result, Citigroup is managed pursuant to three operating segments: *Institutional Clients Group*, *Personal Banking and Wealth Management* and *Legacy Franchises*, with the remaining operations in *Corporate/Other*.

The principal offices of CGMHI are located at 388 Greenwich Street, New York, NY, 10013, telephone number (212) 559-1000. CGMHI was incorporated in New York on 23 February 1977 and is the successor to Salomon Smith Barney Holdings Inc. On 7 April 2003, CGMHI filed a Restated Certificate of Incorporation, changing its name from Salomon Smith Barney Holdings Inc. to Citigroup Global Markets Holdings Inc.

Institutional Clients Group

Institutional Clients Group (ICG) includes Services, Markets and Banking. *ICG* provides corporate, institutional and public sector clients around the world with a full range of wholesale banking products and services, including fixed income and equity sales and trading, foreign exchange, prime brokerage, derivative services, equity and fixed income research, corporate lending, investment banking and advisory services, cash management, trade finance and securities services. *ICG* transacts with clients in both cash instruments and derivatives, including fixed income, foreign currency, equity and commodity products.

ICG revenue is generated primarily from fees and spreads associated with these activities. *ICG* earns fee income for assisting clients with transactional services and clearing and providing brokerage and investment banking services and other such activities. Such fees are recognized at the point in time when Citigroup’s performance under the terms of a contractual arrangement is completed, which is typically at the trade/execution date or closing of a transaction. Revenue generated from these activities is recorded in *Commissions and fees* and *Investment banking*. Revenue is also generated from assets under custody and administration, which is recognized as/when the associated promised service is satisfied, which normally occurs at the point in time the service is requested by the customer and provided by Citi. Revenue generated from these activities is primarily recorded in *Fiduciary fees*.

In addition, as a market maker, *ICG* facilitates transactions, including holding product inventory to meet client demand, and earns the differential between the price at which it buys and sells the products. These price differentials and the unrealized gains and losses on the inventory are recorded in *Principal transactions*. Interest income earned on assets held, less interest paid on long- and short-term debt, is recorded as *Net interest income*.

The amount and types of Markets revenues are impacted by a variety of interrelated factors, including market liquidity; changes in market variables such as interest rates, foreign exchange rates, equity prices, commodity prices and credit spreads, as well as their implied volatilities; investor confidence and other macroeconomic conditions. Assuming all other market conditions do not change, increases in client activity levels or bid/offer spreads generally result in increases in revenues. However, changes in market conditions can significantly impact client activity levels, bid/offer

spreads and the fair value of product inventory. For example, a decrease in market liquidity may increase bid/offer spreads, decrease client activity levels and widen credit spreads on product inventory positions.

ICG's management of the Markets businesses involves daily monitoring and evaluation of the above factors at the trading desk as well as the country level.

In the Markets businesses, client revenues are those revenues directly attributable to client transactions at the time of inception, including commissions, interest or fees earned. Client revenues do not include the results of client facilitation activities (e.g., holding product inventory in anticipation of client demand) or the results of certain economic hedging activities.

ICG's international presence is supported by trading floors in approximately 80 countries and a proprietary network in 95 countries and jurisdictions. At June 30, 2022, *ICG* had \$1.7 trillion in assets and \$829 billion in deposits. Securities services managed \$21.1 trillion in assets under custody and administration at June 30, 2022, of which Citi provided both custody and administrative services to certain clients related to \$1.7 trillion of such assets. Managed assets under trust were \$4.0 trillion at June 30, 2022.

INFORMATION RELATING TO DERIVATIVE INSTRUMENTS AND RISK MANAGEMENT DERIVATIVES ACTIVITIES

In the ordinary course of business, the Company enters into various types of derivative transactions, which include:

- *Futures and forward contracts*, which are commitments to buy or sell at a future date a financial instrument, commodity or currency at a contracted price that may be settled in cash or through delivery of an item readily convertible to cash.
- *Swap contracts*, which are commitments to settle in cash at a future date or dates that may range from a few days to a number of years, based on differentials between specified indices or financial instruments, as applied to a notional principal amount.
- *Option contracts*, which give the purchaser, for a premium, the right, but not the obligation, to buy or sell within a specified time a financial instrument, commodity or currency at a contracted price that may also be settled in cash, based on differentials between specified indices or prices.

Swaps, forwards and some option contracts are over-the-counter (OTC) derivatives that are bilaterally negotiated with counterparties and settled with those counterparties, except for swap contracts that are novated and "cleared" through central counterparties (CCPs). Futures contracts and other option contracts are standardized contracts that are traded on an exchange with a CCP as the counterparty from the inception of the transaction. Citigroup enters into derivative contracts relating to interest rate, foreign currency, commodity and other market/credit risks for the following reasons:

- *Trading Purposes*: The Company trades derivatives as an active market maker. The Company offers its customers derivatives in connection with their risk management actions to transfer, modify or reduce their interest rate, foreign exchange and other market/credit risks or for their own trading purposes. The Company also manages its derivative risk positions through offsetting trade activities, controls focused on price verification and daily reporting of positions to senior managers.
- *Hedging*: The Company uses derivatives in connection with its own risk management activities to hedge certain risks. Hedging may be accomplished by applying hedge accounting in accordance with ASC 815, *Derivatives and Hedging*. For example, CGMHI issues fixed-rate long-term debt and then enters into a receive-fixed, pay-variable-rate interest rate swap with the same tenor and notional amount to synthetically convert the interest payments to a net variable-rate basis. This strategy is the most common form of an interest rate hedge, as it minimizes net interest cost in certain yield curve environments. Derivatives are also used to manage market risks inherent in specific groups of on-balance sheet assets and liabilities, including commodities and borrowings.

Derivatives may expose the Company to market, credit or liquidity risks in excess of the amounts recorded on the Consolidated Statement of Financial Condition. Market risk on a derivative product is the exposure created by potential fluctuations in interest rates, market prices, foreign exchange rates and other factors and is a function of the type of product, the volume of transactions, the tenor and terms of the agreement and the underlying volatility. Credit risk is the exposure to loss in the event of nonperformance by the other party to satisfy a derivative liability where the value of any collateral held by CGMHI is not adequate to cover such losses. The recognition in earnings of unrealized gains on derivative transactions is subject to management's assessment of the probability of counterparty default. Liquidity risk is the potential exposure that arises when the size of a derivative position may affect the ability to monetize the position in a reasonable period of time and at a reasonable cost in periods of high volatility and financial stress.

Derivative transactions are customarily documented under industry standard master netting agreements, which provide that following an event of default, the non-defaulting party may promptly terminate all transactions between the parties and determine the net amount due to be paid to, or by, the defaulting party. Events of default include (i) failure to make a payment on a derivative transaction that remains uncured following applicable notice and grace periods, (ii) breach of agreement that remains uncured after applicable notice and grace periods, (iii) breach of a representation, (iv) cross default, either to third-party debt or to other derivative transactions entered into between the parties, or, in some cases, their affiliates, (v) the occurrence of a merger or consolidation that results in the creditworthiness of a party becoming materially weaker and (vi) the cessation or repudiation of any applicable guarantee or other credit support document. Obligations under master netting agreements are often secured by collateral posted under an industry standard credit support annex to the master netting agreement. An event of default may also occur under a credit support annex if a party fails to make a collateral delivery that remains uncured following applicable notice and grace periods.

The netting and collateral rights incorporated in the master netting agreements are considered to be legally enforceable if a supportive legal opinion has been obtained from counsel of recognized standing that provides (i) the requisite level of certainty regarding enforceability and (ii) that the exercise of rights by the non-defaulting party to terminate and close-out transactions on a net basis under these agreements will not be stayed or avoided under applicable law upon an event of default, including bankruptcy, insolvency or similar proceeding.

A legal opinion may not be sought for certain jurisdictions where local law is silent or unclear as to the enforceability of such rights or where adverse case law or conflicting regulation may cast doubt on the enforceability of such rights. In some jurisdictions and for some counterparty types, the insolvency law may not provide the requisite level of certainty. For example, this may be the case for certain sovereigns, municipalities, central banks and U.S. pension plans.

Exposure to credit risk on derivatives is affected by market volatility, which may impair the ability of counterparties to satisfy their obligations to the Company. Credit limits are established and closely monitored for customers engaged in derivatives transactions. CGMHI considers the level of legal certainty regarding enforceability of its offsetting rights under master netting agreements and credit support annexes to be an important factor in its risk management process. Specifically, CGMHI generally transacts much lower volumes of derivatives under master netting agreements where CGMHI does not have the requisite level of legal certainty regarding enforceability, because such derivatives consume greater amounts of single counterparty credit limits than those executed under enforceable master netting agreements.

Cash collateral and security collateral in the form of G10 government debt securities are often posted by a party to a master netting agreement to secure the net open exposure of the other party; the receiving party is free to commingle/rehypothecate such collateral in the ordinary course of its business. Nonstandard collateral such as corporate bonds, municipal bonds, U.S. agency securities and/or MBS may also be pledged as collateral for derivative transactions. Security collateral posted to open and maintain a master netting agreement with a counterparty, in the form of cash and/or securities, may from time to time be segregated in an account at a third-party custodian pursuant to a tri-party account control agreement.

RISK FACTORS

(Extracted from Citigroup's Annual Report on Form 10-K for the fiscal year ended December 31, 2021, filed with the U.S. Securities and Exchange Commission on the 25th day of February, 2022.)

The following discussion sets forth what management currently believes could be the material risks and uncertainties that could impact Citi's businesses, results of operations and financial condition. Other risks and uncertainties, including those not currently known to Citi or its management, could also negatively impact Citi's businesses, results of operations and financial condition. Thus, the following should not be considered a complete discussion of all of the risks and uncertainties that Citi may face.

MARKET-RELATED RISKS

Macroeconomic, Geopolitical and Other Challenges and Uncertainties Globally Could Have a Negative Impact on Citi's Businesses and Results of Operations.

In addition to the significant macroeconomic challenges posed by the pandemic (see the pandemic-related risk factor below), Citi has experienced, and could experience in the future, negative impacts to its businesses and results of operations as a result of other macroeconomic, geopolitical and other challenges, uncertainties and volatility.

For example, the recent action of Russian military forces and support personnel in Ukraine has escalated tensions between Russia and the U.S., NATO, the EU and the U.K. The U.S. has imposed, and is likely to impose material additional, financial and economic sanctions and export controls against certain Russian organizations and/or individuals, with similar actions either implemented or planned by the EU and the U.K. and other jurisdictions. During the week of February 21, 2022, the U.S., the U.K., and the EU each imposed packages of financial and economic sanctions that, in various ways, constrain transactions with numerous Russian entities and individuals; transactions in Russian sovereign debt; and investment, trade, and financing to, from, or in certain regions of Ukraine. Citi's ability to engage in activity with certain consumer and institutional businesses in Russia and Ukraine or involving certain Russian or Ukrainian businesses and customers is dependent in part upon whether such engagement is restricted under any current or expected U.S., EU and other countries or U.K. sanctions and laws. Sanctions and export controls, as well as any actions by Russia, could adversely affect Citi's business activities and customers in and from Russia and Ukraine. Moreover, actions by Russia, and any further measures taken by the U.S. or its allies, could have negative impacts on regional and global financial markets and economic conditions. For additional information about these and other related risks, see the operational processes and systems, cybersecurity and emerging markets risk factors below.

Additionally, governmental fiscal and monetary actions, or expected actions, such as changes in interest rate policies and any program implemented by a central bank to change the size of its balance sheet, could significantly impact interest rates, economic growth rates, the volatility of global financial markets, foreign exchange rates and global capital flows. Further, it remains uncertain to what extent central banks may keep interest rates low or whether central banks might raise interest rates or reduce the size of their balance sheets, particularly as inflationary pressures continue and the U.S. and global economies continue to improve. While earlier in the pandemic the Federal Reserve Board (FRB) and other central banks took actions to support the global economy, including by further reducing their benchmark interest rates, mismatches between supply and demand of goods and services contributed to a rise in inflation in 2021, prompting the FRB to announce the approaching end of the period of extraordinarily low interest rates.

Interest rates on loans Citi makes are typically based off or set at a spread over a benchmark interest rate, and would likely decline or rise as benchmark rates decline or rise, respectively. While the interest rates at which Citi pays depositors are already low and unlikely to decline much further, declining or continued low interest rates for loans could further compress Citi's net interest income. Citi's net interest income could also be adversely affected due to a flattening of the interest rate yield curve (e.g., a lower spread between shorter-term versus longer-term interest rates), as Citi, similar to other banks, typically pays interest on deposits based on shorter-term interest rates and earns money on loans based on longer-term interest rates.

In contrast, an abrupt and sustained increase in interest rates could interfere with the global macroeconomic recovery, whether due to continued or increased inflationary pressures or otherwise. And while Citi estimates its overall net interest income would generally increase due to higher interest rates, higher rates could adversely affect Citi's funding costs, levels of deposits in its consumer and institutional businesses and certain business or product revenues. For additional information on Citi's interest rate risk, see "Managing Global Risk—Market Risk—Net Interest Income at Risk" below.

Additional areas of uncertainty include, among others, an elevated level of inflation resulting in adverse spill-over effects; the ability of Congress to raise the federal debt ceiling; slowing of the Chinese economy, including negative economic impacts associated with such slowdown or any policy actions; significant disruptions and volatility in financial markets; other geopolitical tensions and conflicts; protracted or widespread trade tensions; financial market, other economic and political disruption driven by anti-establishment movements; natural disasters; other pandemics; and election outcomes. For example, Citi's market-making businesses can suffer losses resulting from the widening of credit spreads due to unanticipated changes in financial markets. In addition, adverse developments or downturns in one or more of the world's larger economies would likely have a significant impact on the global economy or the economies of other countries because of global financial and economic linkages.

These and additional global macroeconomic, geopolitical and other challenges, uncertainties and volatilities have negatively impacted, and could continue to negatively impact, Citi's businesses, results of operations and financial condition, including its credit costs, revenues across *ICG* and *GCB* and *AOCI* (which would in turn negatively impact Citi's book and tangible book value).

STRATEGIC RISKS

Rapidly Evolving Challenges and Uncertainties Related to the COVID-19 Pandemic in the U.S. and Globally Will Likely Continue to Have Negative Impacts on Citi's Businesses and Results of Operations and Financial Condition

The COVID-19 pandemic has affected all of the countries and jurisdictions in which Citi operates, including severely impacting global health, financial markets, consumer and business spending and economic conditions. The extent of the future pandemic impacts remain uncertain and will likely evolve by region, country or state, largely depending on the duration and severity of the public health consequences, including the duration and further spread of the coronavirus as well as any variants becoming more prevalent and impactful; further production, distribution, acceptance and effectiveness of vaccines; availability and efficiency of testing; the public response; and government actions. The future impacts to global economic conditions may include, among others:

- further disruption of global supply chains;
- higher inflation;
- higher interest rates;
- significant disruption and volatility in financial markets;
- additional closures, reduced activity and failures of many businesses, leading to loss of revenues and net losses;
- further institution of social distancing and restrictions on businesses and the movement of the public in and among the U.S. and other countries; and
- reduced U.S. and global economic output.

The pandemic has had, and may continue to have, negative impacts on Citi's businesses and overall results of operations and financial condition, which could be material. The extent of the impact on Citi's operations and financial performance, including its ability to execute its business strategies and initiatives, will continue to depend significantly on future developments in the U.S. and globally. Such developments are uncertain and cannot be predicted, including the course of the coronavirus, as well as any weakness or slowing in the economic recovery or a further economic downturn, whether due to further supply chain disruptions, inflation trends, higher interest rates or otherwise.

The pandemic may not be sufficiently contained for an extended period of time. A prolonged health crisis could reduce economic activity in the U.S. and other countries, resulting in additional declines or weakness in employment trends and business and consumer confidence. These factors could negatively impact global economic activity and

markets; cause a continued decline in the demand for Citi's products and services and in its revenues; further increase Citi's credit and other costs; and may result in impairment of long-lived assets or goodwill. These factors could also cause an increase in Citi's balance sheet, risk-weighted assets and ACL, resulting in a decline in regulatory capital ratios or liquidity measures, as well as regulatory demands for higher capital levels and/or limitations or reductions in capital distributions (such as common share repurchases and dividends). Moreover, any disruption or failure of Citi's performance of, or its ability to perform, key business functions, as a result of the continued spread of COVID-19 or otherwise, could adversely affect Citi's operations.

The impact of the pandemic on Citi's consumer and corporate borrowers will vary by sector or industry, with some borrowers experiencing greater stress levels, particularly as credit and customer assistance support further winds down, which could lead to increased pressure on their results of operations and financial condition, increased borrowings or credit ratings downgrades, thus likely leading to higher credit costs for Citi. These borrowers include, among others, businesses that are more directly impacted by the institution of social distancing, the movement of the public and store closures. In addition, stress levels ultimately experienced by Citi's borrowers may be different from and more intense than assumptions made in prior estimates or models used by Citi, resulting in an increase in Citi's ACL or net credit losses, particularly as the benefits of fiscal stimulus and government support programs diminish.

Ongoing legislative and regulatory changes in the U.S. and globally to address the economic impact from the pandemic could further affect Citi's businesses, operations and financial performance. Citi could also face challenges, including legal and reputational, and scrutiny in its efforts to provide relief measures. Such efforts have resulted in, and may continue to result in, litigation, including class actions, and regulatory and government actions and proceedings. Such actions may result in judgments, settlements, penalties and fines adverse to Citi. In addition, the different types of government actions could vary in scale and duration across jurisdictions and regions with varying degrees of effectiveness.

Citi has taken measures to maintain the health and safety of its colleagues; however, these measures could result in additional expenses, and illness of employees could negatively affect staffing for a period of time. In addition, Citi's ability to recruit, hire and onboard colleagues in key areas could be negatively impacted by pandemic restrictions as well as Citi's COVID-19 vaccination requirement (see the qualified colleagues risk factor below).

Further, it is unclear how the macroeconomic or business environment or societal norms may be impacted after the pandemic. The post-pandemic environment may undergo unexpected developments or changes in financial markets, fiscal, monetary, tax and regulatory environments and consumer customer and corporate client behavior. These developments and changes could have an adverse impact on Citi's results of operations and financial condition. Ongoing business and regulatory uncertainties and changes may make Citi's longer-term business, balance sheet and strategic and budget planning more difficult or costly. Citi and its management and businesses may also experience increased or different competitive and other challenges in this environment. To the extent that it is not able to adapt or compete effectively, Citi could experience loss of business and its results of operations and financial condition could suffer (see the competitive challenges risk factor below).

Citi's Ability to Return Capital to Common Shareholders Consistent with Its Capital Planning Efforts and Targets Substantially Depends on Regulatory Capital Requirements, Including the Results of the CCAR Process and Regulatory Stress Tests.

Citi's ability to return capital to its common shareholders consistent with its capital planning efforts and targets, whether through its common stock dividend or through a share repurchase program, substantially depends, among other things, on regulatory capital requirements, including the Stress Capital Buffer (SCB), which is based upon the results of the CCAR process required by the FRB as well as the supervisory stress tests required under the Dodd- Frank Act (as described in more detail below).

Citi's ability to return capital also depends on its results of operations and financial condition, the capital impact related to divestitures, forecasts of macroeconomic conditions, its implementation and maintenance of an effective capital planning process and management framework, and effectiveness in planning, managing and calculating its level of risk-weighted assets under both the Advanced Approaches and the Standardized Approach, Supplementary Leverage Ratio (SLR) and global systemically important bank holding company (GSIB) surcharge, which has been made more

challenging due to elevated levels of liquidity in the financial system related to the pandemic (see the macroeconomic challenges and uncertainties risk factor above).

Changes in regulatory capital rules, requirements or interpretations could have a material impact on Citi's regulatory capital, both as a result of changes in Citi's reported regulatory capital and integration into the CCAR process and regulatory stress tests. For example, Citi was required to adopt the Standardized Approach for Counterparty Credit Risk (SA-CCR) as of January 1, 2022, which resulted in an approximate \$51 billion increase in Citi's risk-weighted assets under the Standardized Approach. Citi voluntarily suspended common share repurchases during the fourth quarter of 2021, in anticipation of the adverse impact resulting from the adoption of SA-CCR. Citi will be required to adopt SA-CCR for purposes of the supervisory stress test during the 2023 cycle and SA-CCR may be considered by management during the 2022 cycle for purposes of management's own capital adequacy assessment. In addition, the U.S. banking agencies may potentially consider a number of changes to the U.S. regulatory capital framework in the future, including, but not limited to, revisions to the U.S. Basel III rules, recalibration of the GSIB surcharge and SLR, and enactment of the discretionary Countercyclical Capital Buffer. All of these potential changes could negatively impact Citi's regulatory capital position or increase Citi's regulatory capital requirements.

All CCAR firms, including Citi, will continue to be subject to a rigorous regulatory evaluation of capital planning practices, including, but not limited to, governance, risk management and internal controls. Citi's ability to return capital may be adversely impacted if such an evaluation of Citi resulted in negative findings. In addition, Citi's ability to accurately predict, interpret or explain to stakeholders the results of the CCAR process, and thus to address any market or investor perceptions, may be limited as the FRB's assessment of Citi's capital adequacy is conducted using the FRB's proprietary stress test models.

The FRB has stated that it expects leading capital adequacy practices to continue to evolve and to likely be determined by the FRB each year as a result of its cross-firm review of capital plan submissions. Similarly, the FRB has indicated that, as part of its stated goal to continually evolve its annual stress testing requirements, several parameters of the annual stress testing process may continue to be altered, including the severity of the stress test scenario, the FRB modeling of Citi's balance sheet, pre-provision net revenue (PPNR) and stress losses, and the addition of components deemed important by the FRB.

Beginning January 1, 2022, Citi was required to phase into regulatory capital at 25% per year the changes in retained earnings, deferred tax assets and ACL determined upon the January 1, 2020 CECL adoption date, as well as subsequent changes in the ACL between January 1, 2020 and December 31, 2021. The FRB has stated that it plans to maintain its current framework for calculating allowances on loans in the supervisory stress test through the 2023 supervisory stress test cycle, while continuing to evaluate appropriate future enhancements to this framework. The impacts on Citi's capital adequacy of the FRB's incorporation of CECL in its supervisory stress tests on an ongoing basis, and of other potential regulatory changes in the FRB's stress testing methodologies, remain unclear.

In addition, the FRB has integrated the annual stress testing requirements with ongoing regulatory capital requirements. For Citigroup, the SCB equals the maximum decline in Citi's Common Equity Tier 1 Capital ratio under the supervisory severely adverse scenario over a nine-quarter CCAR measurement period, plus four quarters of planned common stock dividends, subject to a minimum requirement of 2.5%. Effective October 1, 2021, Citi's SCB was 3.0%. The SCB is calculated by the FRB using its proprietary data and modeling of each firm's results. Accordingly, Citi's SCB may change annually, or possibly more frequently, based on the supervisory stress test results, thus potentially resulting in volatility in the calculation of the SCB. Similar to the other regulatory capital buffers, a breach of the SCB would result in graduated limitations on capital distributions.

Although various uncertainties exist regarding the extent of, and the ultimate impact to Citi from, these changes to the FRB's regulatory capital, stress testing and CCAR regimes, these changes could increase the level of capital Citi is required or elects to hold, including as part of Citi's management buffer, thus potentially impacting the extent to which Citi is able to return capital to shareholders.

Citi, Its Management and Its Businesses Must Continually Review, Analyze and Successfully Adapt to Ongoing Regulatory and Legislative Uncertainties and Changes in the U.S. and Globally.

Despite the adoption of final regulations and laws in numerous areas impacting Citi and its businesses over the past several years, Citi, its management and its businesses continually face ongoing regulatory and legislative uncertainties and changes, both in the U.S. and globally. While the areas of ongoing regulatory and legislative uncertainties and changes facing Citi are too numerous to list completely, various examples include, but are not limited to (i) potential fiscal, monetary, regulatory, tax and other changes arising from the U.S. federal government and other governments, including as a result of the differing priorities of the current U.S. presidential administration, changes in regulatory leadership or focus and actions of Congress or in response to the pandemic; (ii) potential changes to various aspects of the regulatory capital framework and requirements applicable to Citi (see the capital return risk factor above); and (iii) future legislative and regulatory requirements in the U.S. and globally related to climate change, including any new disclosure requirements. When referring to “regulatory,” Citi is including both formal regulation and the views and expectations of its regulators in their supervisory roles.

U.S. and international regulatory and legislative initiatives have not always been undertaken or implemented on a coordinated basis, and areas of divergence have developed and continue to develop with respect to the scope, interpretation, timing, structure or approach, leading to inconsistent or even conflicting requirements, including within a single jurisdiction. For example, in May 2019, the European Commission adopted, as part of Capital Requirements Directive V (CRD V), a new requirement for major banking groups headquartered outside the EU (which would include Citi) to establish an intermediate EU holding company where the foreign bank has two or more institutions (broadly meaning banks, broker-dealers and similar financial firms) established in the EU. While in some respects the requirement mirrors an existing U.S. requirement for non-U.S. banking organizations to form U.S. intermediate holding companies, the implementation of the EU holding company requirement could lead to additional complexity with respect to Citi’s resolution planning, capital and liquidity allocation and efficiency in various jurisdictions.

Moreover, ongoing regulatory and legislative uncertainties and changes make Citi’s and its management’s long-term business, balance sheet and strategic budget planning difficult, subject to change and potentially more costly. U.S. and other regulators globally have implemented and continue to discuss various changes to certain regulatory requirements, which would require ongoing assessment by management as to the impact to Citi, its businesses and business planning. For example, while the Basel III post-crisis regulatory reforms and revised market risk framework have been finalized at the international level, there remain significant uncertainties with respect to the integration of these revisions into the U.S. regulatory capital framework. Business planning is required to be based on possible or proposed rules or outcomes, which can change dramatically upon finalization, or upon implementation or interpretive guidance from numerous regulatory bodies worldwide, and such guidance can change.

Regulatory and legislative changes have also significantly increased Citi’s compliance risks and costs (see the implementation and interpretation of regulatory changes risk factor below) and can adversely affect Citi’s businesses, results of operations and financial condition.

Citi’s Continued Investment and Other Initiatives as Part of Its Transformation and Strategic Refresh May Not Be as Successful as It Projects or Expects.

As part of its transformation initiatives, Citi continues to make significant investments to improve its infrastructure, risk management and controls and further enhance safety and soundness (for additional information, see the legal and regulatory proceedings risk factor below). Citi also continues to execute on its strategic refresh that includes, among other things, its exit of certain consumer banking businesses (see below) and its investments to deepen client relationships and enhance client offerings and capabilities in order to simplify the Company and enhance its allocation of resources.

For example, Citi continues to invest in its technology and digital capabilities across the franchise, including digital platforms and mobile and cloud-based solutions. In addition, Citi has been making other investments across the Company, such as in Citi’s wealth management business, commercial banking business, treasury and trade solutions, securities services and other businesses, including implementing new capabilities and partnerships. Citi has also been pursuing productivity improvements through various technology and digital initiatives, organizational simplification

and location strategies. Failure to properly invest in and upgrade Citi's technology and processes could result in an inability to be sufficiently competitive, serve clients effectively and avoid operational errors (for additional information, see the operational processes and systems risk factor below). There is no guarantee that these or other initiatives Citi may pursue will be as productive or effective as Citi expects, or at all.

Furthermore, Citi's strategic refresh necessitates further changes in and exits of certain businesses, which involve significant execution complexity, and could result in additional losses, charges or other negative financial impacts. For example, Citi may not be able to achieve its objectives related to its exits of 13 consumer markets in *Asia* and *EMEA* or exit of the consumer, small business and middle-market banking operations in Mexico. These exits may not be as productive, effective or timely as Citi expects and may result in additional foreign currency translation adjustments (CTA) or other losses, charges or other negative financial or strategic impacts, which could be material. For additional information on CTA losses, see the incorrect assumptions or estimates risk factor below.

Citi's investment and other initiatives may continue to evolve as its business strategies, the market environment and regulatory expectations change, which could make the initiatives more costly and more challenging to implement, and limit their effectiveness. Moreover, Citi's ability to achieve expected returns on its investments and costs savings depends, in part, on factors that it cannot control, including, among others, interest rates; inflation; impacts related to the pandemic; customer, client and competitor actions; and ongoing regulatory changes.

Citi's Ability to Utilize Its DTAs, and Thus Reduce the Negative Impact of the DTAs on Citi's Regulatory Capital, Will Be Driven by Its Ability to Generate U.S. Taxable Income.

At December 31, 2021, Citi's net DTAs were \$24.8 billion, net of a valuation allowance of \$4.2 billion, of which \$9.5 billion was deducted from Citi's Common Equity Tier 1 Capital under the U.S. Basel III rules, primarily relating to net operating losses, foreign tax credit and general business credit carry-forwards.

Of the net DTAs at December 31, 2021, \$2.8 billion related to foreign tax credit (FTC) carry-forwards, net of a valuation allowance. The carry-forward utilization period for FTCs is 10 years and represents the most time-sensitive component of Citi's DTAs. The FTC carry-forwards at December 31, 2021 expire over the period of 2022–2029. Citi must utilize any FTCs generated in the then-current-year tax return prior to utilizing any carry-forward FTCs.

The accounting treatment for realization of DTAs, including FTCs, is complex and requires significant judgment and estimates regarding future taxable earnings in the jurisdictions in which the DTAs arise and available tax planning strategies. Forecasts of future taxable earnings will depend upon various factors, including, among others, the continued impact of the pandemic and other macroeconomic conditions. In addition, any future increase in U.S. corporate tax rates could result in an increase in Citi's DTA, which may subject more of Citi's existing DTA to exclusion from regulatory capital while improving Citi's ability to utilize its FTC carry-forwards.

Citi's overall ability to realize its DTAs will primarily be dependent upon its ability to generate U.S. taxable income in the relevant tax carry-forward periods. Although utilization of FTCs in any year is generally limited to 21% of foreign source taxable income in that year, overall domestic losses (ODL) that Citi has incurred in the past allow it to reclassify domestic source income as foreign source. Failure to realize any portion of the net DTAs would have a corresponding negative impact on Citi's net income and financial returns.

Citi has not been and does not expect to be subject to the Base Erosion Anti-Abuse Tax (BEAT), which, if applicable to Citi in any given year, would have a significantly adverse effect on both Citi's net income and regulatory capital.

Citi's Interpretation or Application of the Complex Tax Laws to Which It Is Subject Could Differ from Those of the Relevant Governmental Authorities, Which Could Result in Litigation or Examinations and the Payment of Additional Taxes, Penalties or Interest.

Citi is subject to various income-based tax laws of the U.S. and its states and municipalities, as well as the numerous non-U.S. jurisdictions in which it operates. These tax laws are inherently complex and Citi must make judgments and interpretations about the application of these laws, including the Tax Cuts and Jobs Act (Tax Reform), to its entities, operations and businesses. In addition, Citi is subject to litigation or examinations with U.S. and non-U.S. tax authorities regarding non-income-based tax matters. Citi's interpretations or application of the tax laws, including with

respect to Tax Reform, withholding, stamp, service and other non-income taxes, could differ from that of the relevant governmental taxing authority, which could result in the requirement to pay additional taxes, penalties or interest, which could be material.

A Deterioration in or Failure to Maintain Citi’s Co-Branding or Private Label Credit Card Relationships, Including as a Result of Early Termination, Bankruptcy or Liquidation, Could Have a Negative Impact on Citi’s Results of Operations or Financial Condition.

Citi has co-branding and private label relationships through its branded cards and retail services credit card businesses with various retailers and merchants globally, whereby in the ordinary course of business Citi issues credit cards to customers of the retailers or merchants. The five largest relationships across both businesses in *North America GCB* constituted an aggregate of approximately 9% of Citi’s revenues in 2021. Citi’s co-branding and private label agreements provide for shared economics between the parties and generally have a fixed term.

Over the last several years, a number of U.S. retailers have continued to experience declining sales due to the pandemic or otherwise, which has resulted in significant numbers of store closures and, in a number of cases, bankruptcies, as retailers attempt to cut costs and reorganize. In addition, as has been widely reported, competition among card issuers, including Citi, for these relationships is significant, and it has become increasingly difficult in recent years to maintain such relationships on the same terms or at all.

Citi’s co-branding and private label relationships could be negatively impacted by, among other things, the general economic environment; changes in consumer sentiment, spending patterns and credit card usage behaviors; a decline in sales and revenues, partner store closures, government imposed restrictions, reduced air and business travel, or other operational difficulties of the retailer or merchant; early termination due to a contractual breach or exercise of other early termination right; or other factors, including bankruptcies, liquidations, restructurings, consolidations or other similar events, whether due to the ongoing impact of the pandemic or otherwise (see the pandemic-related risk factor above).

While various mitigating factors could be available to Citi if any of the above events were to occur—such as by replacing the retailer or merchant or offering other card products—these events, particularly early termination and bankruptcies or liquidations, could negatively impact the results of operations or financial condition of branded cards, retail services or Citi as a whole, including as a result of loss of revenues, increased expenses, higher cost of credit, impairment of purchased credit card relationships and contract-related intangibles or other losses.

Citi’s Inability in Its Resolution Plan Submissions to Address Any Shortcomings or Deficiencies Identified or Guidance Provided by the FRB and FDIC Could Subject Citi to More Stringent Capital, Leverage or Liquidity Requirements, or Restrictions on Its Growth, Activities or Operations, and Could Eventually Require Citi to Divest Assets or Operations.

Title I of the Dodd-Frank Act requires Citi to prepare and submit a plan to the FRB and the FDIC for the orderly resolution of Citigroup (the bank holding company) and its significant legal entities under the U.S. Bankruptcy Code in the event of future material financial distress or failure. The eight U.S. GSIBs, including Citi, filed their most recent resolution plans with the FRB and FDIC on July 1, 2021. For additional information on Citi’s resolution plan submissions, see “Managing Global Risk—Liquidity Risk” below.

Under Title I, if the FRB and the FDIC jointly determine that Citi’s resolution plan is not “credible” (which, although not defined, is generally believed to mean the regulators do not believe the plan is feasible or would otherwise allow Citi to be resolved in a way that protects systemically important functions without severe systemic disruption), or would not facilitate an orderly resolution of Citi under the U.S. Bankruptcy Code, and Citi fails to resubmit a resolution plan that remedies any identified deficiencies, Citi could be subjected to more stringent capital, leverage or liquidity requirements, or restrictions on its growth, activities or operations. If within two years from the imposition of any such requirements or restrictions Citi has still not remediated any identified deficiencies, then Citi could eventually be required to divest certain assets or operations. Any such restrictions or actions would negatively impact Citi’s reputation, market and investor perception, operations and strategy.

Citi's Performance and the Performance of Its Individual Businesses Could Be Negatively Impacted if Citi Is Not Able to Effectively Compete for, Retain and Motivate Highly Qualified Colleagues..

Recent employment conditions have made the competition to hire and retain qualified employees significantly more challenging. Citi's performance and the performance of its individual businesses largely depend on the talents and efforts of its diverse and highly qualified colleagues. Specifically, Citi's continued ability to compete in each of its lines of business, to manage its businesses effectively and to execute its global strategy depends on its ability to attract new colleagues and to retain and motivate its existing colleagues. If Citi is unable to continue to attract, retain and motivate the most highly qualified colleagues, Citi's performance, including its competitive position, the execution of its strategy and its results of operations could be negatively impacted.

Citi's ability to attract, retain and motivate colleagues depends on numerous factors, some of which are outside of its control. For example, the competition for talent recently has been particularly intense because of economic conditions associated with the pandemic. Also, the banking industry generally is subject to more comprehensive regulation of employee compensation than other industries, including deferral and clawback requirements for incentive compensation, which can make it unusually challenging for Citi to compete in labor markets against businesses that are not subject to such regulation. Citi often competes for talent with such businesses, including, among others, technology companies. Further, Citi's vaccination requirement for its U.S.-based employees could make it more difficult to compete for or retain colleagues. Other factors that could impact its ability to attract, retain and motivate colleagues include, among other things, Citi's presence in a particular market or region, the professional opportunities it offers and its reputation.

Financial Services Companies and Others as well as Emerging Technologies Pose Increasingly Competitive Challenges to Citi.

Citi operates in an increasingly evolving and competitive business environment, which includes both financial and non-financial services firms, such as traditional banks, online banks, financial technology companies and others. These companies compete on the basis of, among other factors, size, reach, quality and type of products and services offered, price, technology and reputation. Certain competitors may be subject to different and, in some cases, less stringent legal and regulatory requirements, placing Citi at a competitive disadvantage.

Citi competes with financial services companies in the U.S. and globally that continue to develop and introduce new products and services. In recent years, non-financial services firms, such as financial technology companies, have begun to offer services traditionally provided by financial institutions, such as Citi, and have sought bank charters to provide these services. These firms attempt to use technology and mobile platforms to enhance the ability of companies and individuals to borrow, save and invest money.

Moreover, emerging technologies have the potential to intensify competition and accelerate disruption in the financial services industry. For example, there is increasing interest from clients and investors in digital assets such as cryptocurrencies. Financial services firms and other market participants have begun to offer services related to those assets such as custody and trading. However, Citi may not be able to provide the same or similar services for legal or regulatory reasons and such services increase compliance risk. In addition, changes in the payments space (e.g., instant and 24x7 payments) are accelerating, and, as a result, certain of Citi's products and services could become less competitive.

In addition, as discussed above, it is unclear how the macroeconomic business environment or societal norms may be impacted as a result of the pandemic. Citi may experience increased or different competitive and other challenges in a post-pandemic environment. Increased competition and emerging technologies have required and could require Citi to change or adapt its products and services to attract and retain customers or clients or to compete more effectively with competitors, including new market entrants. Simultaneously, as Citi develops new products and services leveraging emerging technologies, new risks may emerge that, if not designed and governed adequately, may result in control gaps and in Citi operating outside of its risk appetite. For example, instant and 24x7 payments products could be accompanied by challenges to forecasting and managing liquidity, as well as increased operational and compliance risks.

To the extent that Citi is not able to compete effectively with financial technology companies and other firms, Citi could be placed at a competitive disadvantage, which could result in loss of customers and market share, and its businesses, results of operations and financial condition could suffer. For additional information on Citi's competitors, see the co-brand and private label cards and qualified colleagues risk factors above.

OPERATIONAL RISKS

A Failure or Disruption of Citi's Operational Processes or Systems Could Negatively Impact Citi's Reputation, Customers, Clients, Businesses or Results of Operations and Financial Condition.

Citi's global operations rely heavily on its technology, including the accurate, timely and secure processing, management, storage and transmission of confidential transactions, data and other information as well as the monitoring of a substantial amount of data and complex transactions in real time. For example, Citi obtains and stores an extensive amount of personal and client-specific information for its consumer and institutional customers and clients, and must accurately record and reflect their extensive account transactions. Citi's operations must also comply with complex and evolving laws and regulations in the countries in which it operates.

With the evolving proliferation of new technologies and the increasing use of the internet, mobile devices and cloud technologies to conduct financial transactions, large global financial institutions such as Citi have been, and will continue to be, subject to an ever-increasing risk of operational loss, failure or disruption, including as a result of cyber or information security incidents. These risks have been exacerbated during the pandemic, when a substantial portion of Citi's colleagues have worked remotely and customers and clients have increased their use of online banking and other platforms (for additional information, see the pandemic-related risk factor above and the cybersecurity risk factor below).

Although Citi has continued to upgrade its technology, including systems to automate processes and enhance efficiencies, operational incidents are unpredictable and can arise from numerous sources, not all of which are fully within Citi's control. These include, among others, human error, such as manual transaction processing errors; fraud or malice on the part of employees or third parties; accidental system or technological failure; electrical or telecommunication outages; failures of or cyber incidents involving computer servers or infrastructure; or other similar losses or damage to Citi's property or assets (see also the climate change risk factor below). For example, Citi has experienced and could experience further losses associated with manual transaction processing errors.

Irrespective of the sophistication of the technology utilized by Citi, there will always be some room for human error. In view of the large transactions in which Citi engages, such errors could result in significant loss.

Operational incidents can also arise as a result of failures by third parties with which Citi does business, such as failures by internet, mobile technology and cloud service providers or other vendors to adequately follow procedures or processes, safeguard their systems or prevent system disruptions or cyber attacks.

Incidents that impact information security and/or technology operations may cause disruptions and/or malfunctions within Citi's businesses (e.g., the temporary loss of availability of Citi's online banking system or mobile banking platform), as well as the operations of its clients, customers or other third parties. In addition, operational incidents could involve the failure or ineffectiveness of internal processes or controls.

Given Citi's global footprint and the high volume of transactions processed by Citi, certain failures, errors or actions may be repeated or compounded before they are discovered and rectified, which would further increase the consequences and costs. Operational incidents could result in financial losses as well as misappropriation, corruption or loss of confidential and other information or assets, which could significantly negatively impact Citi's reputation, customers, clients, businesses or results of operations and financial condition. Cyber-related and other operational incidents can also result in legal and regulatory proceedings, fines and other costs (see the legal and regulatory proceedings risk factor below).

For information on Citi's management of operational risk, see "Managing Global Risk—Operational Risk" below.

Citi's and Third Parties' Computer Systems and Networks Have Been, and Will Continue to Be, Susceptible to an Increasing Risk of Continually Evolving, Sophisticated Cybersecurity Activities That Could Result in the Theft, Loss, Misuse or Disclosure of Confidential Client or Customer Information, Damage to Citi's Reputation, Additional Costs to Citi, Regulatory Penalties, Legal Exposure and Financial Losses.

Citi's computer systems, software and networks are subject to ongoing cyber incidents such as unauthorized access, loss or destruction of data (including confidential client information), account takeovers, unavailability of service, computer viruses or other malicious code, cyber attacks and other similar events. These threats can arise from external parties, including cyber criminals, cyber terrorists, hacktivists and nation-state actors, as well as insiders who knowingly or unknowingly engage in or enable malicious cyber activities.

Third parties with which Citi does business, as well as retailers and other third parties with which Citi's customers do business, may also be sources of cybersecurity risks, particularly where activities of customers are beyond Citi's security and control systems. For example, Citi outsources certain functions, such as processing customer credit card transactions, uploading content on customer-facing websites and developing software for new products and services. These relationships allow for the storage and processing of customer information by third-party hosting of or access to Citi websites, which could lead to compromise or the potential to introduce vulnerable or malicious code, resulting in security breaches impacting Citi customers. Furthermore, because financial institutions are becoming increasingly interconnected with central agents, exchanges and clearing houses, including as a result of derivatives reforms over the last few years, Citi has increased exposure to cyber attacks through third parties. While many of Citi's agreements with third parties include indemnification provisions, Citi may not be able to recover sufficiently, or at all, under the provisions to adequately offset any losses Citi may incur from third-party cyber incidents.

Citi has been subject to attempted and sometimes successful cyber attacks from external sources over the last several years, including (i) denial of service attacks, which attempt to interrupt service to clients and customers, (ii) hacking and malicious software installations, intended to gain unauthorized access to information systems or to disrupt those systems, (iii) data breaches due to unauthorized access to customer account data and (iv) malicious software attacks on client systems, in an attempt to gain unauthorized access to Citi systems or client data under the guise of normal client transactions. While Citi's monitoring and protection services were able to detect and respond to the incidents targeting its systems before they became significant, they still resulted in limited losses in some instances as well as increases in expenditures to monitor against the threat of similar future cyber incidents. There can be no assurance that such cyber incidents will not occur again, and they could occur more frequently and on a more significant scale.

Further, although Citi devotes significant resources to implement, maintain, monitor and regularly upgrade its systems and networks with measures such as intrusion detection and prevention and firewalls to safeguard critical business applications, there is no guarantee that these measures or any other measures can provide absolute security. Because the methods used to cause cyber attacks change frequently or, in some cases, are not recognized until launched or even later, Citi may be unable to implement effective preventive measures or proactively address these methods until they are discovered. In addition, given the evolving nature of cyber threat actors and the frequency and sophistication of the cyber activities they carry out, the determination of the severity and potential impact of a cyber incident may not become apparent for a substantial period of time following discovery of the incident. Also, while Citi engages in certain actions to reduce the exposure resulting from outsourcing, such as performing security control assessments of third-party vendors and limiting third-party access to the least privileged level necessary to perform job functions, these actions cannot prevent all third-party-related cyber attacks or data breaches.

Cyber incidents can result in the disclosure of personal, confidential or proprietary customer or client information, damage to Citi's reputation with its clients and the market, customer dissatisfaction and additional costs to Citi, including expenses such as repairing systems, replacing customer payment cards, credit monitoring or adding new personnel or protection technologies. Regulatory penalties, loss of revenues, exposure to litigation and other financial losses, including loss of funds, to both Citi and its clients and customers and disruption to Citi's operational systems could also result from cyber incidents (for additional information on the potential impact of operational disruptions, see the operational processes and systems risk factor above). Moreover, the increasing risk of cyber incidents has resulted in

increased legislative and regulatory scrutiny of firms' cybersecurity protection services and calls for additional laws and regulations to further enhance protection of consumers' personal data.

While Citi maintains insurance coverage that may, subject to policy terms and conditions including significant self-insured deductibles, cover certain aspects of cyber risks, such insurance coverage may be insufficient to cover all losses and may not take into account reputational harm, the cost of which could be immeasurable.

For additional information about Citi's management of cybersecurity risk, see "Managing Global Risk—Operational Risk—Cybersecurity Risk" below.

Changes to or the Application of Incorrect Assumptions, Judgments or Estimates in Citi's Financial Statements Could Cause Significant Unexpected Losses or Impacts in the Future

U.S. GAAP requires Citi to use certain assumptions, judgments and estimates in preparing its financial statements, including, among other items, the estimate of the ACL; reserves related to litigation, regulatory and tax matters exposures; valuation of DTAs; the fair values of certain assets and liabilities; and the assessment of goodwill or other assets for impairment. If Citi's assumptions, judgments or estimates underlying its financial statements are incorrect or differ from actual or subsequent events, Citi could experience unexpected losses or other adverse impacts, some of which could be significant.

For example, the CECL methodology requires that Citi provide reserves for a current estimate of lifetime expected credit losses for its loan portfolios and other financial assets, as applicable, at the time those assets are originated or acquired. This estimate is adjusted each period for changes in expected lifetime credit losses. Citi's ACL estimate depends upon its CECL models and assumptions, forecasted macroeconomic conditions, including, among other things, U.S. unemployment rate and U.S. Real GDP, and the credit indicators, composition and other characteristics of Citi's loan and other applicable financial assets. These model assumptions and forecasted macroeconomic conditions will change over time, whether due to the pandemic or otherwise, resulting in greater variability in Citi's ACL compared to its provision for loan losses under the previous GAAP methodology, and, thus, impact its results of operations and financial condition, as well as regulatory capital due to the CECL phase-in beginning January 1, 2022.

Moreover, Citi has incurred losses related to its foreign operations that are reported in the CTA components of *Accumulated other comprehensive income (loss) (AOCI)*. In accordance with U.S. GAAP, a sale, substantial liquidation or any other deconsolidation event of any foreign operations, such as those related to Citi's legacy or exit businesses, would result in reclassification of any foreign CTA component of *AOCI* related to that foreign operation, including related hedges and taxes, into Citi's earnings. For example, Citi incurred a pretax loss of approximately \$680 million (\$580 million after-tax) in the third quarter of 2021 related to the sale of Citi's Australia consumer banking business in *Asia GCB*, primarily reflecting the impact of a CTA loss.

Changes to Financial Accounting and Reporting Standards or Interpretations Could Have a Material Impact on How Citi Records and Reports Its Financial Condition and Results of Operations.

Periodically, the Financial Accounting Standards Board (FASB) issues financial accounting and reporting standards that govern key aspects of Citi's financial statements or interpretations thereof when those standards become effective, including those areas where Citi is required to make assumptions or estimates. Changes to financial accounting or reporting standards or interpretations, whether promulgated or required by the FASB or other regulators, could present operational challenges and could also require Citi to change certain of the assumptions or estimates it previously used in preparing its financial statements, which could negatively impact how it records and reports its financial condition and results of operations generally and/or with respect to particular businesses.

If Citi's Risk Management Processes, Strategies or Models Are Deficient or Ineffective, Citi May Incur Significant Losses and Its Regulatory Capital and Capital Ratios Could Be Negatively Impacted.

Citi utilizes a broad and diversified set of risk management and mitigation processes and strategies, including use of models in enacting processes and strategies as well as in analyzing and monitoring the various risks Citi assumes in conducting its activities. For example, Citi uses models as part of its comprehensive stress testing initiatives across the Company. Citi also relies on data to aggregate, assess and manage various risk exposures. Management of these risks is

made even more challenging within a global financial institution such as Citi, particularly given the complex, diverse and rapidly changing financial markets and conditions in which Citi operates as well as that losses can occur unintentionally from untimely, inaccurate or incomplete processes.

In addition, in October 2020, Citigroup and Citibank entered into consent orders with the FRB and OCC that require Citigroup and Citibank to make improvements in various aspects of enterprise-wide risk management, compliance, data quality management and governance and internal controls (see the legal and regulatory proceedings risk factor below).

Citi's risk management processes, strategies and models are inherently limited because they involve techniques, including the use of historical data in many circumstances, assumptions and judgments that cannot anticipate every economic and financial outcome in the markets in which Citi operates, nor can they anticipate the specifics and timing of such outcomes. Citi could incur significant losses, and its regulatory capital and capital ratios could be negatively impacted, if Citi's risk management processes, including its ability to manage and aggregate data in a timely and accurate manner, strategies or models are deficient or ineffective. Such deficiencies or ineffectiveness could also result in inaccurate financial, regulatory or risk reporting.

Moreover, Citi's Basel III regulatory capital models, including its credit, market and operational risk models, currently remain subject to ongoing regulatory review and approval, which may result in refinements, modifications or enhancements (required or otherwise) to these models. Modifications or requirements resulting from these ongoing reviews, as well as any future changes or guidance provided by the U.S. banking agencies regarding the regulatory capital framework applicable to Citi, have resulted in, and could continue to result in, significant changes to Citi's risk-weighted assets. These changes can negatively impact Citi's capital ratios and its ability to achieve its regulatory capital requirements.

CREDIT RISKS

Credit Risk and Concentrations of Risk Can Increase the Potential for Citi to Incur Significant Losses.

Credit risk primarily arises from Citi's lending and other businesses in both *ICG* and *GCB*. Citi has credit exposures to consumer, corporate and public sector borrowers and other counterparties in the U.S. and various countries and jurisdictions globally, including end-of-period consumer loans of \$271 billion and end-of-period corporate loans of \$397 billion at year-end 2021.

A default by a borrower or other counterparty, or a decline in the credit quality or value of any underlying collateral, exposes Citi to credit risk. Despite Citi's target client strategy, various macroeconomic, geopolitical and other factors, among other things, can increase Citi's credit risk and credit costs, particularly for certain sectors, industries or countries (for additional information, see the pandemic-related, co-branding and private label credit card and macroeconomic challenges and uncertainties risk factors above and the emerging markets risk factor below). For example, a weakening of economic conditions, including higher unemployment levels, can adversely affect borrowers' ability to repay their obligations. In addition, weakening economic conditions may result in Citi being unable to liquidate its collateral, as well as disputes with counterparties regarding the valuation of collateral Citi holds and Citi being unable to realize the fair value of such collateral.

While Citi provides reserves for expected losses for its credit exposures, as applicable, such reserves are subject to judgments and estimates that could be incorrect or differ from actual future events. Under the CECL accounting standard, the ACL reflects expected losses, rather than incurred losses, which has resulted in and could lead to additional volatility in the allowance and the provision for credit losses as forecasts of economic conditions change. In addition, Citi's future allowance may be affected by seasonality of its cards portfolio balances based on historical evidence showing that (i) credit card balances typically decrease during the first and second quarters, as borrowers use tax refunds to pay down balances; and (ii) balances increase during the third and fourth quarters each year as payments are no longer impacted by tax refunds and the holiday season approaches. However, these seasonal trends could be affected in 2022 due to the impacts of the pandemic, government stimulus and expiration of consumer and small business relief programs. For additional information, see the incorrect assumptions or estimates and changes to financial accounting and reporting standards risk factors above.

Concentrations of risk to clients or counterparties engaged in the same or related industries or doing business in a particular geography, especially credit and market risks, can also increase Citi's risk of significant losses. As of year-end 2021, Citi's most significant concentration of credit risk was with the U.S. government and its agencies, which primarily results from trading assets and investments issued by the U.S. government and its agencies. In addition, Citi routinely executes a high volume of securities, trading, derivative and foreign exchange transactions with non-U.S. sovereigns and with counterparties in the financial services industry, including banks, insurance companies, investment banks, governments, central banks and other financial institutions. Moreover, Citi has indemnification obligations in connection with various transactions that expose it to concentrations of risk, including credit risk from hedging or reinsurance arrangements related to those obligations. A rapid deterioration of a large borrower or other counterparty or within a sector or country in which Citi has large exposures or indemnifications or unexpected market dislocations could cause Citi to incur significant losses.

LIQUIDITY RISKS

The Maintenance of Adequate Liquidity and Funding Depends on Numerous Factors, Including Those Outside of Citi's Control, Such as Market Disruptions and Increases in Citi's Credit Spreads.

As a large, global financial institution, adequate liquidity and sources of funding are essential to Citi's businesses. Citi's liquidity and sources of funding can be significantly and negatively impacted by factors it cannot control, such as general disruptions in the financial markets, governmental fiscal and monetary policies, regulatory changes or negative investor perceptions of Citi's creditworthiness, unexpected increases in cash or collateral requirements and the inability to monetize available liquidity resources, whether due to the pandemic or otherwise. Citi competes with other banks and financial institutions for both institutional and consumer deposits, which represent Citi's most stable and lowest cost source of long-term funding. The competition for deposits has continued to increase in recent years, including, among others, as a result of online banks and digital banking. Furthermore, although Citi has had robust deposit growth since the onset of the pandemic, it remains unclear how "sticky" (likely to remain at Citi) those deposits may be, particularly in a less monetarily accommodative environment.

Moreover, Citi's costs to obtain and access secured funding and long-term unsecured funding are directly related to its credit spreads and changes in interest and currency exchange rates. Changes in credit spreads are driven by both external market factors and factors specific to Citi, such as negative views by investors of the financial services industry or Citi's financial prospects, and can be highly volatile. For additional information on Citi's primary sources of funding, see "Managing Global Risk—Liquidity Risk" below.

Citi's ability to obtain funding may be impaired and its cost of funding could increase if other market participants are seeking to access the markets at the same time, or if market appetite declines, as is likely to occur in a liquidity stress event or other market crisis. A sudden drop in market liquidity could also cause a temporary or lengthier dislocation of underwriting and capital markets activity. In addition, clearing organizations, central banks, clients and financial institutions with which Citi interacts may exercise the right to require additional collateral based on their perceptions or the market conditions, which could further impair Citi's access to and cost of funding.

In addition, as a holding company, Citi relies on interest, dividends, distributions and other payments from its subsidiaries to fund dividends as well as to satisfy its debt and other obligations. Several of Citi's U.S. and non-U.S. subsidiaries are or may be subject to capital adequacy or other liquidity, regulatory or contractual restrictions on their ability to provide such payments, including any local regulatory stress test requirements. Citi's broker-dealer and bank subsidiaries are subject to restrictions on their ability to lend or transact with affiliates, as well as restrictions on their ability to use funds deposited with them in brokerage or bank accounts to fund their businesses. Limitations on the payments that Citi receives from its subsidiaries could also impact its liquidity. A bank holding company is required by law to act as a source of financial and managerial strength for its subsidiary banks. As a result, the FRB may require Citi to commit resources to its subsidiary banks even if doing so is not otherwise in the interests of Citi or its shareholders or creditors, reducing the amount of funds available to meet its obligations. In addition, in the event of a subsidiary's liquidation or reorganization, Citi's right to participate in a distribution of such subsidiary's assets is subject to the prior claims of the subsidiary's creditors.

The Credit Rating Agencies Continuously Review the Credit Ratings of Citi and Certain of Its Subsidiaries, and a Ratings Downgrade Could Have a Negative Impact on Citi's Funding and Liquidity Due to Reduced Funding Capacity and Increased Funding Costs, Including Derivatives Triggers That Could Require Cash Obligations or Collateral Requirements.

The credit rating agencies, such as Fitch, Moody's and S&P Global Ratings, continuously evaluate Citi and certain of its subsidiaries. Their ratings of Citi and its more significant subsidiaries' long-term/ senior debt and short-term/commercial paper are based on a number of factors, including standalone financial strength, as well as factors that are not entirely within the control of Citi and its subsidiaries, such as the agencies' proprietary rating methodologies and assumptions, and conditions affecting the financial services industry and markets generally.

Citi and its subsidiaries may not be able to maintain their current respective ratings. A ratings downgrade could negatively impact Citi's ability to access the capital markets and other sources of funds as well as the costs of those funds, and its ability to maintain certain deposits. A ratings downgrade could also have a negative impact on Citi's funding and liquidity due to reduced funding capacity and the impact from derivative triggers, which could require Citi to meet cash obligations and collateral requirements. In addition, a ratings downgrade could have a negative impact on other funding sources such as secured financing and other margined transactions for which there may be no explicit triggers, and on contractual provisions and other credit requirements of Citi's counterparties and clients that may contain minimum ratings thresholds in order for Citi to hold third-party funds. Some entities could have ratings limitations on their permissible counterparties, of which Citi may or may not be aware.

Furthermore, a credit ratings downgrade could have impacts that may not be currently known to Citi or are not possible to quantify. Certain of Citi's corporate customers and trading counterparties, among other clients, could re-evaluate their business relationships with Citi and limit the trading of certain contracts or market instruments with Citi in response to ratings downgrades. Changes in customer and counterparty behavior could impact not only Citi's funding and liquidity but also the results of operations of certain Citi businesses.

COMPLIANCE RISKS

Ongoing Interpretation and Implementation of Regulatory and Legislative Requirements and Changes and Heightened Regulatory Scrutiny and Expectations in the U.S. and Globally Have Increased Citi's Compliance, Regulatory and Other Risks and Costs.

Citi is continually required to interpret and implement extensive and frequently changing regulatory and legislative requirements in the U.S. and other jurisdictions in which it does business, resulting in substantial compliance, regulatory and other risks and costs. In addition, there are heightened regulatory scrutiny and expectations in the U.S. and globally for large financial institutions, as well as their employees and agents, with respect to governance, infrastructure, data and risk management practices and controls. These requirements and expectations also include, among other things, those related to customer and client protection, market practices, anti-money laundering and sanctions. A failure to comply with these requirements and expectations or resolve any identified deficiencies could result in increased regulatory oversight and restrictions, enforcement proceedings, penalties and fines (for additional information, see the legal and regulatory proceedings risk factor below).

Over the past several years, Citi has been required to implement a significant number of regulatory and legislative changes across all of its businesses and functions, and these changes continue. The changes themselves may be complex and subject to interpretation, and will require continued investments in Citi's global operations and technology solutions. In some cases, Citi's implementation of a regulatory or legislative requirement is occurring simultaneously with changing or conflicting regulatory guidance, legal challenges or legislative action to modify or repeal existing rules or enact new rules. Moreover, in some cases, there have been entirely new regulatory or legislative requirements or regimes, resulting in large volumes of regulation and potential uncertainty regarding regulatory expectations for compliance.

Examples of regulatory or legislative changes that have resulted in increased compliance risks and costs include (i) various laws relating to the limitation of cross-border data movement and/or collection and use of customer information, including data localization and protection and privacy laws, which also can conflict with or increase compliance

complexity with respect to other laws, including anti-money laundering laws; (ii) the FRB’s “total loss absorbing capacity” (TLAC) requirements; and (iii) the U.S. banking agencies’ regulatory capital rules and requirements, which have continued to evolve (for additional information, see the capital return risk factor above). In addition, the U.S. banking agencies have prioritized issues of social, economic and racial justice, and are in the process of considering ways in which these issues can be mitigated, including through rulemaking, supervision and other means.

Increased and ongoing compliance and regulatory requirements, uncertainties, scrutiny and expectations have resulted in higher compliance costs for Citi, in part due to an increase in risk, regulatory and compliance staff over the last several years. Extensive and changing compliance requirements can also result in increased reputational and legal risks for Citi, as failure to comply with regulations and requirements, or failure to comply with regulatory expectations, can result in enforcement and/or regulatory proceedings, penalties and fines.

Citi Is Subject to Extensive Legal and Regulatory Proceedings, Examinations, Investigations, Consent Orders and Related Compliance Efforts and Other Inquiries That Could Result in Significant Monetary Penalties, Supervisory or Enforcement Orders, Business Restrictions, Limitations on Dividends, Changes to Directors and/or Officers and Collateral Consequences Arising from Such Outcomes.

At any given time, Citi is a party to a significant number of legal and regulatory proceedings and is subject to numerous governmental and regulatory examinations, investigations, consent orders and related compliance efforts, and other inquiries. Citi can also be subject to enforcement proceedings not only because of violations of laws and regulations, but also due to failures, as determined by its regulators, to have adequate policies and procedures, or to remedy deficiencies on a timely basis.

The October 2020 FRB and OCC consent orders require Citigroup and Citibank to implement targeted action plans and quarterly progress reports detailing the results and status of improvements relating principally to various aspects of enterprise-wide risk management, compliance, data quality management and governance and internal controls. These improvements will result in continued significant investments by Citi during 2022 and beyond, as an essential part of Citi’s broader transformation efforts to enhance its infrastructure, governance, processes and risk and controls.

Although there are no restrictions on Citi’s ability to serve its clients, the OCC consent order requires Citibank to obtain prior approval of any significant new acquisition, including any portfolio or business acquisition, excluding ordinary course transactions. Moreover, the OCC consent order provides that the OCC has the right to assess future civil money penalties or take other supervisory and/or enforcement actions, including where the OCC determines Citibank has not made sufficient and sustainable progress to address the required improvements. Such actions by the OCC could include imposing business restrictions, including possible limitations on the declaration or payment of dividends and changes in directors and/or senior executive officers. More generally, the OCC and/or the FRB could take additional enforcement or other actions if the regulatory agency believes that Citi has not met regulatory expectations regarding compliance with the consent orders.

The global judicial, regulatory and political environment has generally been challenging for large financial institutions. The complexity of the federal and state regulatory and enforcement regimes in the U.S., coupled with the global scope of Citi’s operations, also means that a single event or issue may give rise to a large number of overlapping investigations and regulatory proceedings, either by multiple federal and state agencies and authorities in the U.S. or by multiple regulators and other governmental entities in different jurisdictions, as well as multiple civil litigation claims in multiple jurisdictions.

U.S. and non-U.S. regulators have been increasingly focused on “conduct risk,” a term used to describe the risks associated with behavior by employees and agents, including third parties, that could harm clients, customers, employees or the integrity of the markets, such as improperly creating, selling, marketing or managing products and services or improper incentive compensation programs with respect thereto, failures to safeguard a party’s personal information, or failures to identify and manage conflicts of interest. In addition to the greater focus on conduct risk, the general heightened scrutiny and expectations from regulators could lead to investigations and other inquiries, as well as remediation requirements, more regulatory or other enforcement proceedings, civil litigation and higher compliance and other risks and costs.

Further, while Citi takes numerous steps to prevent and detect conduct by employees and agents that could potentially harm clients, customers, employees or the integrity of the markets, such behavior may not always be deterred or prevented. Banking regulators have also focused on the overall culture of financial services firms, including Citi.

In addition to regulatory restrictions or structural changes that could result from perceived deficiencies in Citi's culture, such focus could also lead to additional regulatory proceedings. Furthermore, the severity of the remedies sought in legal and regulatory proceedings to which Citi is subject has remained elevated. U.S. and certain non-U.S. governmental entities have increasingly brought criminal actions against, or have sought criminal convictions from, financial institutions and individual employees, and criminal prosecutors in the U.S. have increasingly sought and obtained criminal guilty pleas or deferred prosecution agreements against corporate entities and individuals and other criminal sanctions for those institutions and individuals. These types of actions by U.S. and international governmental entities may, in the future, have significant collateral consequences for a financial institution, including loss of customers and business, and the inability to offer certain products or services and/or operate certain businesses. Citi may be required to accept or be subject to similar types of criminal remedies, consent orders, sanctions, substantial fines and penalties, remediation and other financial costs or other requirements in the future, including for matters or practices not yet known to Citi, any of which could materially and negatively affect Citi's businesses, business practices, financial condition or results of operations, require material changes in Citi's operations or cause Citi reputational harm.

Further, many large claims—both private civil and regulatory—asserted against Citi are highly complex, slow to develop and may involve novel or untested legal theories. The outcome of such proceedings is difficult to predict or estimate until late in the proceedings. Although Citi establishes accruals for its legal and regulatory matters according to accounting requirements, Citi's estimates of, and changes to, these accruals involve significant judgment and may be subject to significant uncertainty, and the amount of loss ultimately incurred in relation to those matters may be substantially higher than the amounts accrued (see the incorrect assumptions or estimates risk factor above). In addition, certain settlements are subject to court approval and may not be approved.

OTHER RISKS

Citi's Presence in the Emerging Markets Subjects It to Various Risks as well as Increased Compliance and Regulatory Risks and Costs.

During 2021, emerging markets revenues accounted for approximately 35% of Citi's total revenues (Citi generally defines emerging markets as countries in *Latin America, Asia* (other than Japan, Australia and New Zealand), and central and Eastern Europe, the Middle East and Africa in *EMEA*).

Although Citi continues to pursue its target client strategy, Citi's presence in the emerging markets subjects it to various risks, such as limitations or unavailability of hedges on foreign investments; foreign currency volatility, including devaluations, sovereign volatility, election outcomes, regulatory changes and political events; foreign exchange controls, including inability to access indirect foreign exchange mechanisms; macroeconomic volatility and disruptions, including with respect to commodity prices; limitations on foreign investment; sociopolitical instability (including from hyperinflation); fraud; nationalization or loss of licenses; business restrictions; sanctions or asset freezes; potential criminal charges; closure of branches or subsidiaries; and confiscation of assets, whether related to geopolitical conflicts or otherwise; and these risks can be exacerbated in the event of a deterioration in relationships between the U.S. and an emerging market country. For example, Citi operates in several countries that have, or have had in the past, strict capital and currency controls, such as Argentina, that limit its ability to convert local currency into U.S. dollars and/or transfer funds outside of those countries. Among other things, Citi faces a risk of devaluation on its unhedged Argentine peso-denominated assets, which continue to increase.

Moreover, if the economic situation in an emerging markets country in which Citi operates were to deteriorate below a certain level, U.S. regulators may impose mandatory loan loss or other reserve requirements on Citi, which would increase its credit costs and decrease its earnings.

In addition, political turmoil and instability have occurred in various regions and emerging market countries across the globe which have required, and may continue to require, management time and attention and other resources (such

as monitoring the impact of sanctions on certain emerging markets economies as well as impacting Citi's businesses and results of operations in affected countries).

Climate Change Could Have a Negative Impact on Citi's Results of Operations and Financial Condition.

Citi operates in countries, states and regions in which many of its businesses, and the activities of many of its customers and clients, are exposed to the adverse impacts of climate change, as well as uncertainties related to the transition to a low-carbon economy. Climate change presents both immediate and long-term risks to Citi and its customers and clients, with the risks expected to increase over time.

Climate risks can arise from both physical risks (those risks related to the physical effects of climate change) and transition risks (risks related to regulatory, compliance, technological, stakeholder and legal changes from a transition to a low-carbon economy). The physical and transition risks can manifest themselves differently across Citi's risk categories in the short, medium and long terms.

The physical risk from climate change could result from increased frequency and/or severity of adverse weather events. For example, adverse weather events could damage or destroy Citi's or its counterparties' properties and other assets and disrupt operations, making it more difficult for counterparties to repay their obligations, whether due to reduced profitability, asset devaluations or otherwise. These events could also increase the volatility in financial markets affecting Citi's trading businesses and increase its counterparty exposures and other financial risks, which may result in lower revenues and higher cost of credit.

Transition risks may arise from changes in regulations or market preferences toward a low-carbon economy, which in turn could have negative impacts on asset values, results of operations or the reputations of Citi and its customers and clients. For example, Citi's corporate credit exposures include oil and gas, power and other industries that may experience reduced demand for carbon-intensive products due to the transition to a low-carbon economy. Moreover, U.S. and non-U.S. banking regulators and others are increasingly focusing on the issue of climate risk at financial institutions, both directly and with respect to their clients. As an example, on December 16, 2021, the OCC requested feedback on draft principles designed to support the identification and management of climate-related financial risks at institutions with more than \$100 billion in total consolidated assets.

Even as regulators begin to mandate additional disclosure of climate-related information by companies across sectors, there may continue to be a lack of information for more robust climate-related risk analyses. Third party exposures to climate-related risks and other data generally are limited in availability and variable in quality. Modeling capabilities to analyze climate-related risks and interconnections are improving but remain incomplete. Legislative or regulatory uncertainties and changes regarding climate-related risk management and disclosures are likely to result in higher regulatory, compliance, credit, reputational and other risks and costs (for additional information, see the ongoing regulatory and legislative uncertainties and changes risk factor above). In addition, Citi could face increased regulatory, reputational and legal scrutiny as a result of its climate risk, sustainability and other ESG related commitments.

The Transition Away from and Discontinuance of the London Inter-Bank Offered Rate (LIBOR) and Any Other Interest Rate Benchmark Could Have Adverse Consequences for Market Participants, Including Citi.

For decades, LIBOR and other rates or indices deemed to be benchmarks have been widely used across financial products and markets globally. These benchmarks have been the subject of ongoing national and international regulatory scrutiny and reform, resulting in regulators generally expecting or requiring banks, including Citi, to cease entering into new contracts that reference USD LIBOR as a benchmark by December 31, 2021. The LIBOR administrator ceased publication of non-USD LIBOR and one-week and two-month USD LIBOR on a representative basis on December 31, 2021, with plans to cease publication of all other USD LIBOR tenors on June 30, 2023. As a result, Citi ceased entering into new contracts referencing USD LIBOR as of January 1, 2022, other than for limited purposes as permitted by regulatory guidance.

LIBOR and other benchmarks have been used in a substantial number of Citi's outstanding securities and products, including, among others, derivatives, corporate loans, commercial and residential mortgages, credit cards, securitized products and other structured securities. Despite ongoing actions to prepare for the transition away from LIBOR (see "Managing Global Risk—Other Risks—LIBOR Transition Risk" below), market participants, including Citi, may not

be adequately prepared for uncertainties associated with these benchmarks' discontinuance or, as necessary, be able to successfully modify their outstanding contracts or products that reference these benchmarks. For example, the transition away from and discontinuance of LIBOR or any other benchmark rate presents various uncertainties and operational, legal, reputational or compliance, financial and other risks and challenges to holders of these contracts and products, as well as financial markets and institutions, including Citi. These include, among others, the pricing, liquidity, observability, value of, return on and market for financial instruments and contracts that reference LIBOR or any other benchmark rate.

While Citi has adopted alternative reference rates for new contracts to replace these outgoing benchmarks, in some instances, it is possible that the characteristics of these new rates may not be sufficiently similar to, or produce the economic equivalent of, the benchmark rates that they are intended to replace. Alternative reference rates, such as the Secured Overnight Financing Rate (SOFR), are calculated using components different from those used in the calculation of LIBOR and may fluctuate differently than, and not be representative of, LIBOR. In order to compensate for these differences, certain of Citi's financial instruments and commercial agreements allow for a benchmark replacement adjustment. However, there can be no assurance that any benchmark replacement adjustment will be sufficient to produce the economic equivalent of LIBOR, either at the benchmark replacement date or over the life of such instruments and agreements.

Further, investors, counterparties and other market participants may not consider the new alternative rates to be a suitable substitute or successor for all of the purposes for which these benchmarks have historically been used (including, without limitation, as a representation of the unsecured short-term funding costs of banks), which may, in turn, reduce their market acceptance. Any failure of the alternative rates to gain broad market acceptance could adversely affect market demand for Citi's products or securities linked to such alternative rates and thus market prices of such instruments. As part of its transition, Citi is relying or has relied on guidance provided by the accounting standard setters related to the transition away from LIBOR. In the event that such guidance is insufficient or otherwise unable to be implemented as intended, LIBOR transition could disrupt Citi's hedge accounting relationships and/or lead to increased costs in connection with determining whether contract amendments result in a modification or an extinguishment from an accounting perspective. Changes in observability of the alternative reference rates could impact the fair value hierarchy classification of financial instruments and contracts.

Moreover, the LIBOR transition presents challenges related to contractual mechanics of existing financial instruments and contracts that reference such benchmarks that mature after discontinuance of the relevant benchmark. Certain of these legacy instruments and contracts do not provide for fallbacks to alternative reference rates, which makes it unclear what the applicable future replacement benchmark rates and associated payments might be after the current benchmark's cessation. Citi may not be able to amend certain instruments and contracts due to an inability to obtain sufficient levels of consent from counterparties or security holders. Although this will depend on the precise contractual terms of the instrument, such consent requirements are often conditions of securities, such as floating rate notes.

Even if the instruments and contracts provide for a transition to an alternative reference rate, the new rate may, particularly in times of financial stress, significantly differ from the prior rates. As a result, Citi may need to consider proactively addressing any contractual uncertainties or rate differences in such instruments and contracts, which would likely be both time consuming and costly, and may not ultimately be successful. While statutory solutions have been enacted in certain jurisdictions to address these contractual concerns (for example, the State of New York and the EU), the availability and effectiveness of these statutory mechanisms to cover all impacted financial instruments and products to which Citi is a party is uncertain.

In addition, the transition away from and discontinuance of LIBOR and other benchmark rates have subjected financial institutions, including Citi, to heightened scrutiny from regulators. Failure to successfully transition away from LIBOR and other benchmark rates could result in adverse regulatory actions, disputes, including potential litigation involving holders of outstanding products and contracts that reference LIBOR, and other benchmark rates and reputational harm to Citi. Citi may also need to further invest in and develop internal systems and infrastructure to transition to alternative benchmark rates to manage its businesses and support its clients.

MANAGING GLOBAL RISK

Overview

For Citi, effective risk management is of primary importance to its overall operations. Accordingly, Citi's risk management process has been designed to monitor, evaluate and manage the principal risks it assumes in conducting its activities. Specifically, the activities that Citi engages in, and the risks those activities generate, must be consistent with Citi's Mission and Value Proposition and the key principles that guide it, as well as Citi's risk appetite. As discussed above, Citi is continuing its efforts to comply with the FRB and OCC consent orders, relating principally to various aspects of risk management, compliance, data quality management and governance, and internal controls (see "Risk Factors—Compliance Risks" above).

Risk management must be built on a foundation of ethical culture. Under Citi's Mission and Value Proposition, which was developed by its senior leadership and distributed throughout the Company, Citi strives to serve its clients as a trusted partner by responsibly providing financial services that enable growth and economic progress while earning and maintaining the public's trust by constantly adhering to the highest ethical standards. As such, Citi asks all colleagues to ensure that their decisions pass three tests: they are in Citi's clients' interests, create economic value and are always systemically responsible. In addition, Citi evaluates colleagues' performance against behavioral expectations set out in Citi's Leadership Principles, which were designed in part to effectuate Citi's Mission and Value Proposition. Other culture-related efforts in connection with conduct risk, ethics and leadership, escalation and treating customers fairly help Citi to execute its Mission and Value Proposition.

Citi has established an Enterprise Risk Management (ERM) Framework to ensure that all of Citi's risks are managed appropriately and consistently across Citi and at an aggregate, enterprise-wide level. The ERM Framework details the principles used to support effective enterprise-wide risk management across the end-to-end risk management lifecycle. The ERM Framework also provides clarity on the expected activities in relation to risk management of the Citigroup Board of Directors (the Board), Citi's Executive Management Team and employees across the lines of defense. The underlying pillars of the framework encompass:

- *Culture*—the core principles and behaviors that underpin a strong culture of risk awareness, in line with Citi's Mission and Value Proposition, and Leadership Principles;
- *Governance*—the committee structure and reporting arrangements that support the appropriate oversight of risk management activities at the Board and Executive Management Team levels;
- *Risk Management*—the end-to-end risk management cycle including the identification, measurement, monitoring, controlling and reporting of all risks including emerging, growing, idiosyncratic or otherwise material risks, and aggregated to an enterprise-wide level; and
- *Enterprise Programs*—the key risk management programs performed across the risk management lifecycle for all risk categories; these programs also outline the specific roles played by each of the lines of defense in these processes.

Each of these pillars is underpinned by Supporting Capabilities, which are the infrastructure, people, technology and data, and modelling and analytical capabilities that are in place to enable the execution of the ERM Framework.

Citi's approach to risk management requires that its risk-taking be consistent with its risk appetite. Risk appetite is the aggregate type and level of risk Citi is willing to take in order to meet its strategic objectives and business plan. Citi's Risk Appetite Framework sets boundaries for risk-taking and consists of a set of risk appetite statements as well as the governance processes through which the risk appetite is established, communicated, cascaded and monitored.

Citi's risks are generally categorized and summarized as follows:

- *Credit risk* is the risk of loss resulting from the decline in credit quality (or downgrade risk) or failure of a borrower, counterparty, third party or issuer to honor its financial or contractual obligations.

- *Liquidity risk* is the risk that Citi will not be able to efficiently meet both expected and unexpected current and future cash flow and collateral needs without adversely affecting either daily operations or financial conditions of Citi.
- *Market risk (Trading and Non-Trading)*: Market risk of trading portfolios is the risk of loss arising from changes in the value of Citi’s assets and liabilities resulting from changes in market variables, such as equity and commodity prices or credit spreads. Market risk of non-trading portfolios is the risk to current or projected financial condition and resilience arising from movements in interest rates and resulting from repricing risk, basis risk, yield curve risk and options risk.
- *Operational risk* is the risk of loss resulting from inadequate or failed internal processes, people and systems, or from external events. It includes legal risk, which is the risk of loss (including litigation costs, settlements and regulatory fines) resulting from the failure of Citi to comply with laws, regulations, prudent ethical standards and contractual obligations in any aspect of Citi’s business, but excludes strategic and reputation risks (see below).
- *Compliance risk* is the risk to current or projected financial condition and resilience arising from violations of laws, rules or regulations, or from non-conformance with prescribed practices, internal policies and procedures or ethical standards.
- *Reputation risk* is the risk to current or projected financial conditions and resilience arising from negative public opinion.
- *Strategic risk* is the risk of a sustained impact (not episodic impact) to Citi’s core strategic objectives as measured by impacts on anticipated earnings, market capitalization, or capital, arising from the external factors affecting the Company’s operating environment; as well as the risks associated with defining the strategy and executing the strategy, which are identified, measured and managed as part of the Strategic Risk Framework at the Enterprise Level.

Citi uses a lines of defense model as a key component of its ERM Framework to manage its risks. The lines of defense model brings together risk-taking, risk oversight and risk assurance under one umbrella and provides an avenue for risk accountability of first line of defense, a construct for effective challenge by the second line of defense (Independent Risk Management and Independent Compliance Risk Management), and empowers independent risk assurance by the third line of defense (Internal Audit). In addition, Citi has enterprise support functions that support safety and soundness across Citi. Each of the lines of defense and enterprise support functions, along with the Board, are empowered to perform relevant risk management processes and responsibilities in order to manage Citi’s risks in a consistent and effective manner.

CREDIT RISK

Overview

Credit risk is the risk of loss resulting from the decline in credit quality of a client, customer or counterparty (or downgrade risk) or the failure of a borrower, counterparty, third party or issuer to honor its financial or contractual obligations. Credit risk arises in many of Citigroup’s business activities, including:

- consumer, commercial and corporate lending;
- capital markets derivative transactions;
- structured finance; and
- securities financing transactions (repurchase and reverse repurchase agreements, and securities loaned and borrowed).

Credit risk also arises from clearing and settlement activities, when Citi transfers an asset in advance of receiving its counter-value or advances funds to settle a transaction on behalf of a client. Concentration risk, within credit risk, is the risk associated with having credit exposure concentrated within a specific client, industry, region or other category.

Credit risk is one of the most significant risks Citi faces as an institution. For additional information, see “Risk Factors—Credit Risk” above. As a result, Citi has an established framework in place for managing credit risk across all

businesses that includes a defined risk appetite, credit limits and credit policies. Citi's credit risk management also includes processes and policies with respect to problem recognition, including "watch lists," portfolio reviews, stress tests, updated risk ratings and classification triggers.

With respect to Citi's clearing and settlement activities, intraday client usage of clearing lines is monitored against limits, as well as against usage patterns with settlement activity monitored daily and intraday for select products. To the extent that a problem develops, Citi typically moves the client to a secured (collateralized) operating model. Generally, Citi's intraday clearing and settlement lines are uncommitted and cancelable at any time.

To manage concentration of risk within credit risk, Citi has in place a framework consisting of industry limits, an idiosyncratic framework consisting of single name concentrations for each business and across Citigroup and a specialized framework consisting of product limits.

Credit exposures are generally reported in notional terms for accrual loans, reflecting the value at which the loans as well as other off-balance sheet commitments are carried on the Consolidated Balance Sheet. Credit exposure arising from capital markets activities is generally expressed as the current mark-to-market, net of margin, reflecting the net value owed to Citi by a given counterparty.

The credit risk associated with these credit exposures is a function of the idiosyncratic creditworthiness of the obligor, as well as the terms and conditions of the specific obligation. Citi assesses the credit risk associated with its credit exposures on a regular basis through its Allowance for Credit Losses (ACL) process, as well as through regular stress testing at the company, business, geography and product levels. These stress-testing processes typically estimate potential incremental credit costs that would occur as a result of either downgrades in the credit quality or defaults of the obligors or counterparties.

LIQUIDITY RISK

Overview

Adequate and diverse sources of funding and liquidity are essential to Citi's businesses. Funding and liquidity risks arise from several factors, many of which are mostly or entirely outside Citi's control, such as disruptions in the financial markets, changes in key funding sources, credit spreads, changes in Citi's credit ratings and macroeconomic, geopolitical and other conditions. For additional information, see "Risk Factors—Liquidity Risks" above.

Citi's funding and liquidity management objectives are aimed at (i) funding its existing asset base, (ii) growing its core businesses, (iii) maintaining sufficient liquidity, structured appropriately, so that Citi can operate under a variety of adverse circumstances, including potential Company-specific and/or market liquidity events in varying durations and severity, and (iv) satisfying regulatory requirements, including, among other things, those related to resolution planning. Citigroup's primary liquidity objectives are established by entity, and in aggregate, across two major categories:

- Citibank (including Citibank Europe plc, Citibank Singapore Ltd. and Citibank (Hong Kong) Ltd.); and
- Citi's non-bank and other entities, including the parent holding company (Citigroup Inc.), Citi's primary intermediate holding company (Citicorp LLC), Citi's broker-dealer subsidiaries (including Citigroup Global Markets Inc., Citigroup Global Markets Limited. And Citigroup Global Markets Japan Inc.) and other bank and non-bank subsidiaries that are consolidated into Citigroup (including Citibanamex).

At an aggregate Citigroup level, Citi's goal is to maintain sufficient funding in amount and tenor to fully fund customer assets and to provide an appropriate amount of cash and high-quality liquid assets (as discussed below), even in times of stress, in order to meet its payment obligations as they come due. The liquidity risk management framework provides that in addition to the aggregate requirements, certain entities be self-sufficient or net providers of liquidity, including in conditions established under their designated stress tests.

Citi's primary funding sources include (i) corporate and consumer deposits via Citi's bank subsidiaries, including Citibank, N.A. (Citibank), (ii) long-term debt (primarily senior and subordinated debt) mainly issued by Citigroup Inc., as the parent, and Citibank, and (iii) stockholders' equity. These sources may be supplemented by short-term borrowings, primarily in the form of secured funding transactions.

As referenced above, Citi's funding and liquidity framework ensures that the tenor of these funding sources is of sufficient term in relation to the tenor of its asset base. The goal of Citi's asset/liability management is to ensure that there is sufficient liquidity and tenor in the liability structure relative to the liquidity profile of the assets. This reduces the risk that liabilities will become due before assets mature or are monetized. This excess liquidity is held primarily in the form of high-quality liquid assets (HQLA).

Citi's liquidity is managed via a centralized treasury model by Treasury, in conjunction with regional and in-country treasurers with oversight provided by Independent Risk Management and various Asset & Liability Committees (ALCOs) at the Citigroup, region, country and business levels. Pursuant to this approach, Citi's HQLA is managed with emphasis on asset-liability management and entity-level liquidity adequacy throughout Citi.

Citi's CRO and Chief Financial Officer co-chair Citigroup's ALCO, which includes Citi's Treasurer and other senior executives. The ALCO sets the strategy of the liquidity portfolio and monitors portfolio performance. Significant changes to portfolio asset allocations are approved by the ALCO. Citi also has other ALCOs, which are established at various organizational levels to ensure appropriate oversight for countries, franchise businesses and regions, serving as the primary governance committees for managing Citi's balance sheet and liquidity.

As a supplement to ALCO, Citi's Funding and Liquidity Risk Committee (FLRC) is a more focused assembly for funding and liquidity risk matters. The FLRC reviews and discusses the funding and liquidity risk profile of, as well as risk management practices for Citigroup and Citibank and reports its findings and recommendations to each relevant ALCO as appropriate.

MARKET RISK

Overview

Market risk is the potential for losses arising from changes in the value of Citi's assets and liabilities resulting from changes in market variables such as interest rates, foreign exchange rates, equity prices, commodity prices and credit spreads, as well as their implied volatilities. Market risk emanates from both Citi's trading and non-trading portfolios. For additional information on market risk and market risk management, see "Risk Factors" above.

Each business is required to establish, with approval from Citi's market risk management, a market risk limit framework for identified risk factors that clearly defines approved risk profiles and is within the parameters of Citi's overall risk appetite. These limits are monitored by the Risk organization, including various regional, legal entity and business Risk Management committees, Citi's country and business Asset & Liability Committees and the Citigroup Risk Management and Asset & Liability Committees. In all cases, the businesses are ultimately responsible for the market risks taken and for remaining within their defined limits.

Market Risk of Trading Portfolios

Trading portfolios include positions resulting from market-making activities, the CVA relating to derivative counterparties and all associated hedges and fair value option loans.

The market risk of CGMHI's trading portfolios is monitored using a combination of quantitative and qualitative measures, including, but not limited to:

- factor sensitivities;
- value at risk (VAR); and
- stress testing.

Each trading portfolio across CGMHI's businesses has its own market risk limit framework encompassing these measures and other controls, including trading mandates, new product approval, permitted product lists and pre-trade approval for larger, more complex and less liquid transactions.

Factor Sensitivities

Factor sensitivities are expressed as the change in the value of a position for a defined change in a market risk factor, such as a change in the value of a U.S. Treasury Bond for a one-basis-point change in interest rates. Citi's Global

Market Risk function, within the Independent Risk Management organization, works to ensure that factor sensitivities are calculated, monitored and limited for all material risks taken in the trading portfolios.

Value at Risk (VAR)

VAR estimates, at a 99% confidence level, the potential decline in the value of a position or a portfolio under normal market conditions assuming a one-day holding period. VAR statistics, which are based on historical data, can be materially different across firms due to differences in portfolio composition, differences in VAR methodologies and differences in model parameters. As a result, Citi believes VAR statistics can be used more effectively as indicators of trends in risk-taking within a firm, rather than as a basis for inferring differences in risk-taking across firms.

Citi uses a single, independently approved Monte Carlo simulation VAR model, which has been designed to capture material risk sensitivities (such as first- and second-order sensitivities of positions to changes in market prices) of various asset classes/risk types (such as interest rate, credit spread, foreign exchange, equity and commodity risks). Citi's VAR includes positions that are measured at fair value.

Citi believes its VAR model is conservatively calibrated to incorporate fat-tail scaling and the greater of short-term (approximately the most recent month) and long-term (three years) market volatility. The Monte Carlo simulation involves approximately 450,000 market factors, making use of approximately 350,000 time series, with sensitivities updated daily, volatility parameters updated intra-monthly and correlation parameters updated monthly. The conservative features of the VAR calibration contribute an approximate 33% add-on to what would be a VAR estimated under the assumption of stable and perfectly, normally distributed markets.

As set forth in the table below, CGMHI's average trading VAR for 2022 increased from 2021, mainly due to higher volatilities and increased mark-to-market hedging in the ICG Markets businesses.

Period-end and Average Trading VAR and Trading and Credit Portfolio VAR

<i>In millions of dollars</i>	Six Months		Six Months	
	June 30, 2022	2022 Average	June 30, 2021	2021 Average
Interest rate	\$ 88	\$ 71	\$ 66	\$ 68
Equity	36	34	26	28
Commodity	31	35	20	16
Foreign exchange	5	7	9	9
Covariance adjustment ⁽¹⁾	(57)	(64)	(56)	(49)
Total trading VAR—all market risk factors, including general and specific risk (excluding credit portfolios) ⁽²⁾	103	83	65	72
Specific risk-only component ⁽³⁾	13	11	11	14
Total trading VAR—general market risk factors only (excluding credit portfolios)	90	72	54	58
Incremental impact of the credit portfolio ⁽⁴⁾	9	5	2	1
Total trading and credit portfolio VAR	\$ 112	\$ 88	\$ 67	\$ 73

(1) Covariance adjustment (also known as diversification benefit) equals the difference between the total VAR and the sum of the VARs tied to each risk type. The benefit reflects the fact that the risks within individual and across risk types are not perfectly correlated and, consequently, the total VAR on a given day will be lower than the sum of the VARs relating to each risk type. The determination of the primary drivers of changes to the covariance adjustment is made by an examination of the impact of both model parameter and position changes.

(2) The total trading VAR includes mark-to-market and certain fair value option trading positions in CGMHI, with the exception of fair value option loans and all CVA exposures.

(3) The specific risk-only component represents the level of equity and fixed income issuer-specific risk embedded in VAR.

- (4) The credit portfolio is composed of mark-to-market positions associated with the CVA relating to derivative counterparties and all associated CVA hedges. FVA and DVA are not included. The credit portfolio also includes fair value option loans and hedges to the leveraged finance pipeline within capital markets origination in CGMHI.

The table below provides the range of market factor VARs associated with CGMHI's total trading VAR, inclusive of specific risk:

<i>In millions of dollars</i>	Six Months 2022		Six Months 2021	
	Low	High	Low	High
Interest rate	\$ 53	\$ 95	\$ 56	\$ 84
Equity	16	65	20	47
Commodity	23	52	10	30
Foreign exchange	4	17	6	13
Total trading	\$ 64	\$ 110	\$ 61	\$ 91
Total trading and credit portfolio	67	117	62	94

Note: No covariance adjustment can be inferred from the above table as the high and low for each market factor will be from different close-of-business dates.

VAR Model Review and Validation

Generally, Citi's VAR review and model validation process entails reviewing the model framework, major assumptions and implementation of the mathematical algorithm. In addition, product specific back-testing on portfolios is periodically completed as part of the ongoing model performance monitoring process and reviewed with Citi's U.S. banking regulators.

Material VAR model and assumption changes must be independently validated within Citi's Independent Risk Management organization. All model changes, including those for the VAR model, are validated by the model validation group within Citi's Model Risk Management. In the event of significant model changes, parallel model runs are undertaken prior to implementation. In addition, significant model and assumption changes are subject to the periodic reviews and approval by Citi's U.S. banking regulators.

Stress Testing

Citi performs market risk stress testing on a regular basis to estimate the impact of extreme market movements. It is performed on individual positions and trading portfolios, as well as in aggregate, inclusive of multiple trading portfolios. Citi's market risk management, after consultations with the businesses, develops both systemic and specific stress scenarios, reviews the output of periodic stress testing exercises and uses the information to assess the ongoing appropriateness of exposure levels and limits. Citi uses two complementary approaches to market risk stress testing across all major risk factors (i.e., equity, foreign exchange, commodity, interest rate and credit spreads): top-down systemic stresses and bottom-up business-specific stresses. Systemic stresses are designed to quantify the potential impact of extreme market movements on an institution-wide basis, and are constructed using both historical periods of market stress and projections of adverse economic scenarios. Business-specific stresses are designed to probe the risks of particular portfolios and market segments, especially those risks that are not fully captured in VAR and systemic stresses.

The systemic stress scenarios and business-specific stress scenarios at Citi are used in several reports reviewed by senior management and also to calculate internal risk capital for trading market risk. In general, changes in market values are defined over a one-year horizon. For the most liquid positions and market factors, changes in market values are defined over a shorter two-month horizon. The limited set of positions and market factors whose market value changes are defined over a two-month horizon are those that in management's judgment have historically remained very liquid during financial crises, even as the trading liquidity of most other positions and market factors materially declined.

OPERATIONAL RISK

Overview

Operational risk is the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events. This includes legal risk, which is the risk of loss (including litigation costs, settlements, and regulatory fines) resulting from the failure of Citi to comply with laws, regulations, prudent ethical standards, and contractual obligations in any aspect of its businesses, but excludes strategic and reputation risks. Citi also recognizes the impact of operational risk on the reputation risk associated with Citi's business activities.

Operational risk is inherent in Citi's global business activities, as well as related support functions, and can result in losses. Citi maintains a comprehensive Citi-wide risk taxonomy to classify operational risks that it faces using standardized definitions across Citi's Operational Risk Management Framework (see discussion below). This taxonomy also supports regulatory requirements and expectations inclusive of those related to U.S. Basel III, Comprehensive Capital Analysis and Review (CCAR), Heightened Standards for Large Financial Institutions and Dodd Frank Annual Stress Testing (DFAST).

Citi manages operational risk consistent with the overall framework described in "Managing Global Risk—Overview" above. Citi's goal is to keep operational risk at appropriate levels relative to the characteristics of its businesses, the markets in which it operates, its capital and liquidity and the competitive, economic and regulatory environment. This includes effectively managing operational risk and maintaining or reducing operational risk exposures within Citi's operational risk appetite.

Citi's Independent Operational Risk Management group has established a global-Operational Risk Management Framework with policies and practices for identification, measurement, monitoring, managing and reporting operational risks and the overall operating effectiveness of the internal control environment. As part of this framework, Citi has defined its operational risk appetite and established a manager's control assessment (MCA) process for self-identification of significant operational risks, assessment of the performance of key controls and mitigation of residual risk above acceptable levels.

Each major business segment must implement operational risk processes consistent with the requirements of this framework. This includes:

- understanding the operational risks they are exposed to;
- designing controls to mitigate identified risks;
- establishing key indicators;
- monitoring and reporting whether the operational risk exposures are in or out of their operational risk appetite;
- having processes in place to bring operational risk exposures within acceptable levels;
- periodically estimate and aggregate the operational risks they are exposed to; and
- ensuring that sufficient resources are available to actively improve the operational risk environment and mitigate emerging risks.

Citi considers operational risks that result from the introduction of new or changes to existing products, or result from significant changes in its organizational structures, systems, processes and personnel.

Citi has a governance structure for the oversight of operational risk exposures through Business Risk and Controls Committees (BRCCs), which include a Citigroup BRCC as well as business, functions, regional and country BRCCs. BRCCs are chaired by the individuals in the first line of defense and provide escalation channels for senior management to review operational risk exposures including breaches of operational risk appetite, key indicators, operational risk events, and control issues. Membership includes senior business and functions leadership as well as members of the second line of defense.

In addition, Independent Risk Management, including the Operational Risk Management group, works proactively with Citi's businesses and functions to drive a strong and embedded operational risk management culture and framework across Citi. The Operational Risk Management group actively challenges business and functions implementation of the Operational Risk Management Framework requirements and the quality of operational risk management practices and outcomes.

Information about businesses' key operational risks, historical operational risk losses and the control environment is reported by each major business segment and functional area. Citi's operational risk profile and related information is summarized and reported to senior management, as well as to the Audit and Risk Committees of Citi's Board of Directors by the Head of Operational Risk Management.

Operational risk is measured through Operational Risk Capital and Operational Risk Regulatory Capital for the Advanced Approaches under Basel III. Projected operational risk losses under stress scenarios are estimated as a required part of the FRB's CCAR process.

For additional information on Citi's operational risks, see "Risk Factors—Operational Risk" above.

Cybersecurity Risk

Overview

Cybersecurity risk is the business risk associated with the threat posed by a cyber attack, cyber breach or the failure to protect Citi's most vital business information assets or operations, resulting in a financial or reputational loss (for additional information, see the operational processes and systems and cybersecurity risk factors in "Risk Factors—Operational Risks" above). With an evolving threat landscape, ever-increasing sophistication of threat actor tactics, techniques and procedures, and use of new technologies to conduct financial transactions, Citi and its clients, customers and third parties are and will continue to be at risk from cyber attacks and information security incidents. Citi recognizes the significance of these risks and, therefore, leverages an intelligence-led strategy to protect against, detect and respond to, and recover from cyber attacks. Further, Citi actively participates in financial industry, government and cross-sector knowledge-sharing groups to enhance individual and collective cybersecurity preparedness and resilience.

Risk Management

Citi's technology and cybersecurity risk management program is built on three lines of defense. Citi's first line of defense under the Office of the Chief Information Security Officer provides frontline business, operational and technical controls and capabilities to protect against cybersecurity risks, and to respond to cyber incidents and data breaches. Citi manages these threats through state-of-the-art Fusion Centers, which serve as central commands for monitoring and coordinating responses to cyber threats. The enterprise information security team is responsible for infrastructure defense and security controls, performing vulnerability assessments and third-party information security assessments, employee awareness and training programs and security incident management. In each case the team works in coordination with a network of information security officers who are embedded within the businesses and functions globally.

Citi's Operational Risk Management-Technology and Cyber (ORM-T/C) and Independent Compliance Risk Management-Technology and Information Security (ICRM-T) groups serve as the second line of defense, and actively evaluate, anticipate and challenge Citi's risk mitigation practices and capabilities. Citi seeks to proactively identify and remediate technology and cybersecurity risks before they materialize as incidents that negatively affect business operations. Accordingly, the ORM-T/C team independently challenges and monitors capabilities in accordance with Citi's defined Technology and Cyber Risk Appetite statements. To address evolving cybersecurity risks and corresponding regulations, ORM-T/C and ICRM-T teams collectively also monitor cyber legal and regulatory requirements, identify and define emerging risks, execute strategic cyber threat assessments, perform new products and initiative reviews, perform data management risk oversight and conduct cyber risk assurance reviews (inclusive of third-party assessments). In addition, ORM-T/C employs tools and oversees and challenges metrics that are both tailored to cybersecurity and technology and aligned with Citi's overall operational risk management framework to effectively track, identify and manage risk.

Internal audit serves as the third line of defense and independently provides assurance on how effectively the organization as a whole manages cybersecurity risk. Citi also has multiple senior committees such as the Information Security Risk Committee (ISRC), which governs enterprise-level risk tolerance inclusive of cybersecurity risk.

COMPLIANCE RISK

Compliance risk is the risk to current or projected financial condition and resilience arising from violations of laws, rules, or regulations, or from non-conformance with prescribed practices, internal policies and procedures or ethical standards. Compliance risk exposes Citi to fines, civil money penalties, payment of damages and the voiding of contracts. Compliance risk can result in diminished reputation, harm to Citi's customers, limited business opportunities and lessened expansion potential. It encompasses the risk of noncompliance with all laws and regulations, as well as prudent ethical standards and some contractual obligations. It could also include exposure to litigation (known as legal risk) from all aspects of traditional and non-traditional banking.

Citi seeks to operate with integrity, maintain strong ethical standards and adhere to applicable policies and regulatory and legal requirements. Citi must maintain and execute a proactive Compliance Risk Management (CRM) Policy that is designed to manage compliance risk effectively across Citi, with a view to fundamentally strengthen the compliance risk management culture across the lines of defense taking into account Citi's risk governance framework and regulatory requirements. Independent Compliance Risk Management's (ICRM) primary objectives are to:

- Drive and embed a culture of compliance and control throughout Citi;
- Maintain and oversee an integrated CRM Policy and Compliance Risk Framework that facilitates enterprise-wide compliance with local, national or cross-border laws, rules or regulations, Citi's internal policies, standards and procedures and relevant standards of conduct;
- Assess compliance risks and issues across product lines, functions and geographies, supported by globally consistent systems and compliance risk management processes; and
- Provide compliance risk data aggregation and reporting capabilities.

To anticipate, control and mitigate compliance risk, Citi has established the CRM Policy to achieve standardization and centralization of methodologies and processes, and to enable more consistent and comprehensive execution of compliance risk management.

Citi has a commitment, as well as an obligation, to identify, assess and mitigate compliance risks associated with its businesses and functions. ICRM is responsible for oversight of Citi's CRM Policy, while all businesses and global control functions are responsible for managing their compliance risks and operating within the Compliance Risk Appetite.

Citi carries out its objectives and fulfills its responsibilities through the Compliance Risk Framework, which is composed of the following integrated key activities, to holistically manage compliance risk:

- Management of Citi's compliance with laws, rules and regulations by identifying and analyzing changes, assessing the impact, and implementing appropriate policies, processes and controls;
- Developing and providing compliance training to ensure colleagues are aware of and understand the key laws, rules and regulations;
- Monitoring the Compliance Risk Appetite, which is articulated through qualitative compliance risk statements describing Citi's appetite for certain types of risk and quantitative measures to monitor the Company's compliance risk exposure;
- Monitoring and testing of compliance risks and controls in assessing conformance with laws, rules, regulations and internal policies; and
- Issue identification, escalation and remediation to drive accountability, including measurement and reporting of compliance risk metrics against established thresholds in support of the CRM Policy and Compliance Risk Appetite.

As discussed above, Citi is working to address the FRB and OCC consent orders, which include improvements to Citi's Compliance Risk Framework and its Enterprise-wide application.

REPUTATION RISK

Citi's reputation is a vital asset in building trust with its stakeholders and Citi is diligent in enhancing and protecting its reputation with its colleagues, customers, investors and regulators. To support this, Citi has developed a reputation risk

framework. Under this framework, Citigroup and Citibank have implemented a risk appetite statement and related key indicators to monitor corporate activities and operations relative to our risk appetite. The framework also requires that business segments and regions escalate significant reputation risks that require review or mitigation through a Reputation Risk Committee or equivalent.

The Reputation Risk Committees, which are composed of Citi's most senior executives, govern the process by which material reputation risks are identified, monitored, reported, managed, and escalated. The Reputation Risk Committees determine the appropriate actions to be taken in line with risk appetite and regulatory expectations, while promoting a culture of risk awareness and high standards of integrity and ethical behavior across the Company, consistent with Citi's mission and value proposition. The Reputation Risk Committees in the business segments and regions are part of the governance infrastructure that Citi has in place to review the reputation risk posed by business activities, sales practices, product design, or perceived conflicts of interest. These committees may also raise potential reputation risks for due consideration by the Reputation Risk Committee at the corporate level. The Citigroup Reputation Risk Committee may escalate reputation risks to the Nomination, Governance and Public Affairs Committee or other appropriate committee of the Citigroup Board of Directors.

The responsibility for enhancing and protecting Citi's reputation is shared by all colleagues, who are guided by Citi's Code of Conduct. Colleagues are expected to exercise sound judgment and common sense in decisions and actions. They are also expected to promptly escalate all issues that present potential reputation risk in line with policy.

STRATEGIC RISK

As discussed above, strategic risk is the risk of a sustained impact (not episodic impact) to Citi's core strategic objectives as measured by impacts on anticipated earnings, market capitalization, or capital, arising from the external factors affecting the Company's operating environment; as well as the risks associated with defining the strategy and executing the strategy, which are identified, measured and managed as part of the Strategic Risk Framework at the Enterprise Level.

In this context, external factors affecting Citi's operating environment are the economic environment, geopolitical/political landscape, industry/competitive landscape, societal trends, customer/client behavior, regulatory/legislative environment and trends related to investors/shareholders.

Citi's Executive Management Team is responsible for the development and execution of Citi's strategy. This strategy is translated into forward-looking plans (collectively Citi's Strategic Plan) that are then cascaded across the organization. Citi's Strategic Plan is presented to the board on an annual basis and is aligned with Risk Appetite thresholds and includes Top Risk identification as required by internal frameworks. It is also aligned with limit requirements for capital allocation. Governance and oversight of strategic risk is facilitated by internal committees on a group-wide basis as well as strategic committees at the *ICG*, *GCB* and regional levels.

Citi works to ensure that strategic risks are adequately considered and addressed across its various risk management activities, and that strategic risks are assessed in the context of Citi's risk appetite. Citi conducts a top-down, bottom-up risk identification process to identify risks, including strategic risks. Business segments undertake a quarterly risk identification process to systematically identify and document all material risks faced by Citi. Independent Risk Management oversees the Risk Identification process through regular reviews and coordinates identification and monitoring of Top Risks. Independent Risk Management also manages strategic risk by monitoring risk appetite thresholds in conjunction with various strategic risk committees, which are part of the governance structure that Citi has in place to manage its strategic risks.

For additional information on Citi's strategic risks, see "Risk Factors—Strategic Risks" above.

OTHER RISKS

LIBOR Transition Risk

The LIBOR administrator ceased publication of non-USD LIBOR and one week and two-month USD LIBOR on a representative basis on December 31, 2021, with plans to cease publication of all other USD LIBOR tenors on June 30,

2023. Regulators expect banks, including Citi, to have ceased entering into new contracts that reference USD LIBOR as a benchmark by December 31, 2021, except for limited circumstances as set out in regulatory guidance.

Citi recognizes that a transition away from and discontinuance of LIBOR presents various risks and challenges that could significantly impact financial markets and market participants, including Citi (for information about Citi's risks from a transition away from and discontinuation of LIBOR or any other benchmark rates, see "Risk Factors— Other Risks" above). Accordingly, Citi has continued its efforts to identify and manage its LIBOR transition risks.

For example, Citi continues to closely monitor legislative, regulatory and other developments related to LIBOR transition matters and legislative relief. The International Swaps and Derivatives Association (ISDA) published the Interbank Offered Rate (IBOR) Fallbacks Protocol for existing IBOR derivatives transactions, which became effective in January 2021. The IBOR Fallbacks Protocol provides derivatives market participants with new fallbacks for legacy and new derivatives contracts if both counterparties adhere to the protocol or engage in bilateral amendments (see discussion below regarding Citi's adherence to the protocol). In April 2021, legislation was adopted in New York State that provides for the use of a statutory replacement for USD LIBOR in certain New York law legacy contracts. Similar federal legislation was passed in the House of Representatives in December 2021 and is pending passage by the Senate, although there is no guarantee that the federal legislative proposal will become law.

In addition, Citi has established a LIBOR governance and implementation program focused on identifying and addressing the impact of LIBOR transition on Citi's clients, operational capabilities and financial contracts. The program operates globally across Citi's businesses and functions and includes active involvement of senior management, oversight by Citi's Asset and Liability Committee and reporting to the Risk Management Committee of Citigroup's Board of Directors. As part of the program, Citi has continued to implement its LIBOR transition action plans and associated roadmaps under the following key workstreams: program management; transition strategy and risk management; customer management, including internal communications and training, legal/contract management and product management; financial exposures and risk management; regulatory and industry engagement; operations and technology; and finance, risk, tax and treasury.

During 2021, Citi continued to participate in a number of working groups formed by global regulators, including the Alternative Reference Rates Committee (ARRC) convened by the FRB. These working groups promote and advance development of alternative reference rates and seek to identify and address potential challenges from any transition to such rates. Citi's LIBOR transition action plans and associated roadmaps are intended to be consistent with the timelines recommended by these working groups. This includes the Commodity Futures Trading Commission's SOFR First Initiative, which is designed to promote derivatives trading in SOFR. Citi also continued to engage with regulators, financial accounting bodies and others on LIBOR transition matters.

Citi's LIBOR transition efforts include, among other things, reducing its overall exposure to LIBOR, increasing Citi's virtual client communication efforts and client transition facilitation, including outreach regarding new industry-led protocols and solutions, and using alternative reference rates in certain newly issued financial instruments and products. In the past several years, Citi has issued preferred stock and benchmark debt referencing the Secured Overnight Financing Rate (SOFR) and issued customer-related debt referencing SOFR and the Sterling Overnight Interbank Average Rate (SONIA), the recommended replacement rate for Sterling LIBOR. Citi has also originated and arranged loans referencing SOFR and SONIA and executed SOFR and SONIA-based derivatives contracts. Further, Citi has also been investing in its systems and infrastructure, as client activity moves away from LIBOR to alternative reference rates. Since the ARRC's recommendation of CME Group's Term SOFR in July 2021, Citi has focused on systems' readiness to provide Term SOFR loan and derivatives to clients, where permitted.

In 2021, Citi also focused on remediating existing LIBOR contracts for which publication ceased on a representative basis on December 31, 2021. Substantially all of these contracts were remediated by December 31, 2021, and Citi continues to actively engage in and track the remediation of any remaining contracts after December 31, 2021. As of December 31, 2021, Citi's overall USD LIBOR gross notional exposure for contracts maturing after the LIBOR cessation date of June 30, 2023 was approximately \$7.1 trillion, which includes approximately \$4 trillion of cleared derivatives that are covered by planned Central Counterparty Clearing House (CCP) conversions, and approximately \$2.4 trillion of bilateral derivatives that are covered by robust contract fallback language. The remaining exposure of

approximately \$0.7 trillion includes bilateral derivatives and cash products that will be addressed by 2022 contract remediation plans.

In addition, for LIBOR contracts that have not yet been remediated, Citi continues to review the effect of relevant legislative solutions, which are expected to facilitate the transition to replacement rates.

UNREGISTERED SALES OF EQUITY SECURITIES, REPURCHASES OF EQUITY SECURITIES AND DIVIDENDS

Unregistered Sales of Equity Securities

None.

Equity Security Repurchases

All large banks, including Citi, are subject to limitations on capital distributions in the event of a breach of any regulatory capital buffers, including the Stress Capital Buffer, with the degree of such restrictions based on the extent to which the buffers are breached. For additional information, see “Risk Factors—Strategic Risks” above.

As indicated in the table below, Citi repurchased \$3.0 billion of common shares during the first quarter of 2022. All shares repurchased were added to treasury stock:

<i>In millions, except per share amounts</i>	Total shares purchased	Average price paid per share
January 2022		
Open market repurchases	8.8	\$ 63.75
Employee transactions ⁽¹⁾	—	—
February 2022		
Open market repurchases	11.2	66.75
Employee transactions ⁽¹⁾	—	—
March 2022		
Open market repurchases	30.3	55.90
Employee transactions ⁽¹⁾	—	—
Total for 1Q22	50.3	\$ 59.68

(1) During the first quarter, pursuant to Citigroup’s Board of Directors’ authorization, Citi withheld 676,126 shares (at an average price of \$67.84) of common stock, added to treasury stock, related to activity on employee stock programs to satisfy the employee tax requirements.

As indicated in the table below, Citi repurchased \$250 million of common shares during the second quarter of 2022. All shares repurchased were added to treasury stock:

<i>In millions, except per share amounts</i>	Total shares purchased	Average price paid per share
April 2022		
Open market repurchases	—	\$ —
Employee transactions ⁽¹⁾	—	—
May 2022		
Open market repurchases	—	—
Employee transactions ⁽¹⁾	—	—
June 2022		
Open market repurchases	5.3	47.07
Employee transactions ⁽¹⁾	—	—
Total for 2Q22	5.3	\$ 47.07

(1) During the second quarter, pursuant to Citigroup’s Board of Directors’ authorization, Citi withheld an insignificant number of shares of common stock, added to treasury stock, related to activity on employee stock programs to satisfy the employee tax requirements.

Dividends

Citi paid common dividends of \$0.51 per share during the first and second quarters of 2022, and on July 21, 2022, declared common dividends of \$0.51 per share for the third quarter of 2022. As previously announced, Citi intends to maintain its current quarterly common dividend of \$0.51 per share, subject to financial and macroeconomic conditions as well as Board of Directors' approval.

As discussed above, Citi's ability to pay common stock dividends is subject to limitations on capital distributions in the event of a breach of any regulatory capital buffers, including the Stress Capital Buffer, with the degree of such restrictions based on the extent to which the buffers are breached. For additional information, see "Risk Factors—Strategic Risks" above.

Any dividend on Citi's outstanding common stock would also need to be made in compliance with Citi's obligations on its outstanding preferred stock.

On April 1, 2022, Citi declared preferred dividends of approximately \$238 million for the second quarter of 2022. On July 21, 2022, Citi declared preferred dividends of approximately \$277 million for the third quarter of 2022.

**CITIGROUP GLOBAL MARKETS HOLDINGS INC.
AND SUBSIDIARIES**

**CONSOLIDATED FINANCIAL STATEMENTS
AS OF JUNE 30, 2022 AND DECEMBER 31, 2021
AND FOR THE SIX MONTHS ENDED
JUNE 30, 2022 AND 2021
(UNAUDITED)**

CITIGROUP GLOBAL MARKETS HOLDINGS INC. AND SUBSIDIARIES
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CITIGROUP GLOBAL MARKETS HOLDINGS INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF INCOME
(Unaudited)

<i>In millions of dollars</i>	Six Months Ended June 30,	
	2022	2021
Revenues:		
Investment banking	\$ 1,845	\$ 3,100
Principal transactions	2,466	2,229
Commissions and fees	870	1,032
Fiduciary fees	172	160
Other	60	55
Total non-interest revenues	5,413	6,576
Interest revenue	2,787	2,265
Interest expense	1,932	1,103
Net interest income	855	1,162
Total revenues, net of interest expense	6,268	7,738
Non-interest expenses:		
Compensation and benefits	2,835	2,637
Technology, communications and equipment	797	862
Brokerage, clearing and exchange fees	741	736
Professional services	231	226
Occupancy	126	139
Other operating and administrative expenses	1,027	855
Total operating expenses	5,757	5,455
Income before income taxes	511	2,283
Provision (benefit) for income taxes	(223)	420
Net income	\$ 734	\$ 1,863

The Notes to the Consolidated Financial Statements are an integral part of these Consolidated Financial Statements.

CITIGROUP GLOBAL MARKETS HOLDINGS INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(Unaudited)

<i>In millions of dollars</i>	<u>Six Months Ended June 30,</u>	
	2022	2021
Net income	\$ 734	\$ 1,863
Add: Other comprehensive income (loss)		
Net change in debt valuation adjustment (DVA), net of taxes ⁽¹⁾	1,567	(7)
Benefit plans liability adjustment, net of taxes	(65)	52
Foreign currency translation adjustment, net of taxes	(406)	(103)
Total other comprehensive income (loss)	1,096	(58)
Total comprehensive income	\$ 1,830	\$ 1,805

(1) See Note 9.

The Notes to the Consolidated Financial Statements are an integral part of these Consolidated Financial Statements.

CITIGROUP GLOBAL MARKETS HOLDINGS INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF FINANCIAL CONDITION

<i>In millions of dollars</i>	June 30, 2022 (Unaudited)	December 31, 2021
Assets		
Cash and cash equivalents	\$ 12,667	\$ 12,961
Cash segregated under federal and other regulations	12,315	13,704
Securities borrowed and purchased under agreements to resell (including \$230,814 and \$211,674 as of June 30, 2022 and December 31, 2021, respectively, at fair value)	320,434	292,971
Trading account assets (including \$119,813 and \$131,622 pledged to creditors at June 30, 2022 and December 31, 2021, respectively):		
Equity securities	36,372	46,853
Mortgage-backed securities	34,436	36,565
Foreign government securities	32,011	35,759
U.S. Treasury and federal agency securities	39,538	26,449
Derivatives	27,190	19,965
Corporate	17,864	18,271
Asset-backed securities	1,912	1,536
State and municipal securities	1,151	1,392
Other trading assets	4,003	4,395
	194,477	191,185
Brokerage receivables:		
Customers	25,622	26,415
Brokers, dealers and clearing organizations	47,090	24,754
	72,712	51,169
Loans to affiliates	76,191	59,741
Goodwill	2,190	2,192
Other assets (including \$4,477 and \$4,738 as of June 30, 2022 and December 31, 2021, respectively, at fair value)	19,230	18,247
Total assets	\$710,216	\$642,170

The Notes to the Consolidated Financial Statements are an integral part of these Consolidated Financial Statements.

CITIGROUP GLOBAL MARKETS HOLDINGS INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF FINANCIAL CONDITION
(Continued)

<i>In millions of dollars, except shares</i>	June 30, 2022 (Unaudited)	December 31, 2021
Liabilities		
Short-term borrowings (including \$5,591 and \$6,132 as of June 30, 2022 and December 31, 2021, respectively, at fair value)	\$ 37,929	\$ 30,655
Securities loaned and sold under agreements to repurchase (including \$62,749 and \$56,695 as of June 30, 2022 and December 31, 2021, respectively, at fair value)	243,297	234,015
Trading account liabilities:		
Foreign government securities	34,455	46,031
U.S. Treasury and federal agency securities	28,017	26,369
Derivatives	23,696	22,055
Equity securities	21,138	18,870
Corporate and other debt securities	<u>9,347</u>	<u>9,557</u>
	116,653	122,882
Brokerage payables (including \$3,288 and \$3,151 as of June 30, 2022 and December 31, 2021, respectively, at fair value)		
Customers	86,018	61,165
Brokers, dealers and clearing organizations	<u>18,586</u>	<u>8,349</u>
	104,604	69,514
Other liabilities	10,346	9,528
Long-term debt (including \$70,554 and \$60,516 as of June 30, 2022 and December 31, 2021, respectively, at fair value)	157,747	137,751
Total liabilities	<u>670,576</u>	<u>604,345</u>
Stockholder's equity		
Common stock (par value \$.01 per share, 1,000 shares authorized; 1,000 shares issued and outstanding)	—	—
Additional paid-in capital	28,963	28,712
Retained earnings	10,886	10,418
Accumulated other comprehensive income (loss) (AOCI)	(209)	(1,305)
Total stockholder's equity	<u>39,640</u>	<u>37,825</u>
Total liabilities and equity	<u>\$ 710,216</u>	<u>\$ 642,170</u>

The Notes to the Consolidated Financial Statements are an integral part of these Consolidated Financial Statements.

CITIGROUP GLOBAL MARKETS HOLDINGS INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDER'S EQUITY
(Unaudited)

<i>In millions of dollars</i>	<u>Six Months Ended June 30,</u>	
	2022	2021
Common stock and additional paid-in capital		
Balance, beginning of period	\$ 28,712	\$ 28,629
Capital contributions from Parent	250	2
Employee benefit plans	1	—
Balance, end of period	28,963	28,631
Retained earnings		
Balance, beginning of period	10,418	8,367
Net income	734	1,863
Dividends	(266)	(187)
Balance, end of period	10,886	10,043
Accumulated other comprehensive income (loss)		
Balance, beginning of period	(1,305)	(1,213)
Other comprehensive income (loss):		
Net change in debt valuation adjustment (DVA), net of taxes ⁽¹⁾	1,567	(7)
Benefit plans liability adjustment, net of taxes	(65)	52
Foreign currency translation adjustment, net of taxes	(406)	(103)
Total other comprehensive income (loss)	1,096	(58)
Balance, end of period	(209)	(1,271)
Total stockholder's equity	\$ 39,640	\$ 37,403

(1) Reflects the after-tax valuation of CGMHI's fair value option liabilities. See "Market Valuation Adjustments" in Note 9.

The Notes to the Consolidated Financial Statements are an integral part of these Consolidated Financial Statements.

CITIGROUP GLOBAL MARKETS HOLDINGS INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
(Unaudited)

<i>In millions of dollars</i>	<u>Six Months Ended June 30,</u>	
	2022	2021
Cash flows from operating activities:		
Net income	\$ 734	\$ 1,863
Adjustments to reconcile net income to net cash provided by (used in) operating activities:		
Depreciation and amortization	32	32
Net change in:		
Trading account assets	(3,292)	(242)
Trading account liabilities	(6,229)	12,028
Brokerage receivables net of brokerage payables	13,547	(9,046)
Other assets	(10,843)	14
Other liabilities	818	1,144
Net cash provided by (used in) operating activities	(5,233)	5,793
Cash flows from investing activities:		
Securities borrowed and purchased under agreements to resell	(27,463)	(14,084)
Loans to affiliates	(16,450)	(7,360)
Other, net	29	(15)
Net cash used in investing activities	(43,884)	(21,459)
Cash flows from financing activities:		
Dividends paid	(266)	(187)
Securities loaned and sold under agreements to repurchase	9,282	(9,033)
Capital contribution from Citigroup	250	—
Employee benefit plans	1	2
Proceeds from issuance of long-term debt	77,946	39,175
Repayment of long-term debt	(45,753)	(19,689)
Short-term borrowings, net	5,974	8,243
Net cash provided by financing activities	47,434	18,511
Change in cash and cash equivalents and cash segregated under federal and other regulations	(1,683)	2,845
Cash and cash equivalents and cash segregated under federal and other regulations at beginning of period	26,665	20,111
Cash and cash equivalents and cash segregated under federal and other regulations at end of period	\$ 24,982	\$ 22,956
Cash and cash equivalents	\$ 12,667	\$ 12,462
Cash segregated under federal and other regulations	12,315	10,494
Cash and cash equivalents and cash segregated under federal and other regulations at end of period	\$ 24,982	\$ 22,956
Cash paid during the period for interest	\$ 1,869	\$ 1,197
Change in tenor of long-term debt ⁽¹⁾	\$ (1,300)	\$ (695)

(1) The composition of CGMHI's debt is adjusted dynamically based on the structural liquidity needs of the Company. During the six months ended June 30, 2022 and 2021, the Company changed the tenor of \$1.3 billion and \$0.7 billion, respectively, in debt with affiliates from long-term to short-term.

The Notes to the Consolidated Financial Statements are an integral part of these Consolidated Financial Statements.

CITIGROUP GLOBAL MARKETS HOLDINGS INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. BASIS OF PRESENTATION, UPDATED ACCOUNTING POLICIES AND ACCOUNTING CHANGES

Basis of Presentation

The accompanying unaudited Consolidated Financial Statements as of June 30, 2022 and for the six-month periods ended June 30, 2022 and 2021 include the accounts of Citigroup Global Markets Holdings Inc. (CGMHI) and its consolidated subsidiaries. CGMHI is a direct wholly owned subsidiary of Citigroup Inc., a Delaware corporation and a financial holding company under the Bank Holding Company Act (Citigroup and its consolidated subsidiaries are referred to herein as “Citigroup” or “Citi”).

In the opinion of management, all adjustments, consisting of normal recurring adjustments, necessary for a fair presentation have been reflected. The accompanying unaudited Consolidated Financial Statements should be read in conjunction with the Consolidated Financial Statements and related notes included in CGMHI’s 2021 Audited Financial Statements.

Certain financial information that is normally included in annual financial statements prepared in accordance with U.S. generally accepted accounting principles (GAAP), but is not required for interim reporting purposes, has been condensed or omitted.

Management must make estimates and assumptions that affect the Consolidated Financial Statements and the related footnote disclosures. While management uses its best judgment, actual results could differ from those estimates.

As noted above, the Notes to these Consolidated Financial Statements are unaudited.

Throughout these Notes, “CGMHI” and “the Company” refer to Citigroup Global Markets Holdings Inc. and its consolidated subsidiaries.

Certain reclassifications and updates have been made to the prior periods’ financial statements and notes to conform to the current period’s presentation.

SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

See Note 1 to the Consolidated Financial Statements in the Company’s 2021 Audited Financial Statements for a summary of all of CGMHI’s significant accounting policies.

ACCOUNTING CHANGES

Multiple Macroeconomic Scenarios-Based ACL Approach

During the second quarter of 2022, the Company refined its Allowances for Credit Losses (ACL) methodology to utilize multiple macroeconomic scenarios to estimate its allowance for credit losses. The ACL was previously estimated using a combination of a single base-case forecast scenario as part of its quantitative component and a qualitative management adjustment to reflect economic uncertainty from downside macroeconomic scenarios. As a result of this change, the Company now explicitly incorporates multiple macroeconomic scenarios—base, upside, and downside—and associated probabilities in the quantitative component when estimating its ACL.

This refinement represents a “change in accounting estimate” under ASC Topic 250, *Accounting Changes and Error Corrections*, with prospective application beginning in the period of change. This change in accounting estimate did not have a material impact on the Company.

FUTURE ACCOUNTING CHANGES

Fair Value Measurement of Equity Securities Subject to Contractual Sale Restrictions

In June 2022, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) 2022-3, *Fair Value Measurement (Topic 820): Fair Value Measurement of Equity Securities Subject to Contractual Sale Restrictions*. The ASU was issued to address diversity in practice whereby certain entities included the impact of contractual restrictions when valuing equity securities, and it clarifies that a contractual restriction on the sale of an equity security should not be considered part of the unit of account of the equity security and, therefore, should not be considered in measuring fair value. The ASU also includes requirements for entities to disclose the fair value of equity securities subject to contractual sale restrictions, the nature and remaining duration of the restrictions and the circumstances that could cause a lapse in the restrictions. The ASU is to be adopted on a prospective basis and will be effective for the Company on January 1, 2024, although early adoption is permitted. Adoption of the accounting standard is not expected to have an impact on CGMHI’s operating results or financial position, as the Company excludes such restrictions when valuing equity securities.

CITIGROUP GLOBAL MARKETS HOLDINGS INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Obligations to Safeguard Crypto-assets Held for Platform Users

In March 2022, the Securities and Exchange Commission (SEC) issued Staff Accounting Bulletin (SAB) No. 121, which expresses the views of the SEC staff regarding the accounting for obligations to safeguard crypto-assets that an entity holds for platform users. Specifically, the guidance requires issuers that hold digital assets for their platform users to recognize a liability for their obligation to safeguard the digital assets held and a corresponding asset, measured initially and subsequently at fair value. The guidance is effective for interim and annual periods ending after June 15, 2022. The Company does not have any transactions within the scope of SAB 121 as of June 30, 2022.

2. PRINCIPAL TRANSACTIONS

Principal transactions revenue consists of realized and unrealized gains and losses from trading activities. Trading activities include revenues from fixed income, equities, credit and commodities products and foreign exchange transactions that are managed on a portfolio basis and characterized below based on the primary risk managed by each trading desk. Not included in the table below is the impact of net interest income related to trading activities, which is an integral part of trading activities' profitability. Principal transactions include CVA (credit valuation adjustments) and FVA (funding valuation adjustments) on over-the-counter derivatives. These adjustments are discussed further in Note 9.

In certain transactions, CGMHI incurs fees and presents these fees paid to third parties in operating expenses.

The following table presents *Principal transactions* revenue:

<i>In millions of dollars</i>	<u>Six Months Ended June 30,</u>	
	2022	2021
Interest rate risks ⁽¹⁾	\$ 836	\$ 745
Credit products and risks ⁽²⁾	329	823
Commodity and other risks ⁽³⁾	866	365
Equity risks ⁽⁴⁾	419	250
Foreign exchange risks ⁽⁵⁾	16	46
Total principal transactions revenue	\$ 2,466	\$ 2,229

(1) Includes revenues from government securities and corporate debt, municipal securities, mortgage securities and other debt instruments. Also includes spot and forward trading of currencies and exchange-traded and over-the-counter (OTC) currency options, options on fixed income securities, interest rate swaps, currency swaps, swap options, caps and floors, financial futures, OTC options and forward contracts on fixed income securities.

(2) Includes revenues from structured credit products.

(3) Primarily includes revenues from crude oil, refined oil products, natural gas and other commodities trades.

(4) Includes revenues from common, preferred and convertible preferred stock, convertible corporate debt, equity-linked notes and exchange-traded and OTC equity options and warrants.

(5) Includes revenues from foreign exchange spot, forward, option and swap contracts, as well as foreign currency translation gains and losses.

3. INCENTIVE PLANS AND RETIREMENT BENEFITS

Incentive Plans

For additional information on the Company's incentive plans, see Note 3 to the Consolidated Financial Statements in the Company's 2021 Audited Financial Statements.

Pension, Postretirement, Post Employment and Defined Contribution Plans

For additional information on the Company's pension, postretirement, post employment and defined contribution plans, see Note 3 to the Consolidated Financial Statements in the Company's 2021 Audited Financial Statements.

The Company's allocated pretax expense associated with the Citigroup pension, postretirement, post employment and defined contribution plans amounted to approximately \$81 million and \$75 million for the six months ended June 30, 2022 and 2021, respectively.

CITIGROUP GLOBAL MARKETS HOLDINGS INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

4. SECURITIES BORROWED, LOANED AND SUBJECT TO REPURCHASE AGREEMENTS

For additional information on the Company's resale and repurchase agreements and securities borrowing and lending agreements, see Note 5 to the Consolidated Financial Statements in the Company's 2021 Audited Financial Statements.

Securities borrowed and purchased under agreements to resell, at their respective carrying values, consisted of the following:

<i>In millions of dollars</i>	June 30, 2022	December 31, 2021
Securities purchased under agreements to resell (including \$195,369 and \$169,427 as of June 30, 2022 and December 31, 2021, respectively, at fair value)	\$ 232,562	\$ 205,523
Deposits paid for securities borrowed (including \$35,445 and \$42,247 as of June 30, 2022 and December 31, 2021, respectively, at fair value)	87,872	87,448
Total	\$ 320,434	\$ 292,971

Securities loaned and sold under agreements to repurchase, at their respective carrying values, consisted of the following:

<i>In millions of dollars</i>	June 30, 2022	December 31, 2021
Securities sold under agreements to repurchase (including \$62,598 and \$56,475 as of June 30, 2022 and December 31, 2021, respectively, at fair value)	\$ 219,853	\$ 216,388
Deposits received for securities loaned (including \$151 and \$220 as of June 30, 2022 and December 31, 2021, respectively, at fair value)	23,444	17,627
Total	\$ 243,297	\$ 234,015

It is the Company's policy to take possession of the underlying collateral, monitor its market value relative to the amounts due under the agreements and, when necessary, require prompt transfer of additional collateral in order to maintain contractual margin protection. For resale and repurchase agreements, when necessary, the Company posts additional collateral in order to maintain contractual margin protection.

A substantial portion of the resale and repurchase agreements is recorded at fair value as the Company elected the fair value option, as described in Notes 9 and 10. The remaining portion is carried at the amount of cash initially advanced or received, plus accrued interest, as specified in the respective agreements.

A substantial portion of securities borrowing and lending agreements is recorded at the amount of cash advanced or received. The remaining portion is recorded at fair value as the Company elected the fair value option for certain securities borrowed and loaned portfolios, as described in Note 10. With respect to securities loaned, the Company receives cash collateral in an amount generally in excess of the market value of the securities loaned. The Company monitors the market value of securities borrowed and securities loaned on a daily basis and posts or obtains additional collateral in order to maintain contractual margin protection.

The following tables present the gross and net resale and repurchase agreements and securities borrowing and lending agreements and the related offsetting amount permitted under ASC 210-20-45. The tables also include amounts related to financial instruments that are not permitted to be offset under ASC 210-20-45, but would be eligible for offsetting to the extent that an event of default has occurred and a legal opinion supporting enforceability of the offsetting rights has been obtained. Remaining exposures continue to be secured by financial collateral, but the Company may not have sought or been able to obtain a legal opinion evidencing enforceability of the offsetting right.

CITIGROUP GLOBAL MARKETS HOLDINGS INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

As of June 30, 2022

<i>In millions of dollars</i>	Gross amounts of recognized assets	Gross amounts offset on the Consolidated Balance Sheet ⁽¹⁾	Net amounts of assets included on the Consolidated Balance Sheet	Amounts not offset on the Consolidated Balance Sheet but eligible for offsetting upon counterparty default ⁽²⁾	Net amounts ⁽³⁾
Securities purchased under agreements to resell	\$ 326,427	\$ 93,865	\$ 232,562	\$ 177,308	\$ 55,254
Deposits paid for securities borrowed	97,291	9,419	87,872	17,735	70,137
Total	\$ 423,718	\$ 103,284	\$ 320,434	\$ 195,043	\$ 125,391

<i>In millions of dollars</i>	Gross amounts of recognized liabilities	Gross amounts offset on the Consolidated Balance Sheet ⁽¹⁾	Net amounts of liabilities included on the Consolidated Balance Sheet	Amounts not offset on the Consolidated Balance Sheet but eligible for offsetting upon counterparty default ⁽²⁾	Net amounts ⁽³⁾
Securities sold under agreements to repurchase	\$ 313,718	\$ 93,865	\$ 219,853	\$ 124,885	\$ 94,968
Deposits received for securities loaned	32,863	9,419	23,444	5,619	17,825
Total	\$ 346,581	\$ 103,284	\$ 243,297	\$ 130,504	\$ 112,793

As of December 31, 2021

<i>In millions of dollars</i>	Gross amounts of recognized assets	Gross amounts offset on the Consolidated Balance Sheet ⁽¹⁾	Net amounts of assets included on the Consolidated Balance Sheet	Amounts not offset on the Consolidated Balance Sheet but eligible for offsetting upon counterparty default ⁽²⁾	Net amounts ⁽³⁾
Securities purchased under agreements to resell	\$ 333,871	\$ 128,348	\$ 205,523	\$ 196,656	\$ 8,867
Deposits paid for securities borrowed	103,447	15,999	87,448	14,045	73,403
Total	\$ 437,318	\$ 144,347	\$ 292,971	\$ 210,701	\$ 82,270

<i>In millions of dollars</i>	Gross amounts of recognized liabilities	Gross amounts offset on the Consolidated Balance Sheet ⁽¹⁾	Net amounts of liabilities included on the Consolidated Balance Sheet	Amounts not offset on the Consolidated Balance Sheet but eligible for offsetting upon counterparty default ⁽²⁾	Net amounts ⁽³⁾
Securities sold under agreements to repurchase	\$ 344,737	\$ 128,348	\$ 216,389	\$ 139,143	\$ 77,246
Deposits received for securities loaned	33,625	15,999	17,626	3,635	13,991
Total	\$ 378,362	\$ 144,347	\$ 234,015	\$ 142,778	\$ 91,237

(1) Includes financial instruments subject to enforceable master netting agreements that are permitted to be offset under ASC 210-20-45.

(2) Includes financial instruments subject to enforceable master netting agreements that are not permitted to be offset under ASC 210-20-45, but would be eligible for offsetting to the extent that an event of default has occurred and a legal opinion supporting enforceability of the offsetting right has been obtained.

(3) Remaining exposures continue to be secured by financial collateral, but the Company may not have sought or been able to obtain a legal opinion evidencing enforceability of the offsetting right.

CITIGROUP GLOBAL MARKETS HOLDINGS INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

The following tables present the gross amount of liabilities associated with repurchase agreements and securities lending agreements, by remaining contractual maturity:

<i>In millions of dollars</i>	As of June 30, 2022				
	Open and overnight	Up to 30 Days	31-90 Days	Greater than 90 Days	Total
Securities sold under agreements to repurchase	\$ 152,513	\$ 77,315	\$ 29,466	\$ 54,424	\$ 313,718
Deposits received for securities loaned	25,783	1	1,451	5,628	32,863
Total	\$ 178,296	\$ 77,316	\$ 30,917	\$ 60,052	\$ 346,581

<i>In millions of dollars</i>	As of December 31, 2021				
	Open and overnight	Up to 30 Days	31-90 Days	Greater than 90 Days	Total
Securities sold under agreements to repurchase	\$ 163,336	\$ 93,221	\$ 36,842	\$ 51,338	\$ 344,737
Deposits received for securities loaned	26,378	6	1,347	5,894	33,625
Total	\$ 189,714	\$ 93,227	\$ 38,189	\$ 57,232	\$ 378,362

The following tables present the gross amount of liabilities associated with repurchase agreements and securities lending agreements, by class of underlying collateral:

<i>In millions of dollars</i>	As of June 30, 2022		
	Repurchase agreements	Securities lending agreements	Total
U.S. Treasury and federal agency securities	\$ 143,180	\$ —	\$ 143,180
State and municipal securities	992	—	992
Foreign government securities	112,902	127	113,029
Corporate bonds	15,302	132	15,434
Equity securities	11,219	32,591	43,810
Mortgage-backed securities	23,118	—	23,118
Asset-backed securities	1,682	—	1,682
Other trading assets	5,323	13	5,336
Total	\$ 313,718	\$ 32,863	\$ 346,581

<i>In millions of dollars</i>	As of December 31, 2021		
	Repurchase agreements	Securities lending agreements	Total
U.S. Treasury and federal agency securities	\$ 134,898	\$ 89	\$ 134,987
State and municipal securities	1,054	—	1,054
Foreign government securities	122,628	211	122,839
Corporate bonds	20,290	148	20,438
Equity securities	28,144	33,116	61,260
Mortgage-backed securities	32,878	—	32,878
Asset-backed securities	1,682	—	1,682
Other trading assets	3,163	61	3,224
Total	\$ 344,737	\$ 33,625	\$ 378,362

CITIGROUP GLOBAL MARKETS HOLDINGS INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

5. DEBT

For additional information regarding CGMHI's short-term borrowings and long-term debt, see Note 6 to the Consolidated Financial Statements in CGMHI's 2021 Audited Financial Statements.

Short-Term Borrowings

<i>In millions of dollars</i>	June 30, 2022	December 31, 2021
Borrowings from affiliates	\$ 19,557	\$ 17,230
Commercial paper	12,429	6,992
Other short-term borrowings	5,943	6,433
Total	\$ 37,929	\$ 30,655

Long-Term Debt

<i>In millions of dollars</i>	June 30, 2022	December 31, 2021
Senior notes	\$ 136,045	\$ 121,047
Subordinated notes	21,702	16,704
Total	\$ 157,747	\$ 137,751

Long-term debt with affiliates totaled \$86.1 billion and \$76.3 billion at June 30, 2022 and December 31, 2021, respectively.

6. CAPITAL REQUIREMENTS

Certain U.S. and non-U.S. broker/dealer subsidiaries are subject to various securities and commodities regulations and capital adequacy requirements promulgated by the regulatory and exchange authorities of the countries in which they operate. These regulatory restrictions may impose regulatory capital requirements and limit the amounts that these subsidiaries can pay in dividends or advance to the Company.

Citigroup Global Markets Inc. (CGMI), a U.S. broker-dealer registered with the SEC that is an indirect wholly owned subsidiary of CGMHI, has elected to compute net capital in accordance with the provisions of Appendix E of the Net Capital Rule. This methodology allows CGMI to compute market risk capital charges using internal value-at-risk models. Under Appendix E of the Net Capital Rule, CGMI is required to hold tentative net capital in excess of \$1 billion and net capital in excess of \$500 million. CGMI is also required to notify the SEC in the event that its tentative net capital is less than \$5 billion. As of June 30, 2022, CGMI had tentative net capital in excess of both the minimum and the notification requirements. At June 30, 2022, CGMI had regulatory net capital of \$11.3 billion, which was \$6.4 billion in excess of the minimum net capital requirement of \$4.9 billion.

Moreover, Citigroup Global Markets Limited (CGML), a broker-dealer registered with the United Kingdom's Prudential Regulation Authority (PRA) that is also an indirect wholly owned subsidiary of CGMHI, had total regulatory capital of \$28 billion at June 30, 2022, which exceeded the PRA's minimum regulatory capital requirements.

In addition, certain of CGMHI's other broker-dealer subsidiaries are subject to regulation in the countries in which they do business, including requirements to maintain specified levels of net capital or its equivalent. CGMHI's other principal broker-dealer subsidiaries were in compliance with their regulatory capital requirements at June 30, 2022.

CITIGROUP GLOBAL MARKETS HOLDINGS INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

7. SECURITIZATIONS AND VARIABLE INTEREST ENTITIES

For additional information regarding CGMHI's use of special purpose entities (SPEs) and variable interest entities (VIEs), see Note 8 to the Consolidated Financial Statements in CGMHI's 2021 Audited Financial Statements.

The Company's involvement with consolidated and unconsolidated VIEs with which the Company holds significant variable interests is presented below:

<i>In millions of dollars</i>	As of June 30, 2022					
	Total involvement with SPE assets	Consolidated VIE / SPE assets	Significant unconsolidated VIE assets ⁽²⁾	Maximum exposure to loss in significant unconsolidated VIEs ⁽¹⁾		
				Debt		
				investments ⁽³⁾	Derivatives	Total
Mortgage securitizations ⁽⁴⁾						
U.S. agency-sponsored	\$ 78,844	\$ —	\$ 78,844	\$ 1,524	\$ —	\$ 1,524
Non-agency-sponsored	29,386	—	29,386	583	—	583
Collateralized loan obligations	2,252	—	2,252	47	—	47
Asset-based financing	2,788	2,283	505	24	—	24
Other	609	138	471	8	64	72
Total	\$ 113,879	\$ 2,421	\$ 111,458	\$ 2,186	\$ 64	\$ 2,250

<i>In millions of dollars</i>	As of December 31, 2021					
	Total involvement with SPE assets	Consolidated VIE / SPE assets	Significant unconsolidated VIE assets ⁽²⁾	Maximum exposure to loss in significant unconsolidated VIEs ⁽¹⁾		
				Debt		
				investments ⁽³⁾	Derivatives	Total
Mortgage securitizations ⁽⁴⁾						
U.S. agency-sponsored	\$ 78,373	\$ —	\$ 78,373	\$ 1,221	\$ —	\$ 1,221
Non-agency-sponsored	29,203	—	29,203	571	—	571
Collateralized loan obligations	2,897	—	2,897	32	—	32
Asset-based financing	3,116	2,586	530	25	—	25
Other	698	—	698	2	225	227
Total	\$ 114,287	\$ 2,586	\$ 111,701	\$ 1,851	\$ 225	\$ 2,076

(1) The definition of maximum exposure to loss is included in the text that follows this table.

(2) Included on the Company's June 30, 2022 and December 31, 2021 Consolidated Statement of Financial Condition.

(3) A significant unconsolidated VIE is an entity in which the Company has any variable interest considered to be significant, regardless of the likelihood of loss.

(4) CGMHI mortgage securitizations also include agency and non-agency (private label) re-securitization activities. These SPEs are not consolidated. See "Re-securitizations" below for further discussion.

The previous tables do not include:

- certain VIEs structured by third parties in which the Company holds securities in inventory, as these investments are made on arm's-length terms;
- certain positions in mortgage- and asset-backed securities held by the Company, which are classified as *Trading account assets*, in which the Company has no other involvement with the related securitization entity deemed to be significant (see Note 9 for more information on these positions); and
- certain representations and warranties exposures in CGMHI residential mortgage securitizations, in which the original mortgage loan balances are no longer outstanding.

The asset balances for consolidated VIEs represent the fair value of the assets consolidated by the Company. The asset balances for unconsolidated VIEs in which the Company has significant involvement represent the most current information available to the Company. In most cases, the asset balances represent an amortized cost basis without regard to impairments, unless fair value information is readily available to the Company.

CITIGROUP GLOBAL MARKETS HOLDINGS INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

The maximum loss exposure represents the balance sheet carrying amount of the Company's investment in the VIE. It reflects the initial amount of cash invested in the VIE, adjusted for any accrued interest and cash principal payments received. The carrying amount may also be adjusted for increases or declines in fair value or any impairment in value recognized in earnings. The maximum exposure of unfunded positions represents the notional amount of a derivative instrument considered to be a variable interest. In certain transactions, the Company has entered into derivative instruments or other arrangements that are not considered variable interests in the VIE (e.g., interest rate swaps, cross-currency swaps or where the Company is the purchaser of credit protection under a credit default swap or total return swap where the Company pays the total return on certain assets to the SPE). Receivables under such arrangements are not included in the maximum exposure amounts.

Mortgage Securitizations

CGMHI's mortgage securitizations represent government-sponsored agency and private label (non-agency-sponsored mortgages) re-securitization activities. These SPEs are not consolidated. See "Re-securitizations" below for further discussion. CGMHI's mortgage securitizations are primarily non-recourse, thereby effectively transferring the risk of future credit losses to the purchasers of the securities issued by the SPE.

The following table includes information about loan delinquencies and liquidation losses for assets held in non-consolidated, non-agency-sponsored securitization entities:

	Securitized assets		90 days past due		Liquidation losses	
	Jun. 30, 2022	Dec. 31, 2021	Jun. 30, 2022	Dec. 31, 2021	Six Months Ended June 30, 2022 2021	
<i>In millions of dollars</i>						
Residential mortgages	\$ 1,150	\$ 2,110	\$ 9	\$ 1	\$ —	\$ —

Re-securitizations

The Company engages in re-securitization transactions in which debt securities are transferred to a VIE in exchange for new beneficial interests. CGMHI did not transfer non-agency (private label) securities to re-securitization entities during the six months ended June 30, 2022 and 2021. These securities are backed by either residential or commercial mortgages and are often structured on behalf of clients. As of June 30, 2022 and December 31, 2021, CGMHI held no retained interests in private label re-securitization transactions structured by CGMHI.

The Company also re-securitizes U.S. government-agency-guaranteed mortgage-backed (agency) securities. During the six months ended June 30, 2022 and 2021, CGMHI transferred agency securities with a fair value of approximately \$14.9 billion and \$24.5 billion, respectively, to re-securitization entities.

As of June 30, 2022, the fair value of CGMHI-retained interests in agency re-securitization transactions structured by CGMHI totaled approximately \$1.5 billion (including \$656 million related to re-securitization transactions executed in 2022), an increase from \$1.2 billion as of December 31, 2021 (including \$641 million related to re-securitization transactions executed in 2021), which is recorded in *Trading account assets*. The original fair values of agency re-securitization transactions in which CGMHI holds a retained interest as of June 30, 2022 and December 31, 2021 were approximately \$78.8 billion and \$78.4 billion, respectively.

As of June 30, 2022 and December 31, 2021, the Company did not consolidate any private label or agency re-securitization entities.

Asset-Based Financing

The Company provides financing to VIEs that primarily hold non-marketable equity securities and derivative transactions. These instruments are reported in *Trading account assets* and are accounted for at fair value through earnings. The Company consolidates VIEs when it has the power to direct the activities that most significantly impact a VIE's economic performance. For CGMHI to realize the maximum loss in these VIEs, the issuer of the equity securities held by the VIE and the derivative counterparties would have to default with no recovery.

8. DERIVATIVES ACTIVITIES

In the ordinary course of business, the Company enters into various types of derivative transactions. All derivatives are recorded in *Trading account assets/Trading account liabilities* on the Consolidated Statement of Financial Condition. For additional information regarding the Company's use of and accounting for derivatives, see Note 9 to the Consolidated Financial Statements in CGMHI's 2021 Audited Financial Statements.

CITIGROUP GLOBAL MARKETS HOLDINGS INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Information pertaining to the Company's derivatives activities, based on notional amounts, is presented in the table below. Derivative notional amounts are reference amounts from which contractual payments are derived and do not represent a complete measure of CGMHI's exposure to derivative transactions. CGMHI's derivative exposure arises primarily from market fluctuations (i.e., market risk), counterparty failure (i.e., credit risk) and/or periods of high volatility or financial stress (i.e., liquidity risk), as well as any market valuation adjustments that may be required on the transactions. Moreover, notional amounts do not reflect the netting of offsetting trades. For example, if CGMHI enters into a receive-fixed interest rate swap with \$100 million notional, and offsets this risk with an identical but opposite pay-fixed position with a different counterparty, \$200 million in derivative notionals is reported, although these offsetting positions may result in de minimis overall market risk.

In addition, aggregate derivative notional amounts can fluctuate from period to period in the normal course of business based on CGMHI's market share, levels of client activity and other factors.

Derivative Notionals

<i>In millions of dollars</i>	Hedging instruments under ASC 815		Trading derivative instruments	
	June 30, 2022	December 31, 2021	June 30, 2022	December 31, 2021
Interest rate contracts				
Swaps	\$ 221	\$ 261	\$ 6,060,196	\$ 5,443,502
Futures and forwards	—	—	1,732,992	1,189,982
Written options	—	—	382,435	424,082
Purchased options	—	—	355,487	406,066
Total interest rate contracts	221	261	8,531,110	7,463,632
Foreign exchange contracts				
Swaps	—	—	710,008	816,426
Futures, forwards and spot	—	—	199,240	196,233
Written options	—	—	99,507	94,344
Purchased options	—	—	100,742	95,261
Total foreign exchange contracts	—	—	1,109,497	1,202,264
Equity contracts				
Swaps	—	—	202,095	264,885
Futures and forwards	—	—	64,264	59,859
Written options	—	—	611,294	562,543
Purchased options	—	—	509,212	469,803
Total equity contracts	—	—	1,386,865	1,357,090
Commodity and other contracts				
Swaps	—	—	99,247	90,877
Futures and forwards	1,365	2,096	86,710	66,032
Written options	—	—	11,845	9,829
Purchased options	—	—	10,863	9,332
Total commodity and other contracts	1,365	2,096	208,665	176,070
Credit derivatives ⁽¹⁾				
Protection sold	—	—	884,264	745,210
Protection purchased	—	—	891,727	761,907
Total credit derivatives	—	—	1,775,991	1,507,117
Total derivative notionals	\$ 1,586	\$ 2,357	\$ 13,012,128	\$ 11,706,173

(1) Credit derivatives are arrangements designed to allow one party (protection purchaser) to transfer the credit risk of a "reference asset" to another party (protection seller). These arrangements allow a protection seller to assume the credit risk associated with the reference asset without directly purchasing that asset. The Company enters into credit derivative positions for purposes such as risk management, yield enhancement, reduction of credit concentrations and diversification of overall risk.

The following table presents the gross and net fair values of the Company's derivative transactions and the related offsetting amounts as of June 30, 2022 and December 31, 2021. Gross positive fair values are offset against gross negative fair values by counterparty, pursuant to enforceable master netting agreements. Under ASC 815-10-45, payables and receivables in respect of cash collateral received from or paid to a given counterparty pursuant to a credit support annex are included in

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the offsetting amount if a legal opinion supporting the enforceability of netting and collateral rights has been obtained. GAAP does not permit similar offsetting for security collateral.

In addition, the following table reflects rule changes adopted by clearing organizations that require or allow entities to treat certain derivative assets, liabilities and the related variation margin as settlement of the related derivative fair values for legal and accounting purposes, as opposed to presenting gross derivative assets and liabilities that are subject to collateral, whereby the counterparties would also record a related collateral payable or receivable. The table also presents amounts that are not permitted to be offset, such as security collateral or cash collateral posted at third-party custodians, but which would be eligible for offsetting to the extent that an event of default has occurred and a legal opinion supporting enforceability of the netting and collateral rights has been obtained.

Derivative Mark-to-Market (MTM) Receivables/Payables

<i>In millions of dollars</i>	Derivatives classified in			
	Trading account assets / liabilities ^{(1) (2)}			
	June 30, 2022		December 31, 2021	
	Assets	Liabilities	Assets	Liabilities
Interest rate derivatives instruments designated as ASC 815 hedges	\$ 11	\$ —	\$ 17	\$ —
Derivatives instruments not designated as ASC 815 hedges				
Over-the-counter	144,545	144,516	144,380	140,278
Cleared	6,440	3,851	1,524	1,716
Exchange traded	34	35	21	2
Interest rate contracts	151,019	148,402	145,925	141,996
Over-the-counter	24,698	25,316	17,617	17,977
Foreign exchange contracts	24,698	25,316	17,617	17,977
Over-the-counter	31,525	35,922	23,640	24,933
Cleared	22	12	19	—
Exchange traded	29,356	30,671	20,395	21,069
Equity contracts	60,903	66,605	44,054	46,002
Over-the-counter	37,405	40,658	25,303	29,120
Exchange traded	605	618	219	227
Commodity and other contracts	38,010	41,276	25,522	29,347
Over-the-counter	17,135	16,385	16,571	16,926
Cleared	1,629	1,392	3,076	3,189
Credit derivatives	18,764	17,777	19,647	20,115
Total derivatives instruments not designated as ASC 815 hedges	293,394	299,376	252,765	255,437
Total derivatives	293,405	299,376	252,782	255,437
Less: Netting agreements ⁽³⁾	(255,258)	(255,258)	(215,148)	(215,148)
Less: Netting cash collateral received/paid ⁽⁴⁾	(10,957)	(20,422)	(17,669)	(18,234)
Net receivables / payables included on the Consolidated Statement of Financial Condition	\$ 27,190	\$ 23,696	\$ 19,965	\$ 22,055
Additional amounts subject to an enforceable master netting agreement, but not offset on the Consolidated Statement of Financial Condition				
Less: Cash collateral received/paid	(134)	(2)	(103)	(4)
Less: Non-cash collateral received/paid	(1,679)	(858)	(1,812)	(847)
Total net receivables/payables	\$ 25,377	\$ 22,836	\$ 18,050	\$ 21,204

(1) The derivatives fair values are also presented in Note 9.

(2) Over-the-counter (OTC) derivatives are derivatives executed and settled bilaterally with counterparties without the use of an organized exchange or central clearing house. Cleared derivatives include derivatives executed bilaterally with a counterparty in the OTC market, but then novated to a central clearing house, whereby the central clearing house becomes the counterparty to both of the original counterparties. Exchange-traded derivatives include derivatives executed directly on an organized exchange that provides pre-trade price transparency.

(3) Represents the netting of balances with the same counterparty under enforceable netting agreements.

(4) Represents the netting of cash collateral paid and received by counterparties under enforceable credit support agreements. Substantially all netting of cash collateral received and paid is against OTC derivative assets and liabilities, respectively.

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For the six months ended June 30, 2022 and 2021, amounts recognized in *Principal transactions* in the Consolidated Statement of Income include certain derivatives not designated in a qualifying hedging relationship. The Company presents this disclosure by business classification, showing derivative gains and losses related to its trading activities together with gains and losses related to non-derivative instruments within the same trading portfolios, as this represents how these portfolios are risk managed. See Note 2 for further information.

Fair Value Hedges

Hedging of Benchmark Interest Rate Risk

CGMHI hedges exposure to changes in the fair value of fixed-rate long-term debt. For qualifying fair value hedges of interest rate risk, the changes in the fair value of the derivative and the change in the fair value of the long-term debt are presented within *Interest expense*.

Hedging of Commodity Price Risk

The Company hedges the change in fair value attributable to spot price movements in physical commodities inventories. The hedging instrument is a futures contract to sell the underlying commodity. In this hedge, the change in the value of the hedged inventory is reflected in earnings, which offsets the change in the fair value of the futures contract that is also reflected in earnings. Although the change in the fair value of the hedging instrument recorded in earnings includes changes in forward rates, CGMHI excludes the differential between the spot and the contractual forward rates under the futures contract from the assessment of hedge effectiveness, and it is generally reflected directly in earnings over the life of the hedge. CGMHI also excludes changes in forward rates from the assessment of hedge effectiveness and records it in *Other comprehensive income*.

The following table summarizes the gains (losses) on the Company's fair value hedges:

<i>In millions of dollars</i>	Gains / (losses) on fair value hedges			
	Six Months Ended June 30,			
	2022		2021	
	Other revenue	Interest expense	Other revenue	Interest expense
Gain (loss) on the hedging derivatives included in assessment of the effectiveness of fair value hedges:				
Interest rate hedges	\$ —	\$ (6)	\$ —	\$ (5)
Commodity hedges	348	—	(566)	—
Total gain (loss) on the hedging derivatives included in assessment of the effectiveness of fair value hedges	348	(6)	(566)	(5)
Gain (loss) on the hedged item in designated and qualifying fair value hedges:				
Interest rate hedges	—	6	—	5
Commodity hedges	(348)	—	566	—
Total gain (loss) on the hedged item in designated and qualifying fair value hedges	(348)	6	566	5
Net loss on the hedging derivatives excluded from assessment of the effectiveness of fair value hedges:				
Interest rate hedges	—	—	—	—
Commodity hedges	(3)	—	(75)	—
Total net loss on the hedging derivatives excluded from assessment of the effectiveness of fair value hedges	\$ (3)	\$ —	\$ (75)	\$ —

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Cumulative Basis Adjustment

Upon electing to apply ASC 815 fair value hedge accounting, the carrying value of the hedged item is adjusted to reflect the cumulative changes in the hedged risk. This cumulative hedge basis adjustment becomes part of the carrying value of the hedged item until the hedged item is derecognized from the balance sheet. The table below presents the carrying amount of CGMHI's hedged assets and liabilities under qualifying fair value hedges at June 30, 2022 and December 31, 2021, along with the cumulative hedge basis adjustments included in the carrying value of those hedged assets and liabilities that would reverse through earnings in future periods.

In millions of dollars

Balance sheet line item in which hedged item is recorded	Carrying amount of hedged asset/ liability	Cumulative fair value hedging adjustment increasing (decreasing) the carrying amount	
		Active	De-designated
As of June 30, 2022			
Trading account assets	\$ 264	\$ 76	\$ —
Long-term debt	232	11	—
As of December 31, 2021			
Trading account assets	\$ 342	\$ 116	\$ —
Long-term debt	277	17	—

Credit Derivatives

The following tables summarize the key characteristics of the Company's credit derivatives portfolio by counterparty and derivative form:

<i>In millions of dollars at June 30, 2022</i>	Fair values		Notionals	
	Receivable	Payable	Protection purchased	Protection sold
By industry of counterparty:				
Banks	\$ 13,098	\$ 13,589	\$ 590,695	\$ 582,882
Broker-dealers	1,662	833	23,864	22,291
Non-financial	12	10	292	131
Insurance and other financial institutions	3,992	3,345	276,876	278,960
Total by industry of counterparty	18,764	17,777	891,727	884,264
By instrument:				
Credit default swaps and options	17,497	17,296	883,467	878,581
Total return swaps and other	1,267	481	8,260	5,683
Total by instrument	18,764	17,777	891,727	884,264
By rating of reference entity:				
Investment grade	3,954	3,714	443,429	429,189
Non-investment grade	14,810	14,063	448,298	455,075
Total by rating of reference entity	18,764	17,777	891,727	884,264
By maturity:				
Within 1 year	3,484	2,771	131,723	128,268
From 1 to 5 years	12,189	12,044	699,665	704,882
After 5 years	3,091	2,962	60,339	51,114
Total by maturity	\$ 18,764	\$ 17,777	\$ 891,727	\$ 884,264

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<i>In millions of dollars at December 31, 2021</i>	Fair values		Notionals	
	Receivable	Payable	Protection purchased	Protection sold
By industry of counterparty:				
Banks	\$ 13,672	\$ 14,137	\$ 470,469	\$ 462,085
Broker-dealers	1,293	502	22,426	22,561
Non-financial	25	66	4,661	1,125
Insurance and other financial institutions	4,657	5,410	264,351	259,439
Total by industry of counterparty	19,647	20,115	761,907	745,210
By instrument:				
Credit default swaps and options	19,310	19,407	751,256	736,399
Total return swaps and other	337	708	10,651	8,811
Total by instrument	19,647	20,115	761,907	745,210
By rating of reference entity:				
Investment grade	7,790	8,011	487,837	456,168
Non-investment grade	11,857	12,104	274,070	289,042
Total by rating of reference entity	19,647	20,115	761,907	745,210
By maturity:				
Within 1 year	1,002	1,186	116,378	107,698
From 1 to 5 years	15,787	16,177	586,016	586,469
After 5 years	2,858	2,752	59,513	51,043
Total by maturity	\$ 19,647	\$ 20,115	\$ 761,907	\$ 745,210

Credit Risk-Related Contingent Features in Derivatives

Certain derivative instruments contain provisions that require the Company to either post additional collateral or immediately settle any outstanding liability balances upon the occurrence of a specified event related to the credit risk of the Company. These events, which are defined by the existing derivative contracts, are primarily downgrades in the credit ratings of the Company and its affiliates.

The fair value (excluding CVA) of all derivative instruments with credit risk-related contingent features that were in a net liability position at June 30, 2022 and December 31, 2021 was \$4.2 billion and \$6.6 billion, respectively. The Company posted \$3.3 billion and \$4.7 billion as collateral for this exposure in the normal course of business as of June 30, 2022 and December 31, 2021, respectively.

A downgrade could trigger additional collateral or cash settlement requirements for the Company and certain affiliates. In the event that CGMHI was downgraded a single notch by all three major rating agencies as of June 30, 2022, the Company could be required to post an additional \$284 million as either collateral or settlement of the derivative transactions. In addition, the Company could be required to segregate with third-party custodians collateral previously received from existing derivative counterparties in the amount of \$121 million upon the single notch downgrade, resulting in aggregate cash obligations and collateral requirements of approximately \$405 million.

Derivatives Accompanied by Financial Asset Transfers

For transfers of financial assets accounted for as a sale by the Company, and for which the Company has retained substantially all of the economic exposure to the transferred asset through a total return swap executed with the same counterparty in contemplation of the initial sale (and still outstanding), the asset amounts derecognized and the gross cash proceeds received as of the date of derecognition were \$2.0 billion and \$2.9 billion as of June 30, 2022 and December 31, 2021, respectively.

At June 30, 2022, the fair value of these previously derecognized assets was \$1.9 billion. The fair value of the total return swaps as of June 30, 2022 was \$19 million recorded as gross derivative assets and \$83 million recorded as gross derivative liabilities. At December 31, 2021, the fair value of these previously derecognized assets was \$2.9 billion. The fair value of the total return swaps as of December 31, 2021 was \$13 million recorded as gross derivative assets and \$58 million recorded as gross derivative liabilities.

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The balances for the total return swaps are on a gross basis, before the application of counterparty and cash collateral netting, and are included primarily as equity derivatives in the tabular disclosures in this Note.

9. FAIR VALUE MEASUREMENT

For additional information regarding fair value measurement at CGMHI, see Note 11 to the Consolidated Financial Statements in CGMHI's 2021 Audited Financial Statements.

Market Valuation Adjustments

The table below summarizes the credit valuation adjustments (CVA) and funding valuation adjustments (FVA) applied to the fair value of derivative instruments at June 30, 2022 and December 31, 2021:

<i>In millions of dollars</i>	Credit and funding valuation adjustments contra-liability (contra-asset)	
	June 30, 2022	December 31, 2021
Counterparty CVA	\$ (198)	\$ (250)
Asset FVA	(109)	(56)
CGMHI (own-credit) CVA ⁽¹⁾	306	177
Liability FVA	49	38
Total CVA—derivative instruments	\$ 48	\$ (91)

(1) Determined using Citi-specific CDS spreads.

The table below summarizes pretax gains (losses) related to changes in CVA on derivative instruments, net of hedges, FVA on derivatives and debt valuation adjustments (DVA) on the Company's own fair value option (FVO) liabilities for the periods indicated:

<i>In millions of dollars</i>	Credit/funding/debt valuation adjustments gain (loss)	
	Six Months Ended June 30,	
	2022	2021
Counterparty CVA	\$ 1	\$ 2
Asset FVA	(47)	3
Own-credit CVA ⁽¹⁾	124	(30)
Liability FVA	11	—
Total CVA—derivative instruments	89	(25)
DVA related to own FVO liabilities	2,090	(12)
Total CVA and DVA	\$ 2,179	\$ (37)

(1) Determined using Citi-specific CDS spreads.

Fair Value Hierarchy

ASC 820-10 specifies a hierarchy of inputs based on whether the inputs are observable or unobservable. Observable inputs are developed using market data and reflect market participant assumptions, while unobservable inputs reflect the Company's market assumptions. These two types of inputs have created the following fair value hierarchy:

- Level 1: Quoted prices for *identical* instruments in active markets.
- Level 2: Quoted prices for similar instruments in active markets, quoted prices for identical or similar instruments in markets that are not active and model-derived valuations in which all significant inputs and significant value drivers are *observable* in the market.
- Level 3: Valuations derived from valuation techniques in which one or more significant inputs or significant value drivers are *unobservable*.

As required under the fair value hierarchy, the Company considers relevant and observable market inputs in its valuations where possible. The fair value hierarchy classification approach typically utilizes rules-based and data driven selection criteria to determine whether an instrument is classified as Level 1, Level 2, or Level 3:

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- The determination of whether an instrument is quoted in an active market and therefore considered a Level 1 instrument is based upon the frequency of observed transactions and the quality of independent market data available on the measurement date.
- A Level 2 classification is assigned where there is observability of prices / market inputs to models, or where any unobservable inputs are not significant to the valuation. The determination of whether an input is considered observable is based on the availability of independent market data and its corroboration, for example through observed transactions in the market.
- Otherwise, an instrument is classified as Level 3.

Items Measured at Fair Value on a Recurring Basis

The following tables present for each of the fair value hierarchy levels the Company's assets and liabilities that are measured at fair value on a recurring basis at June 30, 2022 and December 31, 2021. The Company may hedge positions that have been classified in the Level 3 category with other financial instruments (hedging instruments) that may be classified as Level 3, but also with financial instruments classified as Level 1 or Level 2. The effects of these hedges are presented gross in the following tables:

Fair Value Levels

<i>In millions of dollars at June 30, 2022</i>	Level 1	Level 2	Level 3	Gross inventory	Netting ⁽¹⁾	Net balance
Assets						
Securities borrowed and purchased under agreements to resell						
	\$ —	\$ 324,141	\$ 84	\$ 324,225	\$ (93,411)	\$ 230,814
Trading non-derivative assets						
Trading mortgage-backed securities						
U.S. government-sponsored agency guaranteed	—	32,060	707	32,767	—	32,767
Residential	—	518	153	671	—	671
Commercial	—	860	138	998	—	998
Total trading mortgage-backed securities	—	33,438	998	34,436	—	34,436
U.S. Treasury and federal agency securities	35,620	3,917	1	39,538	—	39,538
State and municipal securities	—	1,119	32	1,151	—	1,151
Foreign government securities	25,862	6,046	103	32,011	—	32,011
Corporate	1,216	15,932	716	17,864	—	17,864
Equity securities	33,566	2,666	140	36,372	—	36,372
Asset-backed securities	—	1,358	554	1,912	—	1,912
Other trading assets ⁽²⁾	18	3,576	409	4,003	—	4,003
Total trading non-derivative assets	96,282	68,052	2,953	167,287	—	167,287
Trading derivatives						
Interest rate contracts	194	150,149	687	151,030		
Foreign exchange contracts	—	24,567	131	24,698		
Equity contracts	51	58,825	2,027	60,903		
Commodity contracts	—	36,056	1,954	38,010		
Credit derivatives	—	17,681	1,083	18,764		
Total trading derivatives	245	287,278	5,882	293,405		
Netting agreements					(255,258)	
Netting of cash collateral received ⁽³⁾					(10,957)	
Total trading derivatives	245	287,278	5,882	293,405	(266,215)	27,190
Securities received as collateral	2,456	236	19	2,711	—	2,711
Investments - Non-marketable equity securities	—	8	196	204	—	204
Other financial assets measured on a recurring basis	—	1,289	273	1,562	—	1,562
Total assets	\$ 98,983	\$ 681,004	\$ 9,407	\$ 789,394	\$ (359,626)	\$ 429,768
Total as a percentage of gross assets ⁽⁴⁾	12.5%	86.3%	1.2%			

Table continues on the next page.

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<i>In millions of dollars at June 30, 2022</i>	Level 1	Level 2	Level 3	Gross inventory	Netting ⁽¹⁾	Net balance
Liabilities						
Securities loaned and sold under						
agreements to repurchase	\$ —	\$ 148,086	\$ 593	\$ 148,679	\$ (85,930)	\$ 62,749
Trading account liabilities						
Securities sold, not yet purchased	78,702	14,188	67	92,957	—	92,957
Trading derivatives						
Interest rate contracts	111	146,506	1,785	148,402		
Foreign exchange contracts	—	24,297	1,019	25,316		
Equity contracts	64	62,339	4,202	66,605		
Commodity contracts	—	39,837	1,439	41,276		
Credit derivatives	—	16,647	1,130	17,777		
Total trading derivatives	175	289,626	9,575	299,376		
Netting agreements					(255,258)	
Netting of cash collateral paid ⁽³⁾					(20,422)	
Total trading derivatives	175	289,626	9,575	299,376	(275,680)	23,696
Obligations to return securities						
received as collateral	3,031	238	19	3,288	—	3,288
Short-term borrowings	—	5,510	81	5,591	—	5,591
Long-term debt	—	55,111	15,443	70,554	—	70,554
Total liabilities	\$ 81,908	\$ 512,759	\$ 25,778	\$ 620,445	\$ (361,610)	\$ 258,835
Total as a percentage of gross liabilities ⁽⁴⁾	13.2%	82.6%	4.2%			

- (1) Represents netting of (i) the amounts due under securities purchased under agreements to resell and the amounts owed under securities sold under agreements to repurchase and (ii) derivative exposures covered by a qualifying master netting agreement and cash collateral offsetting.
- (2) Includes physical commodities accounted for at the lower of cost or fair value.
- (3) Represents the netting of cash collateral paid and received by counterparties under enforceable credit support agreements. Substantially all netting of cash collateral received and paid is against OTC derivative assets and liabilities, respectively.
- (4) Because the amount of the cash collateral paid/received has not been allocated to the Level 1, 2 and 3 subtotals, these percentages are calculated based on total assets and liabilities measured at fair value on a recurring basis, excluding the cash collateral paid/received on derivatives.

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Fair Value Levels

<i>In millions of dollars at December 31, 2021</i>	Level 1	Level 2	Level 3	Gross inventory	Netting ⁽¹⁾	Net balance
Assets						
Securities borrowed and purchased under agreements to resell	\$ —	\$ 337,377	\$ 92	\$ 337,469	\$ (125,795)	\$ 211,674
Trading non-derivative assets						
Trading mortgage-backed securities						
U.S. government-sponsored agency guaranteed	—	34,463	496	34,959	—	34,959
Residential	1	643	103	747	—	747
Commercial	—	778	81	859	—	859
Total trading mortgage-backed securities	1	35,884	680	36,565	—	36,565
U.S. Treasury and federal agency securities	23,319	3,125	5	26,449	—	26,449
State and municipal securities	—	1,357	35	1,392	—	1,392
Foreign government securities	24,927	10,809	23	35,759	—	35,759
Corporate	1,264	16,169	838	18,271	—	18,271
Equity securities	43,606	3,127	120	46,853	—	46,853
Asset-backed securities	—	973	563	1,536	—	1,536
Other trading assets ⁽²⁾	—	4,157	238	4,395	—	4,395
Total trading non-derivative assets	93,117	75,601	2,502	171,220	—	171,220
Trading derivatives						
Interest rate contracts	14	145,083	845	145,942		
Foreign exchange contracts	1	17,408	208	17,617		
Equity contracts	39	42,783	1,232	44,054		
Commodity contracts	—	23,856	1,666	25,522		
Credit derivatives	—	18,890	757	19,647		
Total trading derivatives—before netting and collateral	54	248,020	4,708	252,782		
Netting agreements					(215,148)	
Netting of cash collateral received ⁽³⁾					(17,669)	
Total trading derivatives—after netting and collateral	54	248,020	4,708	252,782	(232,817)	19,965
Securities received as collateral	2,381	33	—	2,414	—	2,414
Investments - Non-marketable equity securities	—	2	191	193	—	193
Other financial assets measured on a recurring basis						
	—	1,874	257	2,131	—	2,131
Total assets	\$ 95,552	\$ 662,907	\$ 7,750	\$ 766,209	\$ (358,612)	\$ 407,597
Total as a percentage of gross assets ⁽⁴⁾	12.5%	86.5%	1.0%			

Table continues on the next page.

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Fair Value Levels

<i>In millions of dollars at December 31, 2021</i>	Level 1	Level 2	Level 3	Gross inventory	Netting ⁽¹⁾	Net balance
Liabilities						
Securities loaned and sold under agreements to repurchase	\$ —	\$ 174,319	\$ 643	\$ 174,962	\$ (118,267)	\$ 56,695
Trading non-derivative liabilities						
Securities sold, not yet purchased	80,868	19,895	64	100,827	—	100,827
Trading derivatives						
Interest rate contracts	14	140,895	1,087	141,996		
Foreign exchange contracts	—	17,311	666	17,977		
Equity contracts	32	43,843	2,127	46,002		
Commodity contracts	—	28,146	1,201	29,347		
Credit derivatives	—	19,467	648	20,115		
Total trading derivatives—before netting and collateral	46	249,662	5,729	255,437		
Netting agreements					(215,148)	
Netting of cash collateral paid ⁽³⁾					(18,234)	
Total trading derivatives—after netting and collateral	46	249,662	5,729	255,437	(233,382)	22,055
Obligations to return securities						
received as collateral	3,116	35	—	3,151	—	3,151
Short-term borrowings	—	6,027	105	6,132	—	6,132
Long-term debt	—	48,237	12,279	60,516	—	60,516
Total liabilities	\$ 84,030	\$ 498,175	\$ 18,820	\$ 601,025	\$ (351,649)	\$ 249,376
Total as a percentage of gross liabilities ⁽⁴⁾	14.0%	82.9%	3.1%			

- (1) Represents netting of (i) the amounts due under securities purchased under agreements to resell and the amounts owed under securities sold under agreements to repurchase and (ii) derivative exposures covered by a qualifying master netting agreement and cash collateral offsetting.
- (2) Includes physical commodities accounted for at the lower of cost or fair value.
- (3) Represents the netting of cash collateral paid and received by counterparties under enforceable credit support agreements. Substantially all netting of cash collateral received and paid is against OTC derivative assets and liabilities, respectively.
- (4) Because the amount of the cash collateral paid/received has not been allocated to the Level 1, 2 and 3 subtotals, these percentages are calculated based on total assets and liabilities measured at fair value on a recurring basis, excluding the cash collateral paid/received on derivatives.

Changes in Level 3 Fair Value Category

The following tables present the changes in the Level 3 fair value category for the six months ended June 30, 2022 and 2021. The gains and losses presented below include changes in the fair value related to both observable and unobservable inputs.

The Company often hedges positions with offsetting positions that are classified in a different level. For example, the gains and losses for assets and liabilities in the Level 3 category presented in the tables below do not reflect the effect of offsetting losses and gains on hedging instruments that may be classified in the Level 1 or Level 2 categories. In addition, the Company hedges items classified in the Level 3 category with instruments also classified in Level 3 of the fair value hierarchy. The hedged items and related hedges are presented gross in the following tables.

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Level 3 Fair Value Rollforward

<i>In millions of dollars</i>	Dec. 31, 2021	Net realized/unrealized gains (losses) incl. in ⁽¹⁾		Transfers		Purchases	Issuances	Sales	Settlements	Jun. 30, 2022	Unrealized
		Principal transactions	Other	into Level 3	out of Level 3						gains (losses)
Assets											
Securities borrowed and purchased under agreements to resell	\$ 92	\$ (1)	\$ —	\$ —	\$ —	\$ 124	\$ —	\$ —	\$ (131)	\$ 84	\$ 4
Trading non-derivative assets											
Trading mortgage-backed securities											
U.S. government-sponsored											
agency guaranteed	496	(14)	—	126	(158)	484	—	(227)	—	707	(21)
Residential	103	—	—	61	(32)	85	—	(64)	—	153	(3)
Commercial	81	(5)	—	97	(34)	9	—	(10)	—	138	(2)
Total trading mortgage-backed securities	680	(19)	—	284	(224)	578	—	(301)	—	998	(26)
U.S. Treasury and federal											
agency securities	5	(5)	—	2	(1)	—	—	—	—	1	—
State and municipal	35	5	—	24	(20)	2	—	(14)	—	32	—
Foreign government	23	(8)	—	40	(1)	65	—	(16)	—	103	(18)
Corporate	838	(33)	—	243	(336)	1,202	—	(1,198)	—	716	(45)
Equity securities	120	(2)	—	63	(48)	107	—	(100)	—	140	(39)
Asset-backed securities	563	(21)	—	140	(127)	393	—	(394)	—	554	(45)
Other trading assets	238	64	—	170	(1)	122	—	(184)	—	409	54
Total trading non-derivative assets	2,502	(19)	—	966	(758)	2,469	—	(2,207)	—	2,953	(119)
Securities received as collateral	—	—	—	7	(2)	14	—	—	—	19	—
Investments in non-marketable equity securities	191	—	(7)	—	—	21	—	(9)	—	196	—
Other financial assets measured on a recurring basis	257	—	33	1	(19)	—	1	—	—	273	169
Liabilities											
Securities loaned and sold under agreements to repurchase	\$ 643	\$ 50	\$ —	\$ —	\$ (3)	\$ 16	\$ —	\$ —	\$ (13)	\$ 593	\$ 28
Trading account liabilities											
Securities sold, not yet purchased	64	(1)	—	28	(16)	59	—	(4)	(65)	67	2
Derivatives, net ⁽³⁾											
Interest rate contracts	242	(926)	—	(5)	(50)	(10)	—	6	(11)	1,098	(909)
Foreign exchange contracts	458	(554)	—	14	12	—	—	—	(150)	888	(570)
Equity contracts	895	(1,790)	—	130	(784)	(393)	—	315	222	2,175	(1,880)
Commodity contracts	(465)	635	—	2	379	(26)	—	24	206	(515)	445
Credit derivatives	(109)	(86)	—	37	(4)	—	—	1	36	47	(17)
Total derivatives, net ⁽³⁾	1,021	(2,721)	—	178	(447)	(429)	—	346	303	3,693	(2,931)
Obligations to return securities											
received as collateral	—	—	—	7	(2)	14	—	—	—	19	—
Short-term borrowings	105	89	—	41	(22)	—	77	—	(31)	81	1
Long-term debt	12,279	3,558	—	3,482	(2,824)	—	6,316	—	(252)	15,443	(3,018)

(1) Net realized/unrealized gains (losses) are presented as increase (decrease) to Level 3 assets, and as (increase) decrease to Level 3 liabilities.

(2) Represents the amount of total gains or losses for the period, included in earnings, (and AOCI for changes in DVA on fair value option liabilities), attributable to the change in fair value relating to assets and liabilities classified as Level 3 that are still held at June 30, 2022.

(3) Total Level 3 trading derivative assets and liabilities have been netted in these tables for presentation purposes only.

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<i>In millions of dollars</i>	Dec. 31, 2020	Net realized/unrealized gains (losses) incl. in ⁽¹⁾					Purchases	Issuances	Sales	Settlements	Jun. 30, 2021	Unrealized gains (losses) still held ⁽²⁾
		Principal transactions	Other	Transfers into		out of Level 3						
Assets												
Securities borrowed and purchased under agreements to resell	\$ 93	\$ —	\$ —	\$ —	\$ (49)	\$ 131	\$ —	\$ —	\$ (131)	\$ 44	\$ 1	
Trading non-derivative assets												
Trading mortgage-backed securities												
U.S. government-sponsored												
agency guaranteed	27	—	—	253	(8)	114	—	(11)	—	375	16	
Residential	338	53	—	70	(68)	170	—	(468)	—	95	4	
Commercial	136	21	—	77	(42)	24	—	(129)	—	87	2	
Total trading mortgage-backed securities												
securities	501	74	—	400	(118)	308	—	(608)	—	557	22	
State and municipal	36	1	—	—	(29)	5	—	—	—	13	—	
Foreign government	34	8	—	143	(1)	13	—	(59)	—	138	(6)	
Corporate debt	393	110	—	166	(168)	648	—	(327)	—	822	(19)	
Equity securities	40	45	—	83	(6)	35	—	(50)	—	147	32	
Asset-backed securities	1,594	247	—	35	(197)	924	—	(1,930)	—	673	7	
Other trading assets	218	(81)	—	60	(33)	190	—	(108)	—	246	(12)	
Total trading non-derivative assets	2,816	404	—	887	(552)	2,123	—	(3,082)	—	2,596	24	
Securities received as collateral	—	—	—	3	—	—	—	—	—	3	—	
Investments in non-marketable equity securities	206	—	22	—	—	—	—	(8)	—	220	—	
Other financial assets measured on a recurring basis	16	—	18	144	(150)	—	—	—	—	28	9	
Liabilities												
Securities loaned and sold under agreements to repurchase	\$ 631	\$ 7	\$ —	\$ —	\$ (483)	\$ 488	\$ —	\$ —	\$ (141)	\$ 488	\$ 19	
Trading account liabilities												
Securities sold, not yet purchased	36	2	—	42	(14)	8	—	—	(17)	53	(1)	
Derivatives, net ⁽³⁾												
Interest rate contracts	42	(205)	—	19	(307)	—	120	—	(82)	(3)	(181)	
Foreign exchange contracts	202	(177)	—	28	(30)	—	—	—	(14)	363	(173)	
Equity contracts	334	(22)	—	110	117	(109)	—	117	(36)	555	(260)	
Commodity contracts	(193)	508	—	(35)	336	(44)	—	42	40	(362)	221	
Credit derivatives	(13)	(45)	—	(61)	91	—	—	—	(46)	16	(45)	
Total derivatives, net ⁽³⁾	372	59	—	61	207	(153)	120	159	(138)	569	(438)	
Obligations to return securities received as collateral	—	—	—	3	—	—	—	—	—	3	—	
Short-term borrowings	208	32	—	42	(32)	—	25	—	(170)	41	17	
Long-term debt	11,957	584	—	3,301	(4,273)	—	4,262	—	(2,921)	11,742	318	

- (1) Net realized/unrealized gains (losses) are presented as increase (decrease) to Level 3 assets, and as (increase) decrease to Level 3 liabilities.
- (2) Represents the amount of total gains or losses for the period, included in earnings, (and AOCI for changes in DVA on fair value option liabilities), attributable to the change in fair value relating to assets and liabilities classified as Level 3 that are still held at June 30, 2021.
- (3) Total Level 3 trading derivative assets and liabilities have been netted in these tables for presentation purposes only.

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Level 3 Fair Value Rollforward

The following were the significant Level 3 transfers for the period December 31, 2021 to June 30, 2022:

- During the six months ended June 30, 2022, transfers of *Long-term debt* were \$3.5 billion from Level 2 to Level 3. Of the \$3.5 billion transfer in the six months ended June 30, 2022, approximately \$2.3 billion related to interest rate option volatility inputs becoming unobservable and/or significant relative to their overall valuation, and \$1.2 billion related to equity and credit derivative inputs (in addition to other volatility inputs, e.g., interest rate volatility inputs) becoming unobservable and/or significant to their overall valuation. In other instances, market changes have resulted in some inputs becoming more observable, and some unobservable inputs becoming less significant to the overall valuation of the instruments (e.g., when an option becomes deep-in or deep-out of the money). This has primarily resulted in \$2.8 billion of certain structured long-term debt products being transferred from Level 3 to Level 2 during the six months ended June 30, 2022.

The following were the significant Level 3 transfers for the period December 31, 2020 to June 30, 2021:

- During the six months ended June 30, 2021, transfers of *Long-term debt* were \$3.3 billion from Level 2 to Level 3. Of the \$3.3 billion transfer in the six months ended June 30, 2021, approximately \$2.4 billion related to interest rate option volatility inputs becoming unobservable and/or significant relative to their overall valuation, and \$0.8 billion related to equity volatility inputs (in addition to other volatility inputs, e.g., interest rate volatility inputs) becoming unobservable and/or significant to their overall valuation. In other instances, market changes have resulted in some inputs becoming more observable, and some unobservable inputs becoming less significant to the overall valuation of the instruments (e.g., when an option becomes deep-in or deep-out of the money). This has primarily resulted in \$4.3 billion of certain structured long-term debt products being transferred from Level 3 to Level 2 during the six months ended June 30, 2021.

Valuation Techniques and Inputs for Level 3 Fair Value Measurements

The following tables present the valuation techniques covering the majority of Level 3 inventory and the most significant unobservable inputs used in Level 3 fair value measurements. Differences between this table and amounts presented in the Level 3 Fair Value Rollforward table represent individually immaterial items that have been measured using a variety of valuation techniques other than those listed.

<i>As of June 30, 2022</i>	Fair Value ⁽¹⁾ <i>(in millions)</i>	Methodology	Input	Low ^{(2) (3)}	High ^{(2) (3)}	Weighted Average ⁽⁴⁾
Assets						
Securities borrowed and purchased						
under agreements to resell	\$ 84	Model-based	Interest rate	1.93 %	2.12 %	2.01 %
Mortgage-backed securities	\$ 804	Yield analysis	Yield	3.46 %	21.98 %	8.82 %
	194	Price-based	Price	\$ 0.57	\$ 102.61	\$ 42.42
State and municipal, foreign government, corporate and other debt securities						
	\$ 656	Price-based	Price	\$ —	\$ 1,028.60	\$ 110.06
	464	Model-based	Equity forward	49.03 %	247.11 %	96.87 %
			Equity volatility	0.05 %	313.95 %	52.45 %
			Equity-Equity correlation	(6.49) %	99.73 %	86.74 %
			Forward price	12.45 %	381.82 %	99.36 %
			Commodity volatility	13.04 %	107.31 %	26.33 %
			Commodity correlation	(53.02) %	93.52 %	19.08 %
Equity securities ⁽⁵⁾	\$ 134	Price-based	Price	\$ —	\$ 8,922.80	\$ 52.09
Asset-backed securities	\$ 328	Price-based	Price	\$ 4.10	\$ 100.00	\$ 79.60
	191	Yield analysis	Yield	4.17 %	16.01 %	7.93 %
Non-marketable equity	\$ 124	Price-based	PE ratio	15.20x	18.00x	15.97x
	71	Comparables analysis	Discount for lack of marketability	28.50 %	31.00 %	30.16 %
			EBITDA multiples	17.40x	17.40x	17.40x
			Cost of capital	17.50 %	20.00 %	17.61 %
			Adjustment factor	0.33x	0.50x	0.34x

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<i>As of June 30, 2022</i>	Fair Value ⁽¹⁾				Low ^{(2) (3)}	High ^{(2) (3)}	Weighted Average ⁽⁴⁾
	<i>(in millions)</i>	Methodology	Input				
Derivatives – Gross ⁽⁶⁾							
Interest rate contracts							
(gross)	\$ 2,361	Model-based	IR normal volatility		0.29 %	1.70 %	0.91 %
			Inflation volatility		0.36 %	3.18 %	1.23 %
Foreign exchange contracts							
(gross)	\$ 1,149	Model-based	FX volatility		4.10 %	67.50 %	12.23 %
			IR-IR correlation		40.00 %	40.00 %	40.00 %
			Credit spread		125 bps	1,012 bps	819 bps
			IR normal volatility		0.27 %	1.39 %	0.48 %
			IR-FX correlation		40.00 %	60.00 %	50.00 %
Equity contracts (gross) ⁽⁷⁾							
	\$ 6,137	Model-based	Equity volatility		0.05 %	313.95 %	42.89 %
			Equity forward		49.03 %	247.11 %	97.14 %
			Equity-FX correlation		(95.00) %	80.00 %	(17.18) %
			Equity-Equity correlation		(6.49) %	99.73 %	86.72 %
			Equity-IR correlation		(10.00) %	60.00 %	35.08 %
Commodity contracts							
(gross)	\$ 3,392	Model-based	Forward price		12.45 %	381.82 %	85.81 %
			Commodity volatility		13.04 %	107.31 %	26.33 %
			Commodity correlation		(53.02) %	93.52 %	19.08 %
Credit derivatives (gross)							
	\$ 1,847	Model-based	Credit spread		14 bps	553 bps	132 bps
	364	Price-based	Credit correlation		10.00 %	85.00 %	42.26 %
			Credit spread volatility		51.42 %	83.52 %	61.54 %
			Price		\$ 1.55	\$ 97.88	\$ 47.03
			Upfront points		0.52 %	88.13 %	23.61 %
Structured financing agreements							
	\$ 273	Model-based	Commodity volatility		13.04 %	107.31 %	26.33 %
			Commodity correlation		(53.02) %	93.52 %	19.08 %
			Forward price		12.45 %	369.11 %	83.72 %
Liabilities							
Securities loaned and sold under agreements to repurchase							
	\$ 593	Model-based	Interest rate		1.81 %	3.68 %	3.08 %
Trading account liabilities							
Securities sold, not yet purchased							
	\$ 44	Price-based	Price		\$ —	\$12,100.00	\$ 2,170.34
	23	Yield analysis	Yield		3.42 %	4.59 %	3.99 %
Short-term borrowings and long-term debt							
	\$15,288	Model-based	IR normal volatility		0.27 %	1.70 %	0.78 %
			Equity volatility		0.05 %	313.95 %	52.55 %
			Equity forward		49.03 %	247.11 %	96.87 %
			Equity-FX correlation		(95.00) %	80.00 %	(17.18) %
			Equity-IR correlation		(10.00) %	60.00 %	35.08 %
			FX volatility		— %	184.21 %	11.63 %
			IR-FX correlation		(35.00) %	60.00 %	49.90 %
			IR-IR correlation		40.00 %	40.00 %	40.00 %
Assets							
Securities borrowed and purchased under agreements to resell							
	\$ 92	Model-based	Interest rate		0.26 %	0.72 %	0.50 %
Mortgage-backed securities							
	\$ 526	Yield analysis	Yield		1.43 %	23.79 %	7.25 %
	154	Price-based	Price		\$ 3	\$ 111	\$ 61

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<i>As of December 31, 2021</i>	Fair Value ⁽¹⁾ <i>(in millions)</i>	Methodology	Input	Low ^{(2) (3)}	High ^{(2) (3)}	Weighted Average ⁽⁴⁾
State and municipal, foreign government, corporate and other debt securities	\$ 580	Price-based	Price	\$ —	\$ 930	\$ 83
	514	Model-based	Equity forward	57.99 %	165.83 %	89.39 %
			Equity volatility	0.08 %	290.64 %	53.94 %
Equity securities ⁽⁵⁾	\$ 108	Price-based	Price	\$ —	\$ 73,000	\$ 7,574
Asset-backed securities	\$ 338	Price-based	Price	\$ 4	\$ 3,200	\$ 122
	203	Yield analysis	Yield	2.43 %	19.35 %	8.30 %
Non-marketable equity	\$ 86	Price-based	PE ratio	11.00x	20.60x	14.14x
	59	Model-based	Price	\$ 275	\$ 2,601	\$ 2,101
	46	Comparables analysis	Cost of capital	17.50 %	20.00 %	17.57 %
			Adjustment factor	0.33x	0.50x	0.33x
			Illiquidity discount	23.10 %	36.00 %	33.88 %
Derivatives – Gross ⁽⁶⁾						
Interest rate contracts (gross)	\$ 1,913	Model-based	IR normal volatility	0.07 %	0.94 %	0.63 %
			Inflation volatility	0.26 %	2.72 %	1.16 %
Foreign exchange contracts (gross)	\$ 874	Model-based	FX volatility	2.13 %	107.42 %	9.64 %
			IR-FX correlation	40.00 %	60.00 %	50.00 %
			IR-IR correlation	40.00 %	40.00 %	40.00 %
			IR normal volatility	0.07 %	0.88 %	0.53 %
			Credit spread	251.50 bps	696.42 bps	629.86 bps
Equity contracts (gross) ⁽⁷⁾	\$ 3,276	Model-based	Equity volatility	0.08 %	290.64 %	45.95 %
			Equity forward	57.99 %	165.83 %	89.45 %
			Equity-FX correlation	(95.00) %	80.00 %	(16.00) %
			Equity-Equity correlation	(6.49) %	99.00 %	85.61 %
			Equity-IR correlation	(3.53) %	60.00 %	32.12 %
Commodity contracts (gross)	\$ 2,867	Model-based	Commodity volatility	10.87 %	188.30 %	26.85 %
			Commodity correlation	(50.52) %	89.83 %	(7.11) %
			Forward price	8.00 %	599.44 %	124.27 %
Credit derivatives (gross)	\$ 1,060	Model-based	Credit spread	1.00 bps	874.72 bps	66.30 bps
	340	Price-based	Price	\$ 13	\$ 102	\$ 73
Liabilities						
Securities loaned and sold under agreements to repurchase	\$ 643	Model-based	Interest rate	0.12 %	1.95 %	1.47 %
Trading account liabilities						
Securities sold, not yet purchased	\$ 62	Price-based	Price	\$ —	\$ 12,875	\$ 1,744
Short-term borrowings and long-term debt	\$12,376	Model-based	IR normal volatility	0.07 %	0.88 %	0.50 %
			Equity volatility	0.08 %	290.64 %	53.21 %
			Equity-IR correlation	(3.53) %	60.00 %	32.12 %
			Equity-FX correlation	(95.00) %	80.00 %	(16.00) %
			FX volatility	0.06 %	41.76 %	9.38 %
			Equity forward	57.99 %	165.83 %	89.39 %

(1) The tables above include the fair values for the items listed and may not foot to the total population for each category.

(2) Some inputs are shown as zero due to rounding.

(3) When the low and high inputs are the same, there is either a constant input applied to all positions, or the methodology involving the input applies to only one large position.

(4) Weighted averages are calculated based on the fair values of the instruments.

(5) For equity securities, the price inputs are expressed on an absolute basis, not as a percentage of the notional amount.

(6) Trading account derivatives—assets and liabilities—are presented on a gross absolute value basis.

(7) Includes hybrid products.

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Estimated Fair Value of Financial Instruments Not Carried at Fair Value

The following tables present the carrying value and fair value of the Company's financial instruments that are not carried at fair value. The tables below therefore exclude items measured at fair value on a recurring basis presented in the tables above.

<i>In billions of dollars</i>	June 30, 2022		Estimated fair value		
	Carrying value	Estimated fair value	Level 1	Level 2	Level 3
Assets					
Securities borrowed and purchased under agreements to resell	\$ 89.6	\$ 89.6	\$ —	\$ 89.6	\$ —
Brokerage receivables	72.7	72.7	—	25.3	47.4
Other financial assets ⁽¹⁾	109.7	109.7	18.5	82.8	8.4
Liabilities					
Securities loaned and sold under agreements to repurchase	\$ 180.5	\$ 180.5	\$ —	\$ 180.5	\$ —
Brokerage payables	101.3	101.3	—	—	101.3
Long-term debt	87.2	87.2	—	84.2	3.0
Other financial liabilities ⁽²⁾	33.8	33.8	—	32.3	1.5

<i>In billions of dollars</i>	December 31, 2021		Estimated fair value		
	Carrying value	Estimated fair value	Level 1	Level 2	Level 3
Assets					
Securities borrowed and purchased under agreements to resell	\$ 81.3	\$ 81.3	\$ —	\$ 81.3	\$ —
Brokerage receivables	51.2	51.2	—	15.5	35.7
Other financial assets ⁽¹⁾	93.6	93.6	17.2	69.2	7.2
Liabilities					
Securities loaned and sold under agreements to repurchase	\$ 177.3	\$ 177.3	\$ —	\$ 177.3	\$ —
Brokerage payables	66.4	66.4	—	—	66.4
Long-term debt	77.2	77.2	—	74.2	3.0
Other financial liabilities ⁽²⁾	26.0	26.0	—	24.5	1.5

(1) Includes cash and cash equivalents, cash segregated under federal and other regulations, loans to affiliates and other financial instruments included in *Other assets* on the Consolidated Statement of Financial Condition, for all of which the carrying value is a reasonable estimate of fair value.

(2) Includes short-term borrowings (carried at cost) and other financial instruments included in *Other liabilities* on the Consolidated Statement of Financial Condition, for all of which the carrying value is a reasonable estimate of fair value.

10. FAIR VALUE ELECTIONS

The Company may elect to report most financial instruments at fair value on an instrument-by-instrument basis with changes in fair value reported in earnings, other than DVA (see below). The election is made upon the initial recognition of an eligible financial asset or financial liability or when certain specified reconsideration events occur. The fair value election may not otherwise be revoked once an election is made. The changes in fair value are recorded in current earnings. Movements in DVA are reported as a component of *AOCI*. Additional discussion regarding the applicable areas in which fair value elections were made is presented in Note 9.

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The following table presents the changes in fair value of those items for which the fair value option has been elected:

<i>In millions of dollars</i>	Changes in fair value—gains (losses)	
	Six Months Ended June 30,	
	2022	2021
Assets		
Securities borrowed and purchased under agreements to resell	\$ (75)	\$ (24)
Trading account assets	5	3
Other financial assets	(654)	(11)
Total assets	\$ (724)	\$ (32)
Liabilities		
Securities loaned and sold under agreements to repurchase	\$ 97	\$ 18
Trading account liabilities	(269)	—
Short-term borrowings ⁽¹⁾	1,645	194
Long-term debt ⁽¹⁾	10,669	(1,136)
Total liabilities	\$ 12,142	\$ (924)

(1) Includes DVA that is included in *AOCI*. See Note 9.

Own Debt Valuation Adjustments (DVA)

Own debt valuation adjustments are recognized on the Company's liabilities for which the fair value option has been elected using Citi's credit spreads observed in the bond market. Changes in fair value of fair value option liabilities related to changes in Citigroup's own credit spreads (DVA) are reflected as a component of *AOCI*.

Among other variables, the fair value of liabilities for which the fair value option has been elected (other than non-recourse debt and similar liabilities) is impacted by the narrowing or widening of Citigroup's credit spreads.

The estimated changes in the fair value of these non-derivative liabilities due to such changes in Citigroup's own credit spread (or instrument-specific credit risk) were a gain of \$2,090 million and a loss of \$12 million for the six months ended June 30, 2022 and 2021, respectively. Changes in fair value resulting from changes in instrument-specific credit risk were estimated by incorporating Citigroup's current credit spreads observable in the bond market into the relevant valuation technique used to value each liability as described above.

The Fair Value Option for Financial Assets and Financial Liabilities

Selected Portfolios of Securities Purchased Under Agreements to Resell, Securities Borrowed, Securities Sold Under Agreements to Repurchase, Securities Loaned and Certain Uncollateralized Short-Term Borrowings

The Company elected the fair value option for certain portfolios of fixed income securities purchased under agreements to resell and fixed income securities sold under agreements to repurchase, securities borrowed, securities loaned and certain uncollateralized short-term borrowings held primarily by broker-dealer entities in the United States and the United Kingdom. In each case, the election was made because the related interest rate risk is managed on a portfolio basis, primarily with offsetting derivative instruments that are accounted for at fair value through earnings.

Changes in fair value for transactions in these portfolios are recorded in *Principal transactions*. The related interest revenue and interest expense are measured based on the contractual rates specified in the transactions and are reported as *Interest revenue* and *Interest expense* in the Consolidated Statement of Income.

Other Financial Assets

The Company also elected the fair value option for certain structured financing agreements with embedded derivatives. The Company has elected the fair value option to mitigate accounting mismatches in cases where hedge accounting is complex and to achieve operational simplifications.

Certain Debt Liabilities

The Company has elected the fair value option for certain debt liabilities. The Company elected the fair value option because these exposures are considered to be trading-related positions and, therefore, are managed on a fair value basis. These positions will continue to be classified as debt or derivatives classified as *Trading account liabilities* on the Company's Consolidated Statement of Financial Condition according to their legal form.

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The following table provides information about the carrying value of notes carried at fair value, disaggregated by type of risk:

<i>In millions of dollars</i>	June 30, 2022	December 31, 2021
Equity linked	\$ 38,758	\$ 37,004
Interest rate linked	25,843	18,112
Commodity linked	3,442	3,116
Credit linked	2,419	2,246
Foreign exchange linked	92	38
Total	\$ 70,554	\$ 60,516

The portion of the changes in fair value attributable to changes in Citigroup's own credit spreads (DVA) is reflected as a component of *AOCI* while all other changes in fair value are reported in *Principal transactions*. Changes in the fair value of these liabilities include accrued interest, which is also included in the change in fair value reported in *Principal transactions*.

The following table provides information about long-term debt carried at fair value:

<i>In millions of dollars</i>	June 30, 2022	December 31, 2021
Carrying amount reported on the Consolidated Statement of Financial Condition	\$ 70,554	\$ 60,516
Aggregate unpaid principal balance in excess of (less than) fair value	(2,482)	(1,567)

The following table provides information about short-term borrowings carried at fair value:

<i>In millions of dollars</i>	June 30, 2022	December 31, 2021
Carrying amount reported on the Consolidated Statement of Financial Condition	\$ 5,591	\$ 6,132
Aggregate unpaid principal balance in excess of (less than) fair value	—	(643)

11. GUARANTEES, LEASES AND COMMITMENTS

CGMHI provides a variety of guarantees and indemnifications to its customers to enhance their credit standing and enable them to complete a wide variety of business transactions. For certain contracts meeting the definition of a guarantee, the guarantor must recognize, at inception, a liability for the fair value of the obligation undertaken in issuing the guarantee.

In addition, the guarantor must disclose the maximum potential amount of future payments that the guarantor could be required to make under the guarantee, if there were a total default by the guaranteed parties. The determination of the maximum potential future payments is based on the notional amount of the guarantees without consideration of possible recoveries under recourse provisions or from collateral held or pledged. As such, CGMHI believes such amounts bear no relationship to the anticipated losses, if any, on these guarantees.

For additional information regarding CGMHI's guarantees and indemnifications, see Note 13 to the Consolidated Financial Statements in CGMHI's 2021 Audited Financial Statements.

Derivative Instruments Considered to Be Guarantees

As of June 30, 2022, the maximum potential amount of future payments on derivative instruments considered to be guarantees was \$8.6 billion, including \$2.9 billion expiring within one year. As of December 31, 2021, the maximum potential amount of future payments on derivative instruments considered to be guarantees was \$17.9 billion, including \$10.2 billion expiring within one year. The carrying amount of the liabilities related to these derivative instruments considered to be guarantees was \$160 million and \$208 million at June 30, 2022 and December 31, 2021, respectively, and is recorded at fair value in *Trading account liabilities*.

Value-Transfer Networks (Including Exchanges and Clearing Houses) (VTNs)

The Company is a member of, or shareholder in, a number of value-transfer networks (VTNs) (payment, clearing and settlement systems as well as exchanges) around the world. As a condition of membership, many of these VTNs require that members stand ready to pay a pro rata share of the losses incurred by the organization due to another member's default on its obligations. The Company's potential obligations may be limited to its membership interests in the VTNs, contributions to the VTN's funds, or, in certain narrow cases, to the full pro rata share. At June 30, 2022 and December 31, 2021, CGMHI had \$10.5 billion and \$11.4 billion, respectively, in capped contingent liquidity facilities with VTNs.

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The maximum exposure is difficult to estimate as this would require an assessment of claims that have not yet occurred; however, the Company believes the risk of loss is remote given historical experience with the VTNs. Accordingly, there are no amounts reflected on the Consolidated Statement of Financial Condition as of June 30, 2022 or December 31, 2021 for potential obligations that could arise from the Company's involvement with VTN associations.

Futures and Over-the-Counter Derivatives Clearing

CGMHI provides clearing services on central clearing parties (CCP) for clients that need to clear exchange-traded and over-the-counter (OTC) derivative contracts with CCPs. Based on all relevant facts and circumstances, CGMHI has concluded that it acts as an agent for accounting purposes in its role as clearing member for these client transactions. As such, CGMHI does not reflect the underlying exchange-traded or OTC derivatives contracts in its Consolidated Financial Statements. See Note 8 for a discussion of CGMHI's derivatives activities that are reflected in its Consolidated Financial Statements.

As a clearing member, CGMHI collects and remits cash and securities collateral (margin) between its clients and the respective CCP. In certain circumstances, CGMHI collects a higher amount of cash (or securities) from its clients than it needs to remit to the CCPs. This excess cash is then held at customer segregated depository institutions such as banks or custodians.

There are two types of margin: initial and variation. Where CGMHI obtains benefits from or controls cash initial margin (e.g., retains an interest spread), cash initial margin collected from clients and remitted to the CCP or depository institutions is reflected within *Payables to customers* and *Receivables from brokers, dealers and clearing organizations* or *Cash segregated under federal and other regulations*, respectively.

However, for exchange-traded and OTC-cleared derivatives contracts where CGMHI does not obtain benefits from or control the client cash balances, the client cash initial margin collected from clients and remitted to the CCP or depository institutions is not reflected on the Company's Consolidated Statement of Financial Condition. These conditions are met when CGMHI has contractually agreed with the client that (i) CGMHI will pass through to the client all interest paid by the CCP or depository institutions on the cash initial margin, (ii) CGMHI will not utilize its right as a clearing member to transform cash margin into other assets, (iii) CGMHI does not guarantee and is not liable to the client for the performance of the CCP or the depository institution and (iv) the client cash balances are legally isolated from CGMHI's bankruptcy estate. The total amount of cash initial margin collected and remitted in this manner was approximately \$18.3 billion and \$17.0 billion as of June 30, 2022 and December 31, 2021, respectively.

Variation margin due from clients to the respective CCP, or from the CCP to clients, reflects changes in the value of the client's derivative contracts for each trading day. As a clearing member, CGMHI is exposed to the risk of non-performance by clients (e.g., failure of a client to post variation margin to the CCP for negative changes in the value of the client's derivative contracts). In the event of non-performance by a client, CGMHI would move to close out the client's positions. The CCP would typically utilize initial margin posted by the client and held by the CCP, with any remaining shortfalls required to be paid by CGMHI as clearing member. CGMHI generally holds incremental cash or securities margin posted by the client, which would typically be expected to be sufficient to mitigate CGMHI's credit risk in the event the client fails to perform.

As required by ASC 860-30-25-5, securities collateral posted by clients is not recognized on the Company's Consolidated Statement of Financial Condition.

Leases

The Company's operating leases, where CGMHI is a lessee, represent office space and branches. These leases have a weighted-average remaining lease term of approximately 14.5 years as of June 30, 2022. The operating lease ROU asset and lease liability were \$696 million and \$562 million, respectively, as of June 30, 2022, compared to an operating lease ROU asset of \$781 million and lease liability of \$622 million as of December 31, 2021. The Company recognizes fixed lease costs on a straight-line basis throughout the lease term in the Consolidated Statement of Income. In addition, variable lease costs are recognized in the period in which the obligation for those payments is incurred.

Margin Loan Indemnifications

CGMHI had margin loan indemnification agreements of \$1.1 billion at June 30, 2022 and December 31, 2021. The commitments to potentially indemnify do not relate to a loan on CGMH's Consolidated Statement of Financial Condition, nor a commitment to extend a loan. The contingencies potentially triggering the obligation to indemnify have not occurred and are not expected to occur. As a result, there are no amounts reflected on the Consolidated Statement of Financial

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Condition as of June 30, 2022 and December 31, 2021 for potential obligations that could arise from these indemnifications provided by the Company.

Unsettled Reverse Repurchase and Securities Borrowing Agreements and Unsettled Repurchase and Securities Lending Agreements

In addition, in the normal course of business, the Company enters into reverse repurchase and securities borrowing agreements, as well as repurchase and securities lending agreements, which settle at a future date. At June 30, 2022 and December 31, 2021, the Company had approximately \$110.9 billion and \$119.7 billion of unsettled reverse repurchase and securities borrowing agreements, and approximately \$51.1 billion and \$37.8 billion of unsettled repurchase and securities lending agreements, respectively. See Note 4 for a further discussion of securities purchased under agreements to resell and securities borrowed, and securities sold under agreements to repurchase and securities loaned, including the Company's policy for offsetting repurchase and reverse repurchase agreements.

Other Financing Commitments

Other CGMHI financing commitments of \$3.1 billion at June 30, 2022 and December 31, 2021 include commitments to enter into collateralized financing transactions.

12. RELATED PARTY TRANSACTIONS

Citigroup Inc. owns 100% of the outstanding common stock of the Company. Pursuant to various intercompany agreements, a number of significant transactions are carried out between the Company and Citigroup and/or their affiliates, including the Citigroup parent company.

Detailed below is a summary of the Company's transactions with other Citigroup affiliates, which are included in the accompanying Consolidated Statement of Income and Consolidated Statement of Financial Condition. These amounts exclude intra-CGMHI balances that eliminate in consolidation.

STATEMENT OF INCOME ITEMS

<i>In millions of dollars</i>	<u>Six Months Ended June 30,</u>	
	2022	2021
Revenues		
Principal transactions ⁽¹⁾	\$ (7,437)	\$ (4,348)
Investment banking	125	135
All other revenues	(31)	(28)
Total non-interest revenues	(7,343)	(4,241)
Interest revenue	432	281
Interest expense	1,036	659
Net interest income (expense)	(604)	(378)
Total revenues, net of interest expense	\$ (7,947)	\$ (4,619)
Operating expenses		
Technology, communications and equipment	\$ 553	\$ 638
Occupancy	99	110
All other expenses ⁽²⁾	723	740
Total non-interest expenses	\$ 1,375	\$ 1,488

(1) Principal transactions revenue consists of realized and unrealized gains and losses from trading activities with non-consolidated CGMHI affiliates. Includes gains and losses on derivatives with non-consolidated CGMHI affiliates, but does not include the gains and losses related to any offsetting derivatives executed with third parties external to CGMHI, which are an integral part of trading activities profitability.

(2) Includes expenses from affiliates for shared services and charges, as well as fees for the early termination of debt with affiliates.

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STATEMENT OF FINANCIAL CONDITION ITEMS

<i>In millions of dollars</i>	June 30, 2022	December 31, 2021
Assets		
Cash and cash equivalents	\$ 7,281	\$ 7,861
Cash segregated under federal and other regulations	8,494	10,034
Securities borrowed and purchased under agreements to resell	19,070	23,362
Derivatives	2,998	1,438
Loans to affiliates	76,191	59,741
Brokerage receivables and other assets	1,876	826
Total assets	\$ 115,910	\$ 103,262
Liabilities		
Short-term borrowings	\$ 19,557	\$ 17,230
Securities loaned and sold under agreements to repurchase	63,380	62,197
Derivatives	2,624	500
Brokerage payables	15,749	10,635
Other liabilities	2,165	1,139
Long-term debt	86,144	76,335
Total liabilities	\$ 189,619	\$ 168,036

Stock-Based Compensation and Retirement Benefits

The Company participates in various Citigroup stock-based compensation programs under which Citigroup stock or stock options are granted to certain of the Company's employees. The Company has no stock-based compensation programs in which its own stock is granted. The Company pays Citigroup directly for participation in certain of its stock-based compensation programs, but receives a capital contribution for those awards related to participation in the employee incentive stock option program.

The Company participates in several non-contributory defined-benefit pension plans and a defined-contribution plan sponsored by Citigroup covering certain eligible employees.

CGMHI Tax-Sharing Agreement

The Company is included in the Citigroup consolidated federal tax return and is a party to a tax-sharing agreement with Citigroup. Under such agreement, the Company is entitled to a tax benefit for its losses and credits that are recognized in Citigroup's Consolidated Financial Statements. Settlements between the Company and Citigroup of current taxes occur throughout the year. The Company also files its consolidated and combined state income tax returns with Citigroup and/or others of its subsidiaries.

Other Intercompany Agreements

Citigroup and its subsidiaries engage in other transactions and servicing activities with the Company, including cash management, data processing, telecommunications, payroll processing and administration, facilities procurement, underwriting and others.

13. CONTINGENCIES

Accounting and Disclosure Framework

ASC 450 governs the disclosure and recognition of loss contingencies, including potential losses from litigation, regulatory, tax and other matters. ASC 450 defines a "loss contingency" as "an existing condition, situation, or set of circumstances involving uncertainty as to possible loss to an entity that will ultimately be resolved when one or more future events occur or fail to occur." It imposes different requirements for the recognition and disclosure of loss contingencies based on the likelihood of occurrence of the contingent future event or events. It distinguishes among degrees of likelihood using the following three terms: "probable," meaning that "the future event or events are likely to occur"; "remote," meaning that "the chance of the future event or events occurring is slight"; and "reasonably possible," meaning that "the chance of the future event or events occurring is more than remote but less than likely." These three terms are used below as defined in ASC 450. In establishing appropriate disclosure and recognition for loss contingencies, management assesses each matter including the role of the relevant Citigroup legal entity. Because specific loss contingency matters may involve multiple Citigroup legal entities and are not solely related to one legal entity, this process requires management to make certain estimates and judgments that affect the Company's Consolidated Financial Statements.

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Accruals. ASC 450 requires accrual for a loss contingency when it is “probable that one or more future events will occur confirming the fact of loss” and “the amount of the loss can be reasonably estimated.” In accordance with ASC 450, Citigroup establishes accruals for contingencies, including any litigation, regulatory or tax matters disclosed herein, when Citigroup believes it is probable that a loss has been incurred and the amount of the loss can be reasonably estimated. When the reasonable estimate of the loss is within a range of amounts, the minimum amount of the range is accrued, unless some higher amount within the range is a better estimate than any other amount within the range. Once established, accruals are adjusted from time to time, as appropriate, in light of additional information. The amount of loss ultimately incurred in relation to those matters may be substantially higher or lower than the amounts accrued for those matters.

Disclosure. ASC 450 requires disclosure of a loss contingency if “there is at least a reasonable possibility that a loss or an additional loss may have been incurred” and there is no accrual for the loss because the conditions described above are not met or an exposure to loss exists in excess of the amount accrued. In accordance with ASC 450, if Citigroup has not accrued for a matter because Citigroup believes that a loss is reasonably possible but not probable, or that a loss is probable but not reasonably estimable, and the reasonably possible loss is material, it discloses the loss contingency. In addition, Citigroup discloses matters for which it has accrued if it believes a reasonably possible exposure to material loss exists in excess of the amount accrued. In accordance with ASC 450, Citigroup’s disclosure includes an estimate of the reasonably possible loss or range of loss for those matters as to which an estimate can be made. ASC 450 does not require disclosure of an estimate of the reasonably possible loss or range of loss where an estimate cannot be made. Neither accrual nor disclosure is required for losses that are deemed remote.

Litigation, Regulatory and Other Contingencies

Overview. In addition to the matters described below, in the ordinary course of business, CGMHI, its parent entity Citigroup, its affiliates and subsidiaries, and current and former officers, directors and employees (for purposes of this section, sometimes collectively referred to as Citigroup and Related Parties) routinely are named as defendants in, or as parties to, various legal actions and proceedings. Certain of these actions and proceedings assert claims or seek relief in connection with alleged violations of consumer protection, securities, banking, antifraud, antitrust, anti-money laundering, employment and other statutory and common laws. Certain of these actual or threatened legal actions and proceedings include claims for substantial or indeterminate compensatory or punitive damages, or for injunctive relief, and in some instances seek recovery on a class-wide basis.

In the ordinary course of business, Citigroup and Related Parties also are subject to governmental and regulatory examinations, information-gathering requests, investigations and proceedings (both formal and informal), certain of which may result in adverse judgments, settlements, fines, penalties, restitution, disgorgement, injunctions or other relief. In addition, Citigroup is a bank holding company, and certain affiliates and subsidiaries of CGMHI are banks, registered broker-dealers, futures commission merchants, investment advisors or other regulated entities and, in those capacities, are subject to regulation by various U.S., state and foreign securities, banking, commodity futures, consumer protection and other regulators. In connection with formal and informal inquiries by these regulators, Citigroup and such affiliates and subsidiaries receive numerous requests, subpoenas and orders seeking documents, testimony and other information in connection with various aspects of their regulated activities. From time to time Citigroup and Related Parties also receive grand jury subpoenas and other requests for information or assistance, formal or informal, from federal or state law enforcement agencies including, among others, various United States Attorneys’ Offices, the Asset Forfeiture and Money Laundering Section and other divisions of the Department of Justice, the Financial Crimes Enforcement Network of the United States Department of the Treasury, and the Federal Bureau of Investigation relating to Citigroup and its customers.

Because of the global scope of Citigroup’s operations and its presence in countries around the world, Citigroup and Related Parties are subject to litigation and governmental and regulatory examinations, information-gathering requests, investigations and proceedings (both formal and informal) in multiple jurisdictions with legal, regulatory and tax regimes that may differ substantially, and present substantially different risks, from those Citigroup and Related Parties are subject to in the United States. In some instances, Citigroup and Related Parties may be involved in proceedings involving the same subject matter in multiple jurisdictions, which may result in overlapping, cumulative or inconsistent outcomes.

Citigroup and CGMHI seek to resolve all litigation, regulatory, tax and other matters in the manner management believes is in the best interests of Citigroup and its shareholders, and contests liability, allegations of wrongdoing and, where applicable, the amount of damages or scope of any penalties or other relief sought as appropriate in each pending matter.

Inherent Uncertainty of the Matters Disclosed. Certain of the matters disclosed below involve claims for substantial or indeterminate damages. The claims asserted in these matters typically are broad, often spanning a multiyear period and sometimes a wide range of business activities, and the plaintiffs’ or claimants’ alleged damages frequently are not quantified or factually supported in the complaint or statement of claim. Other matters relate to regulatory investigations

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or proceedings, as to which there may be no objective basis for quantifying the range of potential fine, penalty or other remedy. As a result, Citigroup is often unable to estimate the loss in such matters, even if it believes that a loss is probable or reasonably possible, until developments in the case, proceeding or investigation have yielded additional information sufficient to support a quantitative assessment of the range of reasonably possible loss. Such developments may include, among other things, discovery from adverse parties or third parties, rulings by the court on key issues, analysis by retained experts and engagement in settlement negotiations. Depending on a range of factors, such as the complexity of the facts, the novelty of the legal theories, the pace of discovery, the court's scheduling order, the timing of court decisions and the adverse party's, regulator's or other authority's willingness to negotiate in good faith toward a resolution, it may be months or years after the filing of a case or commencement of a proceeding or an investigation before an estimate of the range of reasonably possible loss can be made.

Matters as to Which an Estimate Can Be Made. For some of the matters disclosed below, Citigroup is currently able to estimate a reasonably possible loss or range of loss in excess of amounts accrued (if any). For some of the matters included within this estimation, an accrual has been made because a loss is believed to be both probable and reasonably estimable, but an exposure to loss exists in excess of the amount accrued. In these cases, the estimate reflects the reasonably possible range of loss in excess of the accrued amount. For other matters included within this estimation, no accrual has been made because a loss, although estimable, is believed to be reasonably possible, but not probable; in these cases, the estimate reflects the reasonably possible loss or range of loss.

These estimates are based on currently available information. As available information changes, the matters for which Citigroup is able to estimate will change, and the estimates themselves will change. In addition, while many estimates presented in financial statements and other financial disclosures involve significant judgment and may be subject to significant uncertainty, estimates of the range of reasonably possible loss arising from litigation, regulatory and tax proceedings are subject to particular uncertainties. For example, at the time of making an estimate, (i) Citigroup may have only preliminary, incomplete or inaccurate information about the facts underlying the claim, (ii) its assumptions about the future rulings of the court, other tribunal or authority on significant issues, or the behavior and incentives of adverse parties, regulators or other authorities, may prove to be wrong and (iii) the outcomes it is attempting to predict are often not amenable to the use of statistical or other quantitative analytical tools. In addition, from time to time an outcome may occur that Citigroup had not accounted for in its estimate because it had deemed such an outcome to be remote. For all these reasons, the amount of loss in excess of amounts accrued in relation to matters for which an estimate has been made could be substantially higher or lower than the range of loss included in the estimate.

Matters as to Which an Estimate Cannot Be Made. For other matters disclosed below, Citigroup is not currently able to estimate the reasonably possible loss or range of loss. Many of these matters remain in very preliminary stages (even in some cases where a substantial period of time has passed since the commencement of the matter), with few or no substantive legal decisions by the court, tribunal or other authority defining the scope of the claims, the class (if any) or the potentially available damages or other exposure, and fact discovery is still in progress or has not yet begun. In many of these matters, Citigroup has not yet answered the complaint or statement of claim or asserted its defenses, nor has it engaged in any negotiations with the adverse party (whether a regulator, taxing authority or a private party). For all these reasons, Citigroup cannot at this time estimate the reasonably possible loss or range of loss, if any, for these matters.

Opinion of Management as to Eventual Outcome. Subject to the foregoing, it is the opinion of Citigroup's management, based on current knowledge and after taking into account its current accruals, that the eventual outcome of all matters described in this Note would not likely have a material adverse effect on the consolidated financial condition of CGMHI. Nonetheless, given the substantial or indeterminate amounts sought in certain of these matters, and the inherent unpredictability of such matters, an adverse outcome in certain of these matters could, from time to time, have a material adverse effect on CGMHI's consolidated results of operations or cash flows in particular quarterly or annual periods.

ANZ Underwriting Matter

On February 11, 2022, the Australian Commonwealth Director of Public Prosecutions discontinued the prosecution of charges that were brought against Citigroup Global Markets Australia Pty Limited (CGMA) and two Citi employees for alleged criminal cartel offenses in relation to CGMA's role as a joint underwriter and lead manager with other banks in the 2015 institutional share placement by Australia and New Zealand Banking Group Limited (ANZ). The case, captioned R v. CITIGROUP GLOBAL MARKETS AUSTRALIA PTY LIMITED is before the Federal Court in New South Wales, Australia. Additional information concerning this action is publicly available in court filings under the docket number NSD 1316-NSD 1324/2020.

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Facilitation Trading Matters

On January 28, 2022, the Securities and Futures Commission of Hong Kong (SFC) entered into a resolution with Citigroup Global Markets Asia Limited (CGMAL) of the SFC's investigation into CGMAL's equity sales trading desks in connection with facilitation trades. As part of the resolution, CGMAL agreed to pay a civil penalty of \$44.6 million. Citigroup is cooperating with related investigations and inquiries by other government and regulatory agencies in Asia Pacific countries and elsewhere.

Foreign Exchange Matters

Regulatory Actions: Government and regulatory agencies in the U.S. and other jurisdictions are conducting investigations or making inquiries regarding Citigroup's foreign exchange business. Citigroup is cooperating with these and related investigations and inquiries.

Antitrust and Other Litigation: In 2018, a number of institutional investors who opted out of the previously disclosed August 2018 final settlement filed an action against Citigroup, Citibank, Citigroup Global Markets Inc. (CGMI) and other defendants, captioned ALLIANZ GLOBAL INVESTORS, ET AL. v. BANK OF AMERICA CORP., ET AL., in the United States District Court for the Southern District of New York. Plaintiffs allege that defendants manipulated, and colluded to manipulate, the foreign exchange markets. Plaintiffs assert claims under the Sherman Act and unjust enrichment claims, and seek consequential and punitive damages and other forms of relief. On July 28, 2020, plaintiffs filed a third amended complaint. Additional information concerning this action is publicly available in court filings under the docket number 18-CV-10364 (S.D.N.Y.) (Schofield, J.).

In 2018, a group of institutional investors issued a claim against Citigroup, Citibank and other defendants, captioned ALLIANZ GLOBAL INVESTORS GMBH AND OTHERS v. BARCLAYS BANK PLC AND OTHERS, in the High Court of Justice in London. Claimants allege that defendants manipulated, and colluded to manipulate, the foreign exchange market in violation of EU and U.K. competition laws. In December 2021, the High Court ordered that the case be transferred to the U.K.'s Competition Appeal Tribunal. Additional information concerning this action is publicly available in court filings under the case number CL-2018-000840 in the High Court and under the case number 1430/5/7/22 (T) in the Competition Appeal Tribunal.

In 2015, a putative class of consumers and businesses in the U.S. who directly purchased supracompetitive foreign currency at benchmark exchange rates filed an action against Citigroup and other defendants, captioned NYPL v. JPMORGAN CHASE & CO., ET AL., in the United States District Court for the Northern District of California (later transferred to the United States District Court for the Southern District of New York). Subsequently, plaintiffs filed an amended class action complaint against Citigroup, Citibank and Citicorp as defendants. Plaintiffs allege that they suffered losses as a result of defendants' alleged manipulation of, and collusion with respect to, the foreign exchange market. Plaintiffs assert claims under federal and California antitrust and consumer protection laws, and seek compensatory damages, treble damages and declaratory and injunctive relief. On March 8, 2022, the United States District Court for the Southern District of New York denied plaintiffs' motion for class certification and granted in part defendants' motion to exclude plaintiffs' expert's analyses. Additional information concerning this action is publicly available in court filings under the docket numbers 15-CV-2290 (N.D. Cal.) (Chhabria, J.) and 15-CV-9300 (S.D.N.Y.) (Schofield, J.).

In 2019, two applications, captioned MICHAEL O'HIGGINS FX CLASS REPRESENTATIVE LIMITED v. BARCLAYS BANK PLC AND OTHERS and PHILLIP EVANS v. BARCLAYS BANK PLC AND OTHERS, were made to the U.K.'s Competition Appeal Tribunal requesting permission to commence collective proceedings against Citigroup, Citibank and other defendants. The applications seek compensatory damages for losses alleged to have arisen from the actions at issue in the European Commission's foreign exchange spot trading infringement decision (European Commission Decision of May 16, 2019 in Case AT.40135-FOREX (Three Way Banana Split) C(2019) 3631 final). On March 31, 2022, the U.K.'s Competition Appeal Tribunal issued its judgment on certification. On April 21, 2022, both claimants applied for permission to appeal the judgment and for it to be judicially reviewed in the alternative. Additional information concerning these actions is publicly available in court filings under the case numbers 1329/7/7/19 and 1336/7/7/19.

In 2019, a putative class action was filed against Citibank and other defendants, captioned J WISBEY & ASSOCIATES PTY LTD v. UBS AG & ORS, in the Federal Court of Australia. Plaintiffs allege that defendants manipulated the foreign exchange markets. Plaintiffs assert claims under antitrust laws, and seek compensatory damages and declaratory and injunctive relief. Additional information concerning this action is publicly available in court filings under the docket number VID567/2019.

In 2019, two motions for certification of class actions filed against Citigroup, Citibank and Citicorp and other defendants were consolidated, under the caption GERTLER, ET AL. v. DEUTSCHE BANK AG, in the Tel Aviv Central District Court in Israel. Plaintiffs allege that defendants manipulated the foreign exchange markets. Citibank's motion to dismiss plaintiffs' petition for certification was denied on April 12, 2021. On April 6, 2022, the Supreme Court of Israel rejected Citibank's

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motion for leave to appeal the Central District Court's denial of its motion to dismiss. Additional information concerning this action is publicly available in court filings under the docket number CA 29013-09-18.

Interbank Offered Rates-Related Litigation

In May 2019, three putative class actions filed against Citigroup, Citibank, CGMI and other defendants were consolidated, under the caption IN RE ICE LIBOR ANTITRUST LITIGATION, in the United States District Court for the Southern District of New York. Plaintiffs allege that defendants suppressed ICE LIBOR. Plaintiffs assert claims under the Sherman Act, the Clayton Act, and unjust enrichment, and seek compensatory damages, disgorgement, and treble damages. In March 2020, the court granted defendants' motion to dismiss the action for failure to state a claim, which plaintiffs appealed to the United States Court of Appeals for the Second Circuit. On February 14, 2022, the United States Court of Appeals for the Second Circuit dismissed plaintiff's appeal. Additional information concerning this action is publicly available in court filings under the docket numbers 19-CV-439 (S.D.N.Y.) (Daniels, J.) and 20-1492 (2d Cir.).

In August 2020, individual borrowers and consumers of loans and credit cards filed an action against Citigroup, Citibank, CGMI and other defendants, captioned MCCARTHY, ET AL. v. INTERCONTINENTAL EXCHANGE, INC., ET AL., in the United States District Court for the Northern District of California. Plaintiffs allege that defendants conspired to fix ICE LIBOR, assert claims under the Sherman Act and the Clayton Act, and seek declaratory relief, injunctive relief, and treble damages. Additional information concerning this action is publicly available in court filings under the docket number 20-CV-5832 (N.D. Cal.) (Donato, J.).

Interest Rate and Credit Default Swap Matters

Regulatory Actions: The Commodity Futures Trading Commission (CFTC) is conducting an investigation into alleged anticompetitive conduct in the trading and clearing of interest rate swaps (IRS) by investment banks. Citigroup is cooperating with the investigation.

Antitrust and Other Litigation: Beginning in 2015, Citigroup, Citibank, CGMI, CGML and numerous other parties were named as defendants in a number of industry-wide putative class actions related to IRS trading. These actions have been consolidated in the United States District Court for the Southern District of New York under the caption IN RE INTEREST RATE SWAPS ANTITRUST LITIGATION. The actions allege that defendants colluded to prevent the development of exchange-like trading for IRS and assert federal and state antitrust claims and claims for unjust enrichment. Also consolidated under the same caption are individual actions filed by swap execution facilities, asserting federal and state antitrust claims, as well as claims for unjust enrichment and tortious interference with business relations. Plaintiffs in these actions seek treble damages, fees, costs and injunctive relief. Lead plaintiffs in the class action moved for class certification in 2019, and subsequently filed an amended complaint. Additional information concerning these actions is publicly available in court filings under the docket numbers 18-CV-5361 (S.D.N.Y.) (Oetken, J.) and 16-MD-2704 (S.D.N.Y.) (Oetken, J.).

In 2017, Citigroup, Citibank, CGMI, CGML and numerous other parties were named as defendants in an action filed in the United States District Court for the Southern District of New York under the caption TERA GROUP, INC., ET AL. v. CITIGROUP, INC., ET AL. The complaint alleges that defendants colluded to prevent the development of exchange-like trading for credit default swaps and asserts federal and state antitrust claims and state law tort claims. In January 2020, plaintiffs filed an amended complaint, which defendants later moved to dismiss. Additional information concerning this action is publicly available in court filings under the docket number 17-CV-4302 (S.D.N.Y.) (Sullivan, J.).

Madoff-Related Litigation

In December 2008, a Securities Investor Protection Act (SIPA) trustee was appointed for the SIPA liquidation of Bernard L. Madoff Investment Securities LLC (BLMIS), in the United States Bankruptcy Court for the Southern District of New York. Beginning in 2010, he commenced actions against multiple Citi entities, including Citibank, Citicorp North America, Inc., CGML and Citibank (Switzerland) AG, seeking recovery of monies that originated at BLMIS and were allegedly received by the Citi entities as subsequent transferees. On August 30, 2021, the United States Court of Appeals for the Second Circuit reversed the bankruptcy court's denial of the SIPA trustee's motion for leave to amend his complaint and remanded the case to the bankruptcy court for further proceedings. On January 27, 2022, Citibank and Citicorp North America, Inc. filed a petition for a writ of certiorari in the United States Supreme Court seeking review of the Second Circuit's holding that good faith is an affirmative defense. The SIPA trustee filed an amended complaint against Citibank, Citicorp North America, Inc. and CGML on February 11, 2022. The action against Citibank (Switzerland) AG was dismissed on February 23, 2022. Additional information concerning these actions is publicly available in court filings under the docket numbers 10-5345, 12-1700 (Bankr. S.D.N.Y.) (Morris, J.); 12-MC-115 (S.D.N.Y.) (Rakoff, J.); and 17-2992, 17-3076, 17-3139, 19-4282, 20-1333 (2d Cir.).

Also beginning in 2010, the British Virgin Islands liquidators of Fairfield Sentry Limited, whose assets were invested with BLMIS, commenced multiple actions in the United States Bankruptcy Court for the Southern District of New York against over 400 defendants, including CGML Citibank (Switzerland) AG; Citibank, N.A., London; Citivic Nominees Limited; and

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Cititrust (Bahamas) Limited. The actions seek recovery of monies that were allegedly received directly or indirectly by Citi entities from Fairfield Sentry. Appeals concerning various dismissed claims and a petition for interlocutory review on the one claim remaining are pending before the United States District Court for the Southern District of New York, and the remaining claim is proceeding in the Bankruptcy Court. Citi (Switzerland) AG and Citivic Nominees Limited filed a motion to dismiss for lack of personal jurisdiction on October 29, 2021. These actions are captioned FAIRFIELD SENTRY LTD., ET AL. v. CGML, ET AL.; FAIRFIELD SENTRY LTD., ET AL. v. CITIBANK NA LONDON, ET AL.; and FAIRFIELD SENTRY LTD., ET AL. v. ZURICH CAPITAL MARKETS COMPANY, ET AL. Additional information is publicly available in court filings under the docket numbers 10-13164, 10-3496, 10-3622, 10-3634, 11-2770 (Bankr. S.D.N.Y.) (Morris, J.); and 19-3911, 19-4267, 19-4396, 19-4484, 19-5106, 19-5135, 21-2997, 21-3243, 21-3526, 21-3529, 21-3530, 21-4307, 21-4498, 21-4496 (S.D.N.Y.) (Broderick, J.).

Record-Keeping Matters

Certain U.S. regulators and authorities are conducting investigations of CGMI and other firms regarding compliance with record-keeping obligations in connection with business-related communications sent over unapproved electronic messaging channels. CGMI is cooperating with the investigations.

Shareholder Derivative and Securities Litigation

Beginning in October 2020, four derivative actions were filed in the United States District Court for the Southern District of New York, purportedly on behalf of Citigroup (as nominal defendant) against certain of Citigroup's current and former directors. The actions were later consolidated under the case name IN RE CITIGROUP INC. SHAREHOLDER DERIVATIVE LITIGATION. The consolidated complaint asserts claims for breach of fiduciary duty, unjust enrichment, and contribution and indemnification in connection with defendants' alleged failures to implement adequate internal controls. In addition, the consolidated complaint asserts derivative claims for violations of Sections 10(b) and 14(a) of the Securities Exchange Act of 1934 in connection with statements in Citigroup's 2019 and 2020 annual meeting proxy statements. On February 8, 2021, the court stayed the action pending resolution of defendants' motion to dismiss in IN RE CITIGROUP SECURITIES LITIGATION. Additional information concerning this action is publicly available in court filings under the docket number 1:20-CV-09438 (S.D.N.Y.) (Nathan, J.).

Beginning in December 2020, two derivative actions were filed in the Supreme Court of the State of New York, purportedly on behalf of Citigroup (as nominal defendant) against certain of Citigroup's current and former directors, and certain current and former officers. The actions were later consolidated under the case name IN RE CITIGROUP INC. DERIVATIVE LITIGATION, and the court stayed the action pending resolution of defendants' motion to dismiss in IN RE CITIGROUP SECURITIES LITIGATION. On June 23, 2022, a third derivative action was filed in the Supreme Court of the State of New York, purportedly on behalf of Citigroup (as nominal defendant) against certain of Citigroup's current and former directors, and certain current and former officers. This action is subject to consolidation with, and to the same stay as entered in, the actions captioned IN RE CITIGROUP INC. DERIVATIVE LITIGATION. Additional information concerning this action is publicly available in court filings under the docket numbers 656759/2020 and 656930/2022 (N.Y. Sup. Ct.) (Schecter, J.).

Beginning in October 2020, three putative class action complaints were filed in the United States District Court for the Southern District of New York against Citigroup and certain of its current and former officers, asserting violations of Sections 10(b) and 20(a) of the Securities Exchange Act of 1934 in connection with defendants' alleged misstatements concerning Citigroup's internal controls. The actions were later consolidated under the case name IN RE CITIGROUP SECURITIES LITIGATION. The consolidated complaint later added certain of Citigroup's current and former directors as defendants. Defendants have moved to dismiss the consolidated amended complaint. Additional information concerning this action is publicly available in court filings under the docket number 1:20-CV-9132 (S.D.N.Y.) (Nathan, J.).

Sovereign Securities Matters

Regulatory Actions: Government and regulatory agencies are conducting investigations or making inquiries regarding Citigroup's sales and trading activities in connection with sovereign and other government-related securities. Citigroup is cooperating with these investigations and inquiries.

Antitrust and Other Litigation: In 2015, putative class actions filed against CGMI and other defendants were consolidated under the caption IN RE TREASURY SECURITIES AUCTION ANTITRUST LITIGATION in the United States District Court for the Southern District of New York. Plaintiffs allege that defendants colluded to fix U.S. treasury auction bids by sharing competitively sensitive information ahead of the auctions, and that defendants colluded to boycott and prevent the emergence of an anonymous, all-to-all electronic trading platform in the U.S. Treasuries secondary market. Plaintiffs assert claims under antitrust laws, and seek damages, including treble damages where authorized by statute, and injunctive relief. On March 31, 2021, the court granted defendants' motion to dismiss, without prejudice. On May 14, 2021, plaintiffs filed an amended consolidated complaint. On June 14, 2021, certain defendants, including CGMI, moved to dismiss the amended complaint. On March 31, 2022, the court granted defendants' motions to dismiss and denied leave to amend. On April 28, 2022, plaintiffs filed a notice of appeal to the United States Court of Appeals for the Second Circuit from the district court's

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grant of defendants' motions to dismiss the amended consolidated class action complaint. Additional information concerning this action is publicly available in court filings under the docket numbers 15-MD-2673 (S.D.N.Y.) (Gardephe, J.) and 22-943 (2d Cir.).

In 2017, purchasers of supranational, sub-sovereign and agency (SSA) bonds filed a proposed class action on behalf of direct and indirect purchasers of SSA 296 bonds against Citigroup, Citibank, CGMI, CGML, Citibank Canada, Citigroup Global Markets Canada, Inc. and other defendants, captioned JOSEPH MANCINELLI, ET AL. v. BANK OF AMERICA CORPORATION, ET AL., in the Federal Court in Canada. Plaintiffs have filed an amended claim that alleges defendants manipulated, and colluded to manipulate, the SSA bonds market, asserts claims for breach of the Competition Act, breach of foreign law, civil conspiracy, unjust enrichment, waiver of tort and breach of contract, and seeks compensatory and punitive damages, among other relief. Additional information concerning this action is publicly available in court filings under the docket number T-1871-17 (Fed. Ct.).

In 2018, a putative class action was filed against Citigroup, CGMI, Citigroup Financial Products Inc., Citigroup Global Markets Holdings Inc., Citibanamex, Grupo Banamex and other banks, captioned IN RE MEXICAN GOVERNMENT BONDS ANTITRUST LITIGATION, in the United States District Court for the Southern District of New York. The complaint alleges that defendants colluded in the Mexican sovereign bond market. In September 2019, the court granted defendants' motion to dismiss. In December 2019, plaintiffs filed an amended complaint against Citibanamex and other market makers in the Mexican sovereign bond market. Plaintiffs no longer assert any claims against Citigroup and any other U.S. Citi affiliates. The amended complaint alleges a conspiracy to fix prices in the Mexican sovereign bond market from January 1, 2006 to April 19, 2017, and asserts antitrust and unjust enrichment claims, and seeks treble damages, restitution and injunctive relief. In February 2020, certain defendants, including Citibanamex, moved to dismiss the amended complaint, which the court later granted. On June 10, 2021, plaintiffs moved for reconsideration of the decision dismissing certain defendants, including Citibanamex, which those defendants have jointly opposed. On March 30, 2022, the United States District Court for the Southern District of New York denied plaintiffs' motion for reconsideration of the order dismissing certain defendants, including Citibanamex, for lack of personal jurisdiction. Additional information concerning this action is publicly available in court filings under the docket number 18-CV-2830 (S.D.N.Y.) (Oetken, J.).

On February 9, 2021, purchasers of Euro-denominated sovereign debt issued by European central governments added CGMI, CGML and others as defendants to a putative class action, captioned IN RE EUROPEAN GOVERNMENT BONDS ANTITRUST LITIGATION, in the United States District Court for the Southern District of New York. Plaintiffs allege that defendants engaged in a conspiracy to inflate prices of European government bonds in primary market auctions and to fix the prices of European government bonds in secondary markets. Plaintiffs assert a claim under the Sherman Act and seek treble damages and attorneys' fees. On June 4, 2021, certain defendants, including CGMI and CGML, filed a pre-motion letter with the court requesting leave to move to dismiss the action. On March 14, 2022, the court granted in part and denied in part defendants' motions to dismiss, including denying CGMI and CGML's motion to dismiss. On March 28, 2022, certain defendants, including CGMI and CGML, moved for reconsideration. On June 16, 2022, the court denied CGMI and CGML's motion for reconsideration. Additional information concerning this action is publicly available in court filings under the docket number 19-CV-02601 (S.D.N.Y.) (Marrero, J.).

Transaction Tax Matters

Citigroup and Citibank are engaged in litigation or examinations with non-U.S. tax authorities, including in the U.K., India and Germany, concerning the payment of transaction taxes and other non-income tax matters.

Tribune Company Bankruptcy

Certain Citigroup affiliates (along with numerous other parties) have been named as defendants in adversary proceedings related to the Chapter 11 cases of Tribune Company (Tribune) filed in the United States Bankruptcy Court for the District of Delaware, asserting claims arising out of the approximate \$11 billion leveraged buyout of Tribune in 2007. The actions were consolidated as IN RE TRIBUNE COMPANY FRAUDULENT CONVEYANCE LITIGATION and transferred to the United States District Court for the Southern District of New York.

In the adversary proceeding captioned KIRSCHNER v. FITZSIMONS, ET AL., the litigation trustee, as successor plaintiff to the unsecured creditors committee, seeks to avoid and recover as actual fraudulent transfers the transfers of Tribune stock that occurred as a part of the leveraged buyout. Several Citigroup affiliates, along with numerous other parties, were named as shareholder defendants and were alleged to have tendered Tribune stock to Tribune as a part of the buyout. In 2017, the United States District Court for the Southern District of New York dismissed the actual fraudulent transfer claim against the shareholder defendants, including the Citigroup affiliates. In 2019, the litigation trustee filed an appeal to the United States Court of Appeals for the Second Circuit.

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CGMI was named as a defendant in a separate action, *KIRSCHNER v. CGMI*, in connection with its role as advisor to Tribune. In 2019, the court dismissed the action, which the litigation trustee appealed to the United States Court of Appeals for the Second Circuit.

On August 20, 2021, the United States Court of Appeals for the Second Circuit issued its decision in the consolidated appeals in *KIRSCHNER v. FITZSIMONS* and *KIRSCHNER v. CGMI*. In the *FITZSIMONS* action, the Second Circuit affirmed the dismissal of the actual fraudulent transfer claim against the shareholder defendants, including the Citigroup affiliates. In the *CGMI* action, the Second Circuit affirmed the dismissal of all claims against CGMI except for the claim of constructive fraudulent conveyance. As to that claim, the Second Circuit vacated the dismissal and remanded to the district court for further proceedings on that claim and other claims that remain against certain other defendants that are not Citigroup affiliates. On November 29, 2021, on remand from the Second Circuit, the litigation trustee notified the United States District Court for the Southern District of New York that it was voluntarily dismissing all claims against CGMI pursuant to a settlement agreement. The district court approved the voluntary dismissal on December 10, 2021. Additional information concerning these actions is publicly available in court filings under the docket numbers 12 MC 2296 (S.D.N.Y.) (Cote, J.), 11 MD 2296 (S.D.N.Y.) (Cote, J.), 19-0449 (2d Cir.), and 19-3049 (2d Cir.).

Variable Rate Demand Obligation Litigation

In 2019, the plaintiffs in the consolidated actions *CITY OF PHILADELPHIA v. BANK OF AMERICA CORP, ET AL.* and *MAYOR AND CITY COUNCIL OF BALTIMORE v. BANK OF AMERICA CORP., ET AL.* filed a consolidated complaint naming as defendants Citigroup, Citibank, CGMI, CGML and numerous other industry participants. The consolidated complaint asserts violations of the Sherman Act, as well as claims for breach of contract, breach of fiduciary duty, and unjust enrichment, and seeks damages and injunctive relief based on allegations that defendants served as remarketing agents for municipal bonds called variable rate demand obligations (VRDOs) and colluded to set artificially high VRDO interest rates. In November 2020, the court granted in part and denied in part defendants' motion to dismiss the consolidated complaint.

On June 2, 2021, the Board of Directors of the San Diego Association of Governments, acting as the San Diego County Regional Transportation Commission, filed a parallel putative class action against the same defendants named in the already pending nationwide consolidated class action. The two actions were consolidated and on August 6, 2021, the plaintiffs in the nationwide putative class action filed a consolidated amended complaint, captioned *THE CITY OF PHILADELPHIA, MAYOR AND CITY COUNCIL OF BALTIMORE, THE BOARD OF DIRECTORS OF THE SAN DIEGO ASSOCIATION OF GOVERNMENTS, ACTING AS THE SAN DIEGO COUNTY REGIONAL TRANSPORTATION COMMISSION v. BANK OF AMERICA CORP., ET AL.* On September 14, 2021, defendants moved to dismiss the consolidated amended complaint in part. On June 28, 2022, the court granted in part and denied in part defendants' partial motion to dismiss the consolidated amended complaint. Additional information concerning this action is publicly available in court filings under the docket number 19-CV-1608 (S.D.N.Y.) (Furman, J.).

Wind Farm Litigations

Beginning in March 2021, six wind farms in Texas commenced actions in New York and Texas state courts for declaratory judgments and breach of contract, asserting that the February 2021 winter storm in Texas excused their performance to deliver energy to Citigroup Energy Inc. (CEI) under the force majeure provisions of their contracts with CEI. In addition, the wind farms sought temporary restraining orders and/or preliminary injunctions, preventing CEI from exercising remedies under the contracts.

Preliminary injunctions were denied with respect to five of the six wind farms: the New York court denied preliminary injunctions with respect to the Stephens Ranch I and Stephens Ranch II wind farms; the Texas court denied preliminary injunctions with respect to the Flat Top, Shannon and Midway wind farms. Later in 2021, Stephens Ranch I, Stephens Ranch II and Flat Top each voluntarily dismissed its action with prejudice. The Mariah del Norte wind farm voluntarily dismissed its action with prejudice on February 18, 2022. On March 17, 2022, the action filed by Midway was voluntarily dismissed. A motion to dismiss the remaining Shannon action remains pending. Additional information concerning these actions is publicly available in court filings under docket numbers 652078/2021 (Sup. Ct. N.Y. Cnty.) (Reed, J.), 2021-01387 (1st Dep't), 652312/2021 (Sup. Ct. N.Y. Cnty.) (Reed, J.), 2021-23588 (District Court Harris County TX) (Schaffer, J.), and 2021-26150 (District Court Harris County TX) (Engelhart, J.).

Settlement Payments

Payments required in settlement agreements described above have been made or are covered by existing litigation or other accruals.