# CITIGROUP GLOBAL MARKETS LIMITED

**(Registered Number: 01763297)**

**ANNUAL REPORT AND FINANCIAL STATEMENTS**

**for the year ended 31 December 2022**

# CITIGROUP GLOBAL MARKETS LIMITED

## STRATEGIC REPORT
for the year ended 31 December 2022

The Directors present their strategic report on Citigroup Global Markets Limited (CGML or the Company) on a standalone basis for the year ended 31 December 2022.

### 1. Introduction

CGML is a wholly owned, indirect subsidiary of Citigroup Inc (Citi), limited by shares. It is Citi's international broker dealer, providing products and services for institutional clients. It is a market maker in equity, fixed income and commodity products across cash, over-the-counter (OTC) derivatives and exchange-traded markets, as well as a provider of investment banking, capital markets and advisory services. CGML operates globally, generating the majority of its business from the Europe, Middle East and Africa (EMEA) region with the remainder coming from Asia and the Americas.

CGML is authorised by the Prudential Regulation Authority (PRA) and regulated by the PRA and Financial Conduct Authority (FCA). CGML is also a Commodity Futures Trading Commission (CFTC) registered swap dealer, and United States Securities Exchange Commission (SEC) registered security-based swap dealer, and is considered a Risk-Taking Operating Material Legal Entity in Citi's Global Resolution Plan. As at 31 December 2022, it had four branch offices and four subsidiaries, listed below. These are not materially active except for the Israel branch, Citigroup Global Markets Europe AG, and Citigroup Global Markets Funding Luxembourg SCA. The Italy branch of CGML is currently in liquidation, which is expected to be completed in 2023. During 2022, the Czech Republic branch of CGML was liquidated. Changes after the reporting period are discussed in the Strategic and Directors' Reports and in Note 34 'Events after the reporting period'.

| **EU Branches** | **Subsidiaries** |
|---|---|
| Czech Republic (liquidated) | Citigroup Global Markets Europe AG (Germany) |
| Italy (in liquidation) | Citigroup Global Markets Funding Luxembourg SCA (Luxembourg) |
| **Non-EU Branches** | Citigroup Global Markets Funding Luxembourg GP S.a.R.L. (Luxembourg) |
| Israel | Citi Global Wealth Management S.A.M. (Monaco) |
| Switzerland | |
| UAE | |

CGML's business supports the Institutional Clients Group (ICG) segment of Citi's operations and is almost entirely wholesale in nature, with a client base that encompasses corporates, financial institutions, institutional and other investors, as well as governments and public sector entities. CGML's principal business activities are summarised below:

| ***Business*** | ***Activities*** |
|---|---|
| Equities | Comprises:<br>• Equity Markets, undertakes market making in, and provides clients with exposure to, equities, convertible bonds, listed and OTC derivatives, structured products, securities financing, and electronic trading.<br>• Multi Asset Group develops asset-based investment and hedging solutions for distributors and institutional investors, with a particular focus on insurance companies, asset managers (including hedge funds) and pension funds.<br>• Prime Finance, provides globally co-ordinated prime brokerage services to clients, including securities lending, margin financing, reporting, clearing, custody and structured financing solutions.<br>• Delta One, which provides access, financing, and investment solutions to a broad spectrum of clients (institutional, corporates and hedge funds) via synthetic products such as swaps, exchange-traded funds (ETFs) and access products.<br>• Futures and OTC Clearing, which provides clients with access to global liquidity venues, global execution on all major futures exchanges, multi-asset clearing services on global central counterparties (CCPs) and delivery of collateral solutions. |

## 1. Introduction (continued)

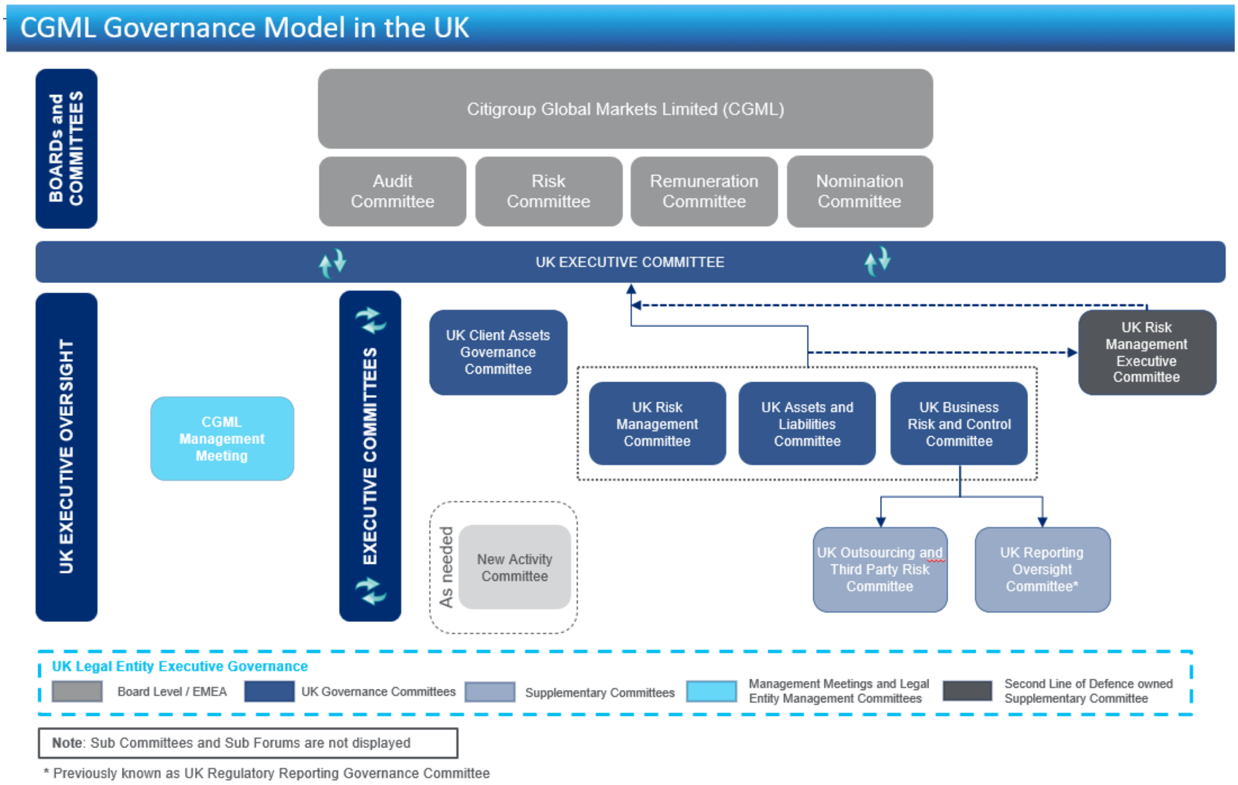
| ***Business*** | ***Activities*** |
|---|---|
| Rates | Makes markets and facilitates client activity across interest rate products in traded markets, including sovereign and supranational bonds, inflation bonds, as well as interest rate, cross currency and inflation derivatives. The business conducts much of its client facing activity on CGML with some market risk transferred to other Citi affiliates. |
| Global Spread Products | Provides clients with access to investment grade, high yield and distressed bond markets, as well as credit derivatives and structured credit products. |
| Commodities | Acts as a principal in commodity markets worldwide, providing risk management services to clients, acting as a liquidity provider and providing investor solutions and working capital facilities for commodity inventories. |
| Banking, Capital Markets and Advisory (BCMA) | BCMA provides structuring and syndication of securities and financing transactions in the bond capital markets and delivers equity and equity-linked solutions in financing acquisitions, funding capital expenditures, managing liabilities, monetising assets, and hedging exposures. The business also provides advisory services to clients in relation to mergers and acquisitions, corporate broking and the raising and restructuring of capital. |

A number of CGML's functional operations are carried out in locations outside London, including at Citi Service Centres in Belfast, Budapest, and Warsaw as well as in locations outside the region. In addition, CGML makes use of a number of affiliated and third party outsourcing arrangements.

## 2. CGML Corporate Governance Report and Principal Risks

For the year ended 31 December 2022, under The Companies (Miscellaneous Reporting) Regulations 2018, the Company has applied the Wates Corporate Governance Principles for Large Private Companies (published by the Financial Reporting Council (FRC) in December 2018 and available on the FRC website).

The chart below highlights the main components of CGML's governance structure, within Citi's regional and UK management and governance framework during 2022:



## 2. CGML Corporate Governance Report and Principal Risks (continued)

***Principle 1 – Purpose and Leadership***

*Purpose*

CGML's purpose, in line with that of Citi, is to serve as a trusted partner to its clients by responsibly providing financial services that enable growth and economic progress. CGML's core activities are being a dealer, market maker and underwriter and providing advisory services. Whilst carrying out these activities, it ensures that actions are always in its clients' interests, create economic value and are systemically responsible.

*Strategy*

CGML's strategic purpose was discussed and formalised during its annual Strategy Day, under the direction of the Board of Directors (the Board). The Strategy Day looks at the year ahead and drives the Board agenda setting. The Strategy Day is an example of ensuring good dialogue with Group, the CGML workforce and wider stakeholders. The key strategic priorities for CGML for the year ended 31 December 2022 were as follows:

- Client excellence and delivering Citi's business strategy;
- Sustained profitability and efficient management of financial and capital resources;
- Improve infrastructure and data to drive resilience, efficiency, and a better client experience;
- Ensure strong governance and controls remain the cornerstone of our success; and
- Attract, retain, and develop diverse talent and shape good culture.

The CGML Strategic and Financial Plan 2022-2024 was documented and approved by the CGML Board following the Strategy Day and is used to clearly articulate the CGML strategic priorities internally.

*Values and Culture*

The Board and senior management are instrumental in shaping good culture and conduct for the Company. The Company's Leadership Principles (take ownership, deliver with pride, and succeed together), represent the qualities, behaviours and expectations employees must exhibit to deliver on the mission of enabling growth and economic progress. Employees contribute to creating a culture that drives client excellence, controls excellence and operational excellence.

Diversity and Inclusion are recognised as part of CGML's core values and the Company nurtures a culture in which employees hold themselves accountable for managing risk and where they continue to take pride in always doing the right thing. Doing the right thing includes taking ownership and showing empathy for colleagues, clients and communities, treating others with respect and civility, and continuing to invest in colleagues from all backgrounds, valuing and learning from different perspectives and breaking down barriers. CGML monitors and measures its 'cultural health' and conduct at governance and management meetings and uses a range of measures to help adjust and improve itself. CGML is also fully engaged with Citi's New Way - a culture transformation programme designed to drive a culture of excellence and accountability that strengthens risk management and the control environment.

As part of the annual Strategy Day, the CGML Board reviewed the Culture target state and the Culture framework and will continue to monitor progress through a CGML Board Culture Working Group chaired by a non-executive director of the Board. The working group reports on culture oversight initiatives to the Board each quarter. The CGML Board expects the CGML management to discuss and demonstrate, in every Board update, how the decisions they make, the habits they practise, the ways in which they invest resources and rewards and their leadership tone support and reinforce the culture Citi is driving. During 2022, working with the Accountability, Culture and Talent (ACT) programme, the CGML Board created two questions (with corresponding guidance) for inclusion in each submission to the CGML Risk Committee and CGML Audit Committee with the intent of encouraging management to consider and evidence culture within every aspect of their work and to give the Board visibility into how management are considering and evaluating cultural considerations.

**2. CGML Corporate Governance Report and Principal Risks** (continued)

Citi's Code of Conduct prohibits discrimination and harassment and highlights procedures for speaking up and reporting concerns about conduct or situations that may put the Company or its customers at risk. For further details please see the Mission and Strategy section on page 11.

***Principle 2 – Board Composition***

The details of each member of the Board during the year ended 31 December 2022 can be found in the Directors' Report on page 19.

To ensure that the balance of responsibilities, accountabilities and decision making across the Company are effectively maintained, CGML has appointed a separate Chair and Chief Executive.

As at 31 December 2022, the Board consisted of six Executive Directors and five Independent Non-Executive Directors.

The Executive Directors are:

- James Bardrick - CGML Chief Executive Officer (CEO)
- Francisco Tobias Marin - EMEA Chief Financial Officer (CFO)
- Amit Raja - EMEA Head of Markets
- Zoe Wimborne - EMEA Chief Risk Officer (CRO)
- Deepak Jain - Global Head of Independent Compliance Risk Management (ICRM) Special Projects
- Evelin Ducsai - EMEA Head of Operations and Technology and Chief Information Officer (CIO) [subject to regulatory approval]

The Independent Non-Executive Directors are:

- Jonathan Moulds - Chair of CGML Board, Chair of CGML Nomination Committee
- William Fall - Chair of CGML Risk Committee
- Sally Clark - Chair of CGML Audit Committee
- Peter Henry - Chair of Remuneration Committee and Citigroup Inc. Board member
- Iain Plunkett - Operations, Technology & Transformation

The composition of the CGML Board reflects the Company's size and is appropriate for the scale, complexity, regulatory oversight, and systemic importance of CGML within Citi. Evelin Ducsai, EMEA Head of O&T and CIO, Amit Raja, EMEA Head of Markets and Francisco Tobias, EMEA CFO joined the Board as Executive Directors in 2022 replacing their predecessors. Peter Henry joined the Board in November 2022 as an Independent Non-Executive Director replacing Diana Taylor as the Group Board representative. Each new Board Director brings a wealth of experience in the financial services industry and subsidiary governance.

The Independent Non-Executive Directors bring experience in risk, finance, operations, transformation and audit, in addition to perspectives and challenge from their roles within the industry and also outside the sectors in which CGML operates. All Directors have access to the advice and services of the Company Secretary's office and may take professional advice at the Company's expense. The duties of the Board are executed partially through committees. The Independent Non-Executive Directors attend and act as chair to relevant committees (as noted on page 6) so that they are able to challenge and influence a broad range of areas affecting CGML. As highlighted above, one Non-Executive Director, Peter Henry, is also a Non-Executive Director of the ultimate parent, Citigroup Inc.

The Board comprises and is supported by nine of Citi's UK Senior Managers (as defined under the Senior Manager and Certification Regime (SM&CR) from the PRA and the FCA) including the Chief Executive Officer and the relevant EMEA business heads together with the Regional heads of Finance, O&T and Risk. Three of the four Non-Executive Directors, who are Board Committee chairs, are Senior Managers and they are subject to all aspects of the SM&CR, including regulatory pre-approval and conduct rules as well as their statutory duty of responsibility.

**2. CGML Corporate Governance Report and Principal Risks** (continued)

***Principle 2 – Board Composition*** (continued)

The SM&CR focuses on a small number of individuals (Senior Managers) who hold key roles or have overall responsibility for whole areas of relevant UK entities and branches. Senior Managers require regulatory pre-approval to perform a Senior Management Function (SMF). The SM&CR requires Senior Managers to take reasonable steps to avoid a breach occurring or continuing. As part of the Individual Accountability Regime (of which the SM&CR is a part), CGML maintains a Management Responsibilities Map which documents the firm's governance arrangements.

*Balance and diversity*

The percentage of female Directors has decreased from 40% to 27%% during 2022; however, the percentage of those from an ethnic minority background has increased from 9% to 27%. Citi is committed to making the Company an ever-more inclusive environment, thereby fostering a more diverse workforce which should increase diversity at the most senior levels. We will be demonstrating our commitment to this area with various initiatives and ensuring CGML is increasingly viewed as an employer of choice.

*Effectiveness*

The Board operates on a quarterly meeting cycle every year together with two additional days for Board Strategy, and more often as required. The Committees meet more frequently with six to eight meetings per year. In addition to the quarterly meetings, the Board receives technical training in the form of in-depth and targeted education sessions that cover a variety of topics including Technology, Cyber, Operational Resilience, and Recovery and Resolution.

The Board ensures it has the relevant knowledge and skills to fulfil its responsibilities and keep pace with growth and innovation. The CGML Nomination Committee undertakes an annual skills assessment exercise and has used the resulting gap analysis to inform its succession planning and continuing education programme for the year ahead.

The Board considers these exercises important in order to identify key areas for future opportunities and improvements. The Board of CGML is focused on being equipped to meet tomorrow's challenges, opportunities and emerging risks, the rapidly changing market, the evolution of competition, trends in its clients' business models and experience expectations, and the effect of new technologies.

***Principle 3 – Director Responsibilities***

*Accountability*

CGML adheres to and seeks to exceed the corporate governance standards expected from a regulated firm of its size and structure. It recognises that success is measured in large part by its ability to deliver a progressive and effective governance model that is both adaptive to the pace of change and robust enough to withstand the challenges it faces. The governance model also reflects the need to demonstrate influence and oversight of areas where the Board relies on other parts of the Group to achieve the outcomes needed to deliver its own strategies. It requires the senior executives of CGML to operate an effective governance environment coupled with a strong culture of risk management and controls to support good decision-making.

The Board delegates authority for oversight of the day-to-day management of the Company to the UK Executive Committee which meets monthly. It is chaired by the Citi EMEA Chief Executive Officer and SMF 7 Group Entity Manager and membership includes the key UK Senior Managers. CGML also has a dedicated monthly management meeting, chaired by the CEO of CGML to review and discuss specific legal entity focused matters.

## 2. CGML Corporate Governance Report and Principal Risks (continued)

***Principle 3 – Director Responsibilities** (continued)*

*Committees*

The Independent Non-Executive Directors are independent and have no material business or other relationships with the Company that might influence their independence or judgement. Certain governance responsibilities are delegated to other Board committees: Audit, Remuneration, Nomination and Risk. Each of these Board committees are chaired by Non-Executive Directors and have a separate charter, which include the authorities delegated to them by the Board.

*Integrity of Information*

The Board receives regular and timely information (at least monthly), via calls or meetings with the CGML CEO on all key aspects of the business including its financial performance, risk management, control environment, market and competitive conditions, Citi Global and EMEA developments and global and local governance and regulatory priorities. CGML's management are responsible for the integrity of this information and individuals are provided with the necessary training to keep up to date with regulatory changes. The Company's financial statements are subject to an external audit by KPMG LLP on an annual basis, and controls are periodically reviewed by CGML's internal audit function. Other key information is prepared by the relevant internal function.

***Principle 4 – Opportunity and Risk***

*Opportunity*

Long-term strategic opportunities are identified in the CGML Strategic and Financial Plan process which is reviewed, discussed and challenged by the Board annually.

*Risk*

CGML's principal risk types arise from the nature of the services provided to its clients and include both financial and non-financial elements. The principal risk types identified by management and covered by CGML's Risk Management Framework are noted as follows:

- reputational risk;
- strategic risk;
- market risk;
- liquidity risk;
- credit risk (mainly in the form of counterparty credit risk);
- operational risk (including conduct risk); and
- compliance risk.

The Risk Committee ensures that the principal financial and non-financial risks and emerging risks are identified and managed appropriately and in a timely manner. The Committee meets at least quarterly and updates the risk register for any changes in underlying conditions. The Committee continues to refine and enhance the Company's Risk Management Framework and risk registers and works to ensure consistency across operations. The Risk Committee reports to the Board on a quarterly basis.

**2. CGML Corporate Governance Report and Principal Risks** (continued)

***Principle 4 – Opportunity and Risk*** *(continued)*

*Responsibilities*

The Board and the Risk Committee are responsible for ensuring that senior management consider the external factors and dependencies on group-wide initiatives that may impact CGML's strategic opportunities. CGML's most valuable resource is its staff, so it closely monitors the impact of its strategy on the capability and resources availability within its talent pool. Risks are managed and mitigation plans designed and executed using CGML's detailed Risk Management Framework. The key external factors that the Board monitors are as follows:

- Geopolitical and economic factors that impact growth opportunities and financial returns. CGML took steps to minimise client and market disruption that might arise as a result of the conflict in Ukraine, supply chain impacts and rise in inflation;
- Rapid technological development that presents opportunities to improve client service but also creates the potential for industry wide change and exposes CGML to high impact risk (Cyber, IT resilience, Data Management). Operations & Technology have a critical role to ensure CGML is able to manage a significant pace of change to protect against negative disruption and to be operationally resilient; and
- The global and local regulatory environment, which requires governance and a strong compliance function to have oversight and collaboration with the first line and is capable of managing multiple priorities across a range of regulatory initiatives, including the timely completion of remediation and targeted improvements, addressing LIBOR transition, the finalisation of Basel III, Operational Resilience Third Party and inter affiliate outsourcing, Environmental, Social and Governance, and Climate Risks, amongst others.

***Principle 5 – Remuneration***

The Remuneration Committee aims to set remuneration at a level that will enable it to secure and retain executives who can deliver the Company's strategy.

The Remuneration Committee is responsible for making recommendations to the Board concerning the Company's remuneration strategy, recruitment framework and long-term incentive plans for senior executives. Pay is aligned with performance and taking into account fair pay and conditions across the Company's workforce.

The Company completed its sixth annual UK Gender Pay Gap Report based on 2022 remuneration. These Reports have highlighted areas which the Company can improve on and the Company is continuing to take steps to reduce the gender pay gap. Citi have signed the UK's Women in Finance Charter, and committed to a target to achieve at least 30% female representation among its director and managing director level staff throughout EMEA by 2025. As of the date of the 2022 Report, it was at 27.3%, up from 19% in 2017. The 2022 Gender Pay Report was published ahead of the UK Government's April 2022 deadline. This reflects continued progress in our gender pay gap figures as a result of women's increasing representation throughout the legal entity, particularly at senior levels.

In fulfilling its role, the Remuneration Committee has regard to the responsibilities set out under the PRA and FCA Remuneration Codes and takes into account, where applicable, relevant guidance and the long-term interests of shareholders, investors and other stakeholders in CGML.

***Principle 6 – Stakeholders***

As set out above in Principle 3, the Board is clear that progressive and effective governance is essential to deliver its purpose and to protect CGML and Citi's reputation and relationships with all its stakeholder community including clients, employees, shareholders, suppliers, regulators and the local communities in which it operates.

Details of our key stakeholders and our engagement with them are set out in our Section 172(1) Statement below and are incorporated into this statement.

As at 31 December 2022 CGML had 30 approved UK Senior Managers, of whom 4 were CGML Non-Executive Directors and 6 more CGML Executive Directors. CGML had 3 outgoing UK Senior Managers, subject to the final handover with the incoming UK Senior Manager.

**2. CGML Corporate Governance Report and Principal Risks** (continued)

***Principle 6 – Stakeholder*** *(continued)*

*Section 172(1) Statement*

Section 172(1) of the Companies Act 2006 requires each Director of the Company to act in a way in which he/she considers, in good faith, would be most likely to promote the success of the Company for the benefit of its members as a whole, and in doing so have regard to a range of matters including:

- the likely consequences of any decision in the long-term;
- the interests of the Company's employees;
- the need to foster the Company's business relationships with suppliers, customers and others;
- the impact of the Company's operations on the community and the environment;
- the desirability of the Company maintaining a reputation for high standards of business conduct; and
- the need to act fairly as between the Company's members.

The Directors of the Company give careful consideration to the matters referred to in section 172(1) when discharging their legal duties. The Board believes in taking decisions for the long-term benefit of the Company and looks to safeguard the Company's reputation by upholding the highest standards of business conduct. Depending on the issue in question, the relevance of each stakeholder group and other relevant factors may vary. As such, the Board strives to understand the needs and priorities of each stakeholder group and the other factors relevant to the issue in question during its deliberations and as part of its decision-making.

Board members receive periodic refresher training on their legal duties and may seek advice about the implications of these duties at any time from our Company Secretary. New Directors are offered a comprehensive induction programme which includes information on their statutory duties.

To ensure the most efficient and effective approach, stakeholder engagement is led by Citi, in particular where matters are of group-wide significance or have an impact on Citi’s reputation including our clients, shareholders, staff and global regulators.

The CGML Board considers and discusses information from across the organisation to help it understand the impact on CGML’s operations and the interests and views of its key stakeholders. The Board also reviews strategic and financial performance as well as operational and financial risks and regulator priorities. The Board receives this information in advance of each quarterly meeting, during monthly calls with the CGML Chief Executive Officer and by holding an annual Strategy Day. The CGML Board receives regular reports from the Citigroup Chair, the Group Board Non-Executive Director and from the Citigroup EMEA Regional CEO at its Board meetings. The Group Board and the CGML Board spent time together during the Group Board visit to London in October 2022 to discuss a number of topics.

Using all of the above actions, the Board has an overview of engagement with stakeholders which enables the Directors to comply with their legal duty under section 172 of the Companies Act 2006.

<u>Key stakeholder engagement</u>

*Clients*

The CGML Board receives regular reporting of client performance and themes via the CEO Board report, allowing an understanding and oversight of the direction of client sentiment. Citi performs a Voice of the Client survey which provides in-depth understanding of our corporate clients’ needs and expectations, alongside regular client performance and service benchmarking, leveraging external reporting and analysis where appropriate. The businesses within CGML operate a globally coordinated client-centric sales and relationship management organisation focussed on generating profitable and responsible growth and building market share with some of the most important organisations across the globe.

**2. CGML Corporate Governance Report and Principal Risks** (continued)

***Principle 6 – Stakeholder*** *(continued)*

*Employees*

CGML is aligned to Citi's mission of enabling growth and economic progress, while adhering to the highest ethical standards. Our culture is embedded through decisions that pass three tests: they are in our clients' interests, create economic value, and are always systemically responsible.

CGML's human capital strategies are designed to attract and retain the talent required to deliver the business strategy and support the health and wellbeing of employees and their families. During the COVID-19 pandemic and continuing into 2022, CGML took proactive measures to support colleagues' wellbeing, and implemented hybrid working through the How We Work programme. This programme is part of our Great Place to Work initiatives which attract and retain the best talent to serve our clients.

During 2022, CGML implemented Citi's enhanced performance management and executive compensation frameworks, policies, and procedures to improve employee accountability for risk and controls performance. A new framework for performance ratings was introduced with four pillars, including a risk and control measure for all employees.

CGML continues to focus on employee engagement and transparent communications. Colleagues are encouraged to share their suggestions and views to CGML through several channels, including an employee representative body, Ethics Office, and the Voice of the Employee Survey. The CGML Board receive regular updates and deep dives into culture, wellbeing, and resilience.

*Suppliers*

CGML works to maintain fair, resilient, well controlled and professional working relationships with its suppliers. CGML has a well-established framework for the engagement with and on-going relationship management and controls relating to risks of its key suppliers, ensuring shared values in the conduct of their business. The Modern Slavery Act 2015 ("the Act") obliges the CGML Board to make an annual statement on the reasonable steps taken to ensure that its own operations and supply chains are free of human trafficking and modern slavery. CGML has made annual statements of this nature since the Act came into force. The CGML Audit Committee reviews and challenges the due diligence which underpins the statement each year and seeks assurance from the second line of defence regarding the due diligence process. The Board is kept informed of any improvements made by Citigroup.

The information relating to the Modern Slavery Act, as required by the Modern Slavery Act 2015, will be published at https://www.citibank.co.uk/personal/home.do.

*Regulators*

CGML maintains an open and regular engagement with regulators to ensure clarity and transparency over its strategy and plan, key risks and opportunities, and progress on ongoing initiatives. Regulatory engagement is maintained both at the Board as well as the CGML and Group Management levels to ensure regulatory requirements and expectations are consistently understood and met. Primary regulatory engagement for CGML is with the PRA/ Bank of England and FCA supervisory teams and senior management, in addition to engaging with the CFTC and SEC internationally. Further, CGML is providing ongoing updates to the regulators on its clients, markets, employees, financials, liquidity, risk measures and operational/technology capabilities and resilience.

**2. CGML Corporate Governance Report and Principal Risks** (continued)

***Principle 6 – Stakeholder*** *(continued)*

*Communities*

In pursuit of Citi's mission, CGML is committed to enabling responsible growth and progress in the communities where we operate. Citi is in regular dialogue with charities and non-governmental organisations (NGOs), as part of its philanthropic commitment and mission to support the communities in which it operates. Citi works closely with community partners to understand the issues local communities are facing so that it can respond appropriately by providing funding, volunteers or other support as required. Specifically, Citi has a focus on supporting disadvantaged young people into employment whether they are from less privileged backgrounds, refugees, young people affected by youth violence or young people with disabilities. The CGML workforce dedicate time through the annual Global Community Day and the London Charity Partner programme. Our previous partnership with Guide Dogs raised over £415,000, in addition to supporting other Citi charitable initiatives in the UK and overseas. Many of these are also supported financially by the Citi Foundation including Career Ready and Teach First. Engagement with local communities allows CGML to understand better the needs and requirements of society enabling it to innovate for the future and pursue its mission of enabling growth and progress.

*Environment*

Citi recognises the importance of its environmental responsibilities, monitors its impact on the environment, and seeks to mitigate environmental risks. Initiatives designed to minimise CGML's operational impact on the environment include safe disposal of waste, recycling and reducing energy consumption. The Board has been actively engaged regarding the implementation of the CGML response to the Prudential Regulation Authority's Supervisory Statement on Climate Change SS3/19 on managing the financial risks from climate change. CGML continues to make progress on embedding the entity's approaches to strengthening governance (via the CGML Risk Committee), incorporating climate change into risk management frameworks, conducting scenario analysis, and enhancing disclosures for climate change-related risks.

*Government and Policymakers*

CGML and Citi takes their responsibilities as a corporate citizen seriously, and pursues constructive engagement with regulators and policymakers to achieve better public policy solutions for issues such as climate change, which impacts our clients, employees and the communities where we operate in. For example in 2022 Citi contributed to the UK House of Commons Environmental Audit Select Committee's report on 'The financial sector and the UK's Net Zero transition' where we highlighted the importance of protecting energy security as energy systems decarbonise. Citi also submitted a comment letter in 2022 on the proposed principles for the risk management of climate-related financial risks issued by the Basel Committee on Banking Supervision (BCBS).

As part of Citi, CGML engages with policymakers both directly and as part of industry efforts, as a member of a number of financial services trade associations. As part of Citi, CGML complies with relevant transparency requirements, at both the European Union and various individual country level. Details of Citi's entry in the EU's Transparency Register can be found at: https://ec.europa.eu/transparencyregister/public/consultation/displaylobbyist.do?id=00353757573-57. Citi provides a summary of certain trade and business associations that it is a member of, and how Citi has engaged with them on climate-related issues on page 34 of its 2022 Taskforce on Climate-Related Financial Disclosures (TCFD) report which is available here: https://www.citigroup.com/rcs/citigpa/storage/public/taskforce-on-climate-related-financial-disclosures-report-2022.pdf.

Citi embraces a culture of openness and inclusivity. We incorporate the interests of a wide array of stakeholders into our business and believe this sharing of knowledge and resources can help us provide the best services and products for our clients and support the long-term resiliency of our business. We consistently hold ourselves accountable to our commitments and are transparent with our stakeholders about the progress we are making.

**2. CGML Corporate Governance Report and Principal Risks** (continued)

***Principle 6 – Stakeholder*** *(continued)*

*Decision making in action*

The Board's approach to stakeholder engagement is illustrated by the transition of the European Government Bond business from CGML to Citibank Europe plc as part of the target operating model planning following the UK's withdrawal from the EU. The Board received regular updates from the UK Executive Committee and working groups set up within the firm to oversee and manage the project. The Board provided challenge and oversight particularly concerning the risk and financial impact on CGML to ensure CGML remains a sustainable and profitable entity whilst enabling it to continue serving clients throughout the EEA with minimal disruption. The Board has continued to be actively engaged in target operating model planning throughout 2021 and into 2022.

**3. Mission and Strategy**

CGML's mission, in line with that of Citi, is to serve as a trusted partner to its clients by responsibly providing financial services that enable growth and economic progress. CGML's core activities are being a dealer, market maker and underwriter and providing advisory services. Whilst carrying out these activities, it ensures that actions are always in its clients' interests, create economic value and are systemically responsible.

The strategic priorities set out in CGML's 2022 - 2024 Strategic and Financial plan which was approved by the Board during the period are as follows:

- *Deliver client excellence as Citi's international broker-dealer.*

  CGML continues to maintain a strong client franchise and competitive position in the client segments, countries and products by capturing growth opportunities and through innovative electronic and digital offerings, despite volatile markets and geo-political uncertainties. CGML will continue to be one of Citigroup's four major global booking and risk management hubs, serving international clients from its registered headquarters in the UK or its international subsidiaries and branches.

- *Improve infrastructure to drive resilience, efficiency and a great client experience.*

  CGML continues to maintain focus on investment in core platforms and infrastructure to enhance client experience through delivery of electronic and digital execution capabilities, improve stability and operational resilience, improve data quality and data insights, simplification and automation of manual processes, and strengthening of cyber and third party risk management. CGML's priorities remain aligned to Citi's objectives and CGML will continue to benefit from enhancements to operational and technology infrastructure capabilities.

- *Make strong governance and controls a cornerstone of CGML's success*.

  CGML has taken positive steps to strengthen the design, operations and effectiveness of the legal entity governance, both at the Executive and the Board levels. CGML remains committed to demonstrate and embed continuous improvements in the control environment, and strong and decisive governance. Active identification and timely remediation of underlying issues, analysis of root causes, establishment of compensating or preventative controls, and broader application of improvements remain key areas of focus.

- *Attract, retain and develop talent and shape good culture and conduct.*

  CGML's priority is to be an employer of choice and to provide a great place to work. Commitment to Diversity and Inclusion is core to Citi's values. As part of Citi's pledge to the Women in Finance Charter, CGML has set a goal to increase the number of senior management roles held by women. These developments are further supported by wider diversity initiatives including measures to identify and retain high performing employees. CGML continues to focus on embedding a sustainable culture that encourages good conduct and high ethical and performance standards, and monitors positive momentum through the Voice of Employee survey results.

### 3. Mission and Strategy (continued)

- *Deliver sustained future profitability and efficient management of financial and capital resources.*

  CGML continues to focus on sustainable returns, improved financial resource efficiency, and effective forward-assessment and management of its financial, capital and liquidity resources to support growth opportunities, and to ensure that it maintains adequate capital and liquidity both in business-as-usual activities and managing periods of stress.

In addition to the above key priorities, CGML will continue to ensure that its capital strategy and financial resources provide a strong foundation for meeting its current actual requirements while supporting strategic growth.

*Citi's consent order compliance*

Citi has embarked on a multiyear transformation, with the target outcome to change its business and operating models such that they simultaneously strengthen risk and controls and improve Citi's value to customers, clients and shareholders. Citi continues to work constructively with the regulators and provides information regarding its plans and progress. Locally, CGML provides regular updates on the transformation to the UK and other regulators for their feedback and expectations on the impacts of the transformation on the firm. CGML will continue to reflect their feedback in its project plans and execution efforts.

### 4. Financial Highlights

**Key Financial Performance Metrics**

| | **2022** | **2021** |
|---|---|---|
| Operating Efficiency<br>*(operating expense as a percentage of gross profit)* | 91.0% | 88.1% |
| Return on Assets<br>*(Net income as a proportion of total assets)* | 0.05% | 0.09% |
| Return on Tangible Common Equity (TCE)<br>*(Net income as a proportion of TCE)* | 1.2% | 1.5% |
| Return on Tier 1 Capital<br>*(Net income as a proportion of Tier 1 capital)* | 1.0% | 1.4% |

The decrease in performance compared to 2021 was mainly as a result of an increase in expenses, driven by one off expenses incurred in 2022 in addition to higher compensation and benefits owing to an increase in headcount relating to increased resources in risk management and controls over the course of the year. While revenues grew in 2022, the Investment Banking sector saw a significant decline in the overall market against a backdrop of uncertainty surrounding the conflict in Ukraine, rising inflation, and subsequent monetary policies.

*4.1 Income Statement Summary*

| | **2022<br>$ Million** | **2021<br>$ Million** |
|---|---|---|
| Commission income and fees | 894 | 1,470 |
| Net dealing income | 3,253 | 2,834 |
| Interest receivable | 949 | 280 |
| Interest payable | (1,472) | (1,087) |
| **Gross profit** | **3,624** | **3,497** |
| Operating expenses | (3,298) | (3,082) |
| Other income and expenses | 17 | 19 |
| **Operating profit on ordinary activities before taxation** | **343** | **434** |
| Tax on profits on ordinary activities | (65) | (31) |
| **Profit after taxation for the financial year** | **278** | **403** |

**4. Financial Highlights** (continued)

*Gross Profit*

Gross profit increased by $127 million, a 4% increase on 2021. The increase was largely as a result of increased market activity across the Commodities and Rates businesses owing to increased client activity and mark to market gains across the energy sector, government bonds, and inflation linked securities as a result of the geopolitical situation in Europe and tighter monetary policy owing to rising inflation. This increase was partially offset by a decline in Investment Banking fee revenues owing to an overall decline in the market driven by the reasons outlined above.

*Commission income and fees*

Commission income and fees result from the BCMA business, from Equity Cash activity and from inter-company fees which are calculated on an arm's length basis. 2022 had a $(576) million decrease in commission income and fees mainly as a result of a decline in Investment Banking activity across the globe. In contrast to a strong performance in the market in 2021, where investors sought to take advantage of record low interest rates, 2022 saw a significant reduction in activity as a result of the rising inflation and tightening monetary policy.

*Net Dealing Income*

The foremost contributors to net dealing income were the Fixed Income and Equities businesses. Net dealing income rose by $419 million mainly on account of the increased market activity across Commodities and Rates as referenced above.

*Interest Receivable and Payable*

Interest receivable and payable mainly reflects income and expense from collateralised financing transactions measured at amortised cost. It also includes amounts paid relating to inter-company funding and subordinated debt. Interest receivable and payable increased significantly over the course of 2022 mainly on account of increasing interest rates.

*Operating Expenses*

Operating expenses were $3,298 million, an increase of $216 million compared to 2021, with the largest costs relating to compensation and benefits of $1,692 million (2021: $1,644 million). The increase in compensation and benefits was largely driven by increased headcount in CGML which increased by 682 over the course of the year. Additional increases in operating expenses included transactional expenses, technology and communication, provisions for liabilities, travel and entertainment, and intercompany service charges.

*4.2 Balance Sheet*

| | **31 December 2022** | **31 December 2021** |
|---|---|---|
| | **$ Million** | **$ Million** |
| Total Assets | 521,792 | 451,281 |
| Total Liabilities | 493,072 | 422,762 |
| Shareholders' funds | 28,720 | 28,519 |

CGML's assets consist primarily of collateralised financing transactions, derivatives and trading inventory. Collateralised financing transactions include reverse repos and stock borrows; derivatives encompass interest rate, credit, equity and commodity derivatives; whilst bonds and equities form the largest categories of trading inventory. The Company's liabilities predominantly comprise collateralised financing transactions, derivatives and securities sold not yet purchased. The increase in assets and liabilities in 2022 was mainly driven by derivatives and associated collateral owing to significant market movements and increases in activity across the interest rate and commodity markets.

**4. Financial Highlights** (continued)

*4.2 Balance Sheet (continued)*

Shareholders' funds were $28,720 million (31 December 2021: $28,519 million) which represented an increase of $201 million. Movements in CGML's Shareholders' funds are mainly generated by total comprehensive income for the year, less coupon payments for Additional Tier 1 (AT1) Notes.

More detailed information about the composition of CGML's balance sheet, including analyses of its derivative and inventory holdings, can be found in the Balance Sheet and the Notes to the Accounts, in particular Note 15 'Financial assets and liabilities accounting classification and fair values', Note 14: 'Financial assets at fair value through profit or loss', and Note 13 'Derivatives'.

*4.3 Regulatory Capital*

CGML's regulatory capital position is summarised below.

| | **2022 $ Million** | **2021 $ Million** |
|---|---|---|
| Capital resources | | |
| Tier 1 capital | 28,314 | 28,380 |
| Tier 2 capital | 2,600 | 2,600 |
| Deductions | (3,566) | (3,037) |
| **Total** | **27,348** | **27,943** |
| Capital requirements (Pillar 1) | | |
| Market risk | 3,558 | 4,279 |
| Credit risk | 5,702 | 5,853 |
| Operational risk | 1,754 | 1,545 |
| Large Exposures risk | 424 | 336 |
| Credit Valuation Adjustment (CVA) risk | 456 | 379 |
| **Total** | **11,894** | **12,392** |
| **Excess capital over Pillar 1** | **15,454** | **15,551** |

Tier 1 capital encompasses tangible shareholders' funds. Tier 2 capital comprises long-term subordinated debt that is eligible for inclusion as capital. Deductions from capital include adjustments for the value of the defined benefit pension scheme, intangible assets and additional valuation adjustments.

Pillar 1 prescribes the minimum capital requirements for banks and investment firms under the Basel Capital Accord and the EU Capital Requirements Directive and Regulation. Following the UK's departure from the EU, the UK has on-shored certain parts of the Capital Requirements Regulation ("CRR II") and CRD V and has published rules to implement elements of CRR II in the UK which came into effect on 1 January 2022. In addition to Pillar 1 requirements, the PRA mandates a set of Pillar 2 regulatory capital standards which CGML is required to meet in its Individual Capital Guidance and certain additional capital buffers.

CGML remained in excess of its minimum regulatory capital requirements throughout the year, with management actively monitoring CGML's capital position on a daily basis.

**4. Financial Highlights** (continued)

*4.4 External Environment*

2022 saw a continued rebound in the UK Gross domestic product (GDP) of 4% as the economy continued its recovery from the impact of COVID-19 in 2020 where the UK GDP declined 11%, (+7.6% in 2021). The invasion of Russian forces into Ukraine in early 2022 saw significant strain on the supply of food and gas into Europe driving an increase in the Consumer Price Index (CPI), which was already impacted by the recovery from COVID-19. CPI rose to 10.5% by the end of 2022, up from 5.4% in December 2021, although down from its peak of 11.1% in October. Interest rates rose significantly over the course of 2022 as central banks aimed to combat rising inflation, with Bank of England base rates rising from 0.25% at the start of the year, to 3.5% in December. Furthermore, the third quarter saw significant volatility in UK Gilt prices following UK domestic political uncertainty and highly disruptive policy changes, requiring the Bank of England to intervene to restore market stability.

**5. 2023 Future Outlook**

The Company continues to monitor and respond to the evolving landscape in relation to COVID-19, elevated levels of inflation, higher interest rates and volatility in financial markets as a result of geo-political developments including continued responses to the invasion of Russian forces into Ukraine.

The Company has a stable business model that has proven its performance and resilience through the period of stress in the last two years and places it in a strong and sustainable position to benefit from opportunities for future growth. The Company plans to continue to grow its businesses offsetting the planned reduction in the European Government bonds portfolio over the coming years.

The external regulatory environment continues to evolve, notably for CGML this includes revisions to the Capital and Liquidity frameworks.

**6. LIBOR Transition Risk**

LIBOR has historically been used as the interest rate benchmark to price or value a wide range of financial products. The Company recognises that the ongoing transition away from and discontinuance of LIBOR presents various risks and challenges that could significantly impact financial markets and market participants. These include, among others, the pricing, liquidity, value of, return on and market for financial instruments and contracts that reference LIBOR or any other benchmark rate, including any alternative benchmark rate. Accordingly, Citi, and by extension the Company, has continued its efforts to identify and manage its LIBOR transition risks. Citi is also closely monitoring legislative, regulatory and other developments related to LIBOR transition matters and relief.

Citigroup established a LIBOR governance and implementation programme focused on identifying and addressing the LIBOR transition impacts to Citi's legal entities, clients, operational capabilities and legal and financial contracts, among others. The programme operates globally across Citi's businesses and functions. Citi also continued to engage with regulators, financial accounting bodies and others on LIBOR transition matters.

Moreover, the Company has continued to identify its LIBOR transition exposures, including financial instruments that do not contain contract provisions that adequately contemplate the discontinuance of reference rates and that require additional negotiation with counterparties. The Company's LIBOR transition efforts include, among other things, using alternative reference rates in certain newly issued financial instruments and products. Further, the Company has also been investing in its systems and infrastructure, as client activity moves away from LIBOR to alternative reference rates.

The LIBOR administrator ceased publication of non-USD LIBOR and one week and two-month USD LIBOR on a representative basis on 31 December 2021, with plans to cease publication of all other USD LIBOR tenors on 30 June 2023. As a result, Citi ceased entering into new contracts referencing USD LIBOR as of 1 January 2022, other than for limited circumstances where regulators recognized that it may be appropriate for banks to enter into new USD LIBOR contracts, including with respect to market-making, hedging or novations of USD transactions executed before 1 January 2022.

### 7. Climate Risk

Climate risk is the risk stemming from climate change either through physical risk (which refers to impact of changes in climate and weather) or through transition risk (which refers to risk arising from actions needed to mitigate the impacts of climate change by transitioning to a low-carbon economy). Citi's approach to climate-related risk is in Citi's Climate Risk Management Framework (CRMF). The CRMF details the governance, principles and requirements that promote the identification, measurement, monitoring, controlling, and reporting of climate-related risk. CRMF and CGML Risk Management Framework document define climate risk as a crosscutting risk which can manifest through or amplify existing risks within risk taxonomy.

Climate risk was recently designated as a "top risk" within Citi's Risk Governance Framework. Top risks are risks that have the potential to produce an impact large enough to threaten Citi's ability to maintain any of its core operations to serve its customers, Citi's earnings, liquidity, capital, operating model or risk profile. CGML's inherent climate-related transition risk is lower than a typical bank entity portfolio due to its credit and collateral exposures being short-term and subject to daily margin adjustments from strong credit counterparties.

Citi's Board of Directors has ultimate oversight of Citi's work to identify, assess and integrate climate-related risks and opportunities throughout the organisation. In addition to oversight by the full Board, the Nomination, Governance and Public Affairs Committee (NGPAC) of the Board and the Risk Management Committee (RMC) of the Board are the bodies primarily charged with oversight of our climate change efforts.

Board level oversight of climate risk matters impacting CGML is ensured by the CGML Board of Directors. Climate-related risk is included in the agendas of CGML Board meetings, including Risk and Audit Committees, as part of discussions relating to risk management frameworks, scenario analysis, Internal Capital Adequacy Assessment Process (ICAAP) risk assessment, new product approval trends and assurance activities. At the executive level in the UK, a dedicated UK Climate-Related Risk Working Group is in place with the primary objective to lead climate-related risk requirements for the UK legal entities.

Citi first established its Environmental and Social Risk Management (ESRM) Policy in 2003, as part of Citi's broader credit risk management policy, applicable to all Citi entities globally. The ESRM Policy provides the framework for how Citi identifies, mitigates, and manages the potential environmental and social risks (including climate risks) associated with clients' activities that could lead to credit or reputation risks to the firm. It guides how Citi evaluates lending, underwriting and advisory in environmentally sensitive and/or high-carbon sectors, and presents opportunities for Citi to engage clients on solutions to thematic risks.

In March 2021, Citi committed to net zero greenhouse gas (GHG) emissions by 2050, which includes net zero associated with our financing by 2050 and net zero for its own operations by 2030. As part of this commitment, Citi set 2030 targets to reduce financed emissions for loan portfolios in six key sectors. Targets and progress against them are detailed in the Citi's Taskforce on Climate-Related Financial Disclosure Report 2022. Citi has already taken significant steps to reduce its carbon footprint in the UK, such as installing solar panels on its UK data centre in 2021.

By order of the Board

*J D K Bardrick*
Director and Chief Executive Officer

*25 April 2023*

Incorporated in England and Wales
Registered office: Citigroup Centre, Canada Square, Canary Wharf, London E14 5LB
Registered Number: 01763297

# DIRECTORS' REPORT
for the year ended 31 December 2022

The Directors present their Report and the audited financial statements of CGML for the year ended 31 December 2022.

**Going concern basis**

The financial statements are prepared on a going concern basis taking into account CGML's existing capital and liquidity resources. The Directors acknowledge the risk that extreme circumstances might adversely impact CGML's ability to continue trading and are satisfied that CGML has the resources to continue in business for the foreseeable future. In making this assessment, the Directors have considered a wide range of information relating to present and future conditions. As CGML is part of the Citigroup, the risks that apply to the parent also apply to all subsidiaries within the group including CGML. The risk factors impacting Citigroup Inc. are described in its 2022 annual report on form 10-K, which can be found at http://www.citigroup.com/citi/investor/sec.htm.

The Directors have reviewed the capital, liquidity and financial position of the Company including future capital, liquidity and financial plans covering a period of at least 12 months from the date of approval of these financial statements.

To assess any potential impact on the Company, the Directors reassessed the components of capital, liquidity and the financial position of the Company and have concluded that the going concern basis is still appropriate. The assessment was completed with reference to CGML's continued stress testing processes within under its Internal Capital Adequacy Assessment Process (ICAAP) and Internal Liquidity Adequacy Assessment Process (ILAAP).

CGML continues to monitor the key risks for its Liquidity and Capital position including the impact of the recent volatility in financial markets and the Company has shown that it would maintain sufficient Capital and Liquidity under plausible downside stress scenarios. The extent of the future impacts for CGML of events arising from such scenarios remains uncertain, but may include a continuation of higher inflation or interest rates and financial market volatility and the Company continues to consider as part of its ongoing evaluations.

Based on the above assessment, the Directors are confident that the Company will have sufficient funds to continue to meet its liabilities as they fall due for at least 12 months from the date of approval of the financial statements and therefore, have prepared the financial statements on a going concern basis. Further information relevant to this assessment is provided in the following sections of these financial statements:

- the principal activities, strategic direction and challenges and uncertainties are described in the Strategic Report on pages 1 to 16;
- a financial summary, including the income statement and statement of financial position, is provided in the financial results section on pages 27 to 31; and
- objectives, policies and processes for managing market, liquidity, credit and operational risk, and CGML's approach to capital management and allocation, are described in Note 29 'Financial instruments and risk management', starting on page 82.

In addition to the going concern basis, Citigroup Inc. continues to provide confirmation that it will provide sufficient funding to the Company to ensure that it maintains a sound financial situation and is in a position to meet its debt obligations for the foreseeable future.

**Dividends**

During the year CGML paid no dividends on its ordinary shares (2021: $nil).

## DIRECTORS' REPORT
for the year ended 31 December 2022

**Information included in the Strategic Report**

CGML has elected to include information on financial risk management as per Schedule 7.6(1)(a) & (b) of the "Large and Medium-sized Companies and Groups Regulations 2008" in the Strategic Report as the Directors consider financial risk management to be of strategic importance to CGML. Further details about financial risk management are provided in Note 29 'Financial instruments and risk management.'

For the year ended 31 December 2022, the Company has applied the Wates Corporate Governance Principles for Large Private Companies (the Principles) (as published by the Financial Reporting Council in December 2018 and which are available on its website). Our corporate governance report, describing how CGML has applied the provisions of the Principles over the past year is presented in the Strategic Report in section 2. CGML Corporate Governance Report and Principal Risks, including employee engagement disclosure under the Section 172(1) Statement.

The Strategic Report also incorporates a discussion of likely future business developments, while important events affecting the Company since the end of the financial year are described in Note 34 'Events after the reporting period'. A summary of the Company's overseas branches and subsidiaries can be found in the Introduction to the Strategic Report.

**Statement of directors' responsibilities in respect of the Strategic Report, the Directors' Report and the financial statements**

The Directors are responsible for preparing the Annual Report, the Strategic Report, the Directors' Report and the financial statements in accordance with applicable law and regulations.

Company law requires the Directors to prepare financial statements for each financial year. Under that law, they have elected to prepare the financial statements in accordance with UK-adopted international accounting standards and applicable law.

Under company law the Directors must not approve the financial statements unless they are satisfied that they give a true and fair view of the state of affairs of the Company and of the profit or loss of the Company for that period. In preparing these financial statements, the Directors are required to:

- select suitable accounting policies and then apply them consistently;
- make judgements and estimates that are reasonable, relevant and reliable;
- state whether they have been prepared in accordance with UK-adopted international accounting standards;
- assess the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern; and
- use the going concern basis of accounting unless they either intend to liquidate the Company or to cease operations, or have no realistic alternative but to do so.

The Directors are responsible for keeping adequate accounting records that are sufficient to show and explain the Company's transactions and disclose with reasonable accuracy at any time the financial position of the Company and enable them to ensure that the financial statements comply with the Companies Act 2006. They are responsible for such internal control as they determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error, and have general responsibility for taking such steps as are reasonably open to them to safeguard the assets of the Company and to prevent and detect fraud and other irregularities.

The Directors are responsible for the maintenance and integrity of the corporate and financial information included on Citi's website. Legislation in the UK governing the preparation and dissemination of financial statements may differ from legislation in other jurisdictions.

# DIRECTORS' REPORT

for the year ended 31 December 2022

**Directors**

The Directors who held office during the year ended 31 December 2022 and since year end were:

***Non-Executive***
S J Clark
W M N Fall
J P Moulds
D L Taylor (resigned on 26 April 2022)
P Henry (appointed 1 September 2022)
I Plunkett (appointed 4 October 2022)

***Executive***
L Arduini (resigned on 28 July 2022)
J D K Bardrick
D Jain
F M Mannion (resigned on 31 March 2022)
Z V Wimborne
A-M Tassell (resigned on 3 November 2022)
F Tobias Marin (appointed 3 August 2022)
A Raja (appointed 28 July 2022)
E Ducsai [subject for regulatory approval]

**Directors' indemnity**

Throughout the year and at the date of this report the Company is party to a group-wide indemnity policy which benefits all of its current Directors and is a qualifying third party indemnity provision for the purpose of section 236 of the Companies Act 2006.

**Employment of disabled people**

CGML is committed to a policy of recruitment and promotion on the basis of aptitude and ability without discrimination of any kind. Applications for employment by disabled persons are fully and fairly considered having regard to the aptitudes and abilities of each applicant. Efforts are made to enable any employees who become disabled during employment to continue their careers within CGML. Training, career development and promotion of disabled persons are, as far as possible, identical to those applicable to other employees who are not disabled.

**Political contributions**

The Company made no political contributions or incurred any political expenditure during the year (2021: $nil).

**Sustainable Operations at CGML**

CGML, as part of Citigroup Inc., has been measuring its environmental footprint for two decades and began reporting on its direct operational impacts in 2002. In 2021, Citi continued its progress to reduce its carbon footprint by continuing to use 100% renewable electricity across its facilities globally. In 2022 we announced to refurbish our EMEA HQ in Canary Wharf, London, by choosing to refurbish rather than move to a new build, will avoid over 100,000 tonnes of carbon being emitted. Updating infrastructure and implementing efficiency measures will also minimise electricity consumption and reduce water consumption by 20%. Other decisions such as reusing materials, a fully electric infrastructure and the installation of solar panels, will mean the building will emit zero carbon in normal operation and make the building consistent with Citi's commitment to reach Net Zero in its own operations by 2030. The project is targeting LEED, BREEAM and WELL certifications. We will continue to work to identify and implement opportunities to reduce our carbon footprint and in 2022 we undertook a detailed Net Zero audit of one of our Belfast offices, identifying opportunities to decarbonise the site.

**Sustainable Operations at CGML** (continued)

To build on its existing success and reduce its operational footprint further, Citi is committed to the following goals for increasing its energy efficiency and reducing GHG emissions by 2025, from a 2010 baseline:

- a 45% reduction in location-based GHG emissions (CO2e);
- a 40% reduction in energy consumption and maintain 100% renewable electricity sourcing; and
- certifying 40% of floor area to be LEED, WELL or equivalent standard, with a focus on Citi owned building to operate at the highest level of sustainability.

In addition to these 2025 reduction targets, in March 2021 Citi announced its commitment to net zero emissions for its global operations by 2030, which will include Scope 1 and 2 emissions. At this time, we're evaluating our emissions inventory among all Scope 3 categories to determine which are material and which we will have ability to influence. This exercise will determine the areas of our supply chain that will be included in our net zero operations emissions target.

Citi reports Scope 1, Scope 2 and Scope 3 Business Travel GHG emissions in both its Environmental Impact Report and its CDP response. Citi's global energy consumption and GHG emissions can be found in the annual Environmental, Social and Governance Report. Citi's GHG emissions and environmental data are verified and assured by SGS, a leading third-party inspection, verification, testing and certification company.

***Streamlined Energy and Carbon Reporting***

The following tables present CGML's estimated energy consumption, greenhouse gas emissions and chosen intensity metrics for its UK-based operations for the financial years 2020, 2021 and 2022 :

| **Energy Consumption** | **2020** | **2021** | **2022** |
|---|---|---|---|
| Energy (MWh) | 47,034 | 51,305 | 71,664 |

**GHG Emissions**

| **Scope** | **Source** | **Unit** | **2020** | **2021** | **2022** |
|---|---|---|---|---|---|
| 1 | Direct | tCO2e | 3,021 | 4,463 | 3,464 |
| 2 | Indirect – Location-based | tCO2e | 6,157 | 5,735 | 6,328 |
| | Indirect – Market-based | tCO2e | — | — | — |
| 3 | Commercial air & rail travel | tCO2e | 1,585 | 638 | 5,275 |
| | Employee expensed car mileage | tCO2e | 4 | — | 2 |
| **Total** | **Scope 1, 2 (location) & Scope 3 Business Travel** | **tCO2e** | **10,768** | **10,837** | **15,069** |
| | **Scope 1, 2 (market) & Scope 3 Business Travel** | **tCO2e** | **4,610** | **5,102** | **8,741** |

| **Intensity Ratio*** | **2020** | **2021** | **2022** |
|---|---|---|---|
| tCO2e/Sq. Ft** | 0.017 | 0.027 | 0.021 |
| tCO2e/FTE | 2.913 | 2.816 | 2.349 |

* these intensity metrics have been calculated using Scope 1 & 2 (location) emissions

** calculated using Citi's total Scope 1 & 2 carbon footprint from the group's UK portfolio

CGML's emissions are calculated in line with the Greenhouse Gas Protocol Corporate Accounting and Reporting Standard (revised edition). The boundaries of the GHG inventory are defined using the operational control approach and cover the emissions the Company is responsible for across Scope 1, 2 and Scope 3 business travel. The emissions are calculated using the emissions factors for 2020, 2021 and 2022 published by the Department for Business, Energy & Industrial Strategy.

**Sustainable Operations at Citigroup Global Markets Limited** (continued)

***Streamlined Energy and Carbon Reporting*** *(continued)*

Citi gathers data from its operations on an ongoing basis, with primary evidence sourced from office managers and technical team. Where Citi pay for occupancy via service charges and the share of consumption is not known, consumption is calculated by benchmarking the energy/square foot against our global portfolio. As multiple Citi-owned subsidiaries occupy the same office spaces and make use of data centres, the figures presented have been calculated using CGML's UK headcount pro-rata to the Citi UK headcount. Citi purchase 100% renewable electricity in the UK through green tariffs for electricity directly purchased. Where electricity is obtained in leased properties from landlords, guarantee of origin certificates are purchased for the equivalent amount used.

In 2022 there has been an increase in electricity consumption with the return-to-work post Covid-19 pandemic. Scope 3 travel has increased substantially also post the pandemic as Citi resumes a new business-as-usual standard.

***Energy efficiency in action***

The main sources of CGML's operations are from the running of data centres, offices and business travel of employees travelling for work. Whether undertaking new construction or renovating existing buildings, Citi prioritise efficiency and sustainability to minimise the environmental impact of its facilities. The below highlights the energy efficiency actions that were undertaken in 2022.

In the Citigroup Centre (CGC) 1 and Citigroup Centre (CGC) 2 buildings:

- CGC 1 chiller sequencing was recommissioned improving management of the site's current load;
- Reduction in Citi employees and tenants in CGC 2 has led to energy services being isolated; and
- Mothballed empty floors, isolating chilled water, tech rooms, variable air volume boxes and air compartment units.

In the Riverdale Data Centre:

- Computer Room Air Handler (CRAH) units have been upgraded/replaced with new units; and
- Installation of temperature monitoring in data halls which will allow a better control of the CRAH units.

In the Belfast Gateway office;

- Expansion of cycling facilities plus the inclusion of e-scooter charging points to promote zero-emitting alternative modes of transport; and
- Net zero carbon audit to identify a site decarbonisation plan in line with Citi's Net Zero pledge.

**Events after the reporting period**

The failures of US regional banks Silicon Valley Bank and Signature Bank, together with the government-sponsored acquisition of Credit Suisse by UBS, have resulted in increased financial market volatility and a revision of market expectations around future monetary policy. Some parts of the market have recovered relatively quickly and, in the near-term, the situation has broadly stabilised. Nevertheless, if further stresses or threats to confidence emerge in the banking sector or elsewhere in financial markets as a result of the tightening of monetary policy, market volatility would be expected to increase again.

At the date on which these financial statements were approved, there were no other significant events affecting the Company since the year end.

**Disclosure of information to auditors**

In accordance with section 418 of the Companies Act 2006 and subject to all the provisions of section 418, the Directors who held office at the date of approval of this Directors' Report confirm that:

- so far as each is aware, there is no relevant audit information of which the Company's Auditor is unaware; and
- each Director has taken all the steps that he/ she ought to have taken as a Director to make himself/ herself aware of any relevant audit information and to establish that the Company's Auditor is aware of that information.

**Auditors**

In accordance with Section 487 of the Companies Act 2006, the auditor will be deemed to be reappointed a KPMG LLP will therefore continue in office.

By order of the Board.

*J D K Bardrick*
Director and Chief Executive Officer

*25 April 2023*

Incorporated in England and Wales
Registered office: Citigroup Centre, Canada Square, Canary Wharf, London E14 5LB
Registered Number: 01763297

**INDEPENDENT AUDITOR'S REPORT TO THE MEMBERS OF CITIGROUP GLOBAL MARKETS LIMITED**

**Opinion**

We have audited the financial statements of Citigroup Global Markets Limited ("the Company") for the year ended 31 December 2022 which comprise the Income Statement, Statement of Comprehensive Income, Statement of Changes in Equity, Balance sheet, Statement of Cash Flows, and related notes, including the accounting policies in note 1.

In our opinion the financial statements:

- give a true and fair view of the state of the Company's affairs as at 31 December 2022 and of its profit for the year then ended;
- have been properly prepared in accordance with UK-adopted international accounting standards; and
- have been prepared in accordance with the requirements of the Companies Act 2006.

**Additional opinion in relation to EU-adopted IFRS**

As explained in note 1 to the financial statements, the Company, in addition to complying with its legal obligation to apply UK-adopted international accounting standards, has also applied International Financial Reporting Standards adopted pursuant to Regulation (EC) No 1606/2002 as it applies in the European Union ("EU-adopted IFRS").

In our opinion the financial statements have been properly prepared in accordance with EU-adopted IFRS.

**Basis for opinion**

We conducted our audit in accordance with International Standards on Auditing (UK) ("ISAs (UK)") and applicable law. Our responsibilities are described below. We have fulfilled our ethical responsibilities under, and are independent of the Company in accordance with, UK ethical requirements including the FRC Ethical Standard as applied to other entities of public interest. We believe that the audit evidence we have obtained is a sufficient and appropriate basis for our opinion.

**Going concern**

The Directors have prepared the financial statements on the going concern basis as they do not intend to liquidate the Company or to cease its operations, and as they have concluded that the Company's financial position means that this is realistic. They have also concluded that there are no material uncertainties that could have cast significant doubt over its ability to continue as a going concern for at least a year from the date of approval of the financial statements ("the going concern period").

We used our knowledge of the Company, its industry, and the general economic environment to identify the inherent risks to its business model and analysed how those risks might affect the Company's financial resources or ability to continue operations over the going concern period. The risks that we considered most likely to adversely affect the Company's available financial resources over this period were:

- the availability of funding and liquidity in the event of market wide and idiosyncratic stresses;
- the impact on regulatory capital requirements in the event of an increase in financial instrument price volatility or risk due to market-wide stress; and
- the impact of the geopolitical tensions due to market-wide stress.

We considered whether these risks could plausibly affect the liquidity in the going concern period by assessing the directors' sensitivities over the level of available financial resources indicated by the Company's financial forecasts taking account of severe, but plausible adverse effects that could arise from these risks individually and collectively.

Our procedures also included:

- Critically assessing assumptions in severe, but plausible scenarios relevant to liquidity and capital. We have also assessed whether forecasts of the income statement and balance sheet are internally consistent and are consistent with our knowledge of the entity and the sector in which it operates.

- We evaluated the achievability of the actions the Directors consider they would take to improve the position should the risks materialise, taking into account the extent to which the Directors can control the timing and outcome of these.

We considered whether the going concern disclosure in note 1(a) to the financial statements gives a full and accurate description of the Directors' assessment of going concern, including the identified risks and dependencies.

Our conclusions based on this work:

- we consider that the Directors' use of the going concern basis of accounting in the preparation of the financial statements is appropriate;
- we have not identified, and concur with the Directors' assessment that there is not, a material uncertainty related to events or conditions that, individually or collectively, may cast significant doubt on the Company's ability to continue as a going concern for the going concern period.

However, as we cannot predict all future events or conditions and as subsequent events may result in outcomes that are inconsistent with judgements that were reasonable at the time they were made, the above conclusions are not a guarantee that the Company will continue in operation.

**Fraud and breaches of laws and regulations – ability to detect**

*Identifying and responding to risks of material misstatement due to fraud*

To identify risks of material misstatement due to fraud ("fraud risks") we assessed events or conditions that could indicate an incentive or pressure to commit fraud or provide an opportunity to commit fraud. Our risk assessment procedures included:

- Enquiring of Directors, the Audit Committee, Internal Audit and inspection of policy documentation as to the Company's high-level policies and procedures to prevent and detect fraud, including the internal audit function, and the Company's channel for "whistleblowing", as well as whether they have knowledge of any actual, suspected or alleged fraud.
- Reading Board, Audit Committee and Risk Committee minutes.
- Using analytical procedures to identify any unusual or unexpected relationships.
- Using our own forensic specialists to assist us in identifying fraud risks associated with journals.

We communicated identified fraud risks throughout the audit team and remained alert to any indications of fraud throughout the audit.

As required by auditing standards, and taking into account our overall knowledge of the control environment, we perform procedures to address the risk of management override of controls, in particular the risk that the Company's management may be in a position to make inappropriate accounting entries and the risk of bias in accounting estimates and judgements such as hard to price financial instruments. On this audit we do not believe there is a fraud risk related to revenue recognition because income is automatically calculated by IT applications and there is no manual intervention which limits the opportunity for management to commit fraud through the manipulation of revenue.

We also identified a fraud risk related to existence and accuracy of unconfirmed derivatives and valuation of hard to price financial instruments in response to possible pressures to meet profit targets.

In determining the audit procedures we took into account the results of our evaluation and testing of the operating effectiveness of some of the Company-wide fraud risk management controls

We performed procedures including:

- Identifying journal entries and other profit and loss adjustments based on risk criteria and comparing the identified entries to supporting documentation. These included those posted by senior finance management, those posted and approved by the same user and those posted to unusual accounts.
- Assessing significant accounting estimates relating to valuation of hard to price financial instrument for bias.

- Incorporating an element of unpredictability in the selection of the nature, timing and extent of audit procedures to be performed, including:
  - increasing the extent of substantive procedures performed on significant accounts
  - selecting items for testing that have lower amounts or are otherwise outside customary selection parameters

*Identifying and responding to risks of material misstatement related to compliance with laws and regulations*

We identified areas of laws and regulations that could reasonably be expected to have a material effect on the financial statements from our general commercial and sector experience, through discussion with the directors (as required by auditing standards), inspection of the Company's regulatory and legal correspondence and discussed with the directors the policies and procedures regarding compliance with laws and regulations.

As the Company is regulated, our assessment of risks involved gaining an understanding of the control environment including the entity's procedures for complying with regulatory requirements.

We communicated identified laws and regulations throughout our team and remained alert to any indications of non-compliance throughout the audit.

The potential effect of these laws and regulations on the financial statements varies considerably.

Firstly, the Company is subject to laws and regulations that directly affect the financial statements including financial reporting legislation (including related companies legislation), distributable profits legislation and taxation legislation and we assessed the extent of compliance with these laws and regulations as part of our procedures on the related financial statement items.

Secondly, the Company is subject to many other laws and regulations where the consequences of non-compliance could have a material effect on amounts or disclosures in the financial statements, for instance through the imposition of fines or litigation or the loss of the Company's license to operate. We identified the following areas as those most likely to have such an effect: regulatory capital and liquidity, money laundering, sanctions lists and financial crime, market abuse regulations, conduct issues, certain aspects of company legislation recognising the financial and regulated nature of the Company's activities. Auditing standards limit the required audit procedures to identify non-compliance with these laws and regulations to enquiry of the Directors and other management and inspection of regulatory and legal correspondence, if any. Therefore, if a breach of operational regulations is not disclosed to us or evident from relevant correspondence, an audit will not detect that breach.

Context of the ability of the audit to detect fraud or breaches of law or regulation

Owing to the inherent limitations of an audit, there is an unavoidable risk that we may not have detected some material misstatements in the financial statements, even though we have properly planned and performed our audit in accordance with auditing standards. For example, the further removed non-compliance with laws and regulations is from the events and transactions reflected in the financial statements, the less likely the inherently limited procedures required by auditing standards would identify it.

In addition, as with any audit, there remained a higher risk of non-detection of fraud, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal controls. Our audit procedures are designed to detect material misstatement. We are not responsible for preventing non-compliance or fraud and cannot be expected to detect non-compliance with all laws and regulations.

**Strategic report and Directors' report**

The Directors are responsible for the Strategic report and the Directors' report. Our opinion on the financial statements does not cover those reports and we do not express an audit opinion thereon.

Our responsibility is to read the Strategic report and the Directors' report and, in doing so, consider whether, based on our financial statements audit work, the information therein is materially misstated or inconsistent with the financial statements or our audit knowledge. Based solely on that work:

- we have not identified material misstatements in the Strategic report and the Directors' report;
- in our opinion the information given in those reports for the financial year is consistent with the financial statements; and
- in our opinion those reports have been prepared in accordance with the Companies Act 2006.

**Matters on which we are required to report by exception**

Under the Companies Act 2006, we are required to report to you if, in our opinion:

- adequate accounting records have not been kept, or returns adequate for our audit have not been received from branches not visited by us; or
- the financial statements are not in agreement with the accounting records and returns; or
- certain disclosures of Directors' remuneration specified by law are not made; or
- we have not received all the information and explanations we require for our audit.

We have nothing to report in these respects.

**Directors' responsibilities**

As explained more fully in their statement set out on page 18, the Directors are responsible for: the preparation of the financial statements and for being satisfied that they give a true and fair view; such internal control as they determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error; assessing the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern; and using the going concern basis of accounting unless they either intend to liquidate the Company or to cease operations, or have no realistic alternative but to do so.

**Auditor's responsibilities**

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue our opinion in an auditor's report. Reasonable assurance is a high level of assurance, but does not guarantee that an audit conducted in accordance with ISAs (UK) will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of the financial statements.

A fuller description of our responsibilities is provided on the FRC's website at
www.frc.org.uk/auditorsresponsibilities.

**The purpose of our audit work and to whom we owe our responsibilities**

This report is made solely to the Company's members, as a body, in accordance with Chapter 3 of Part 16 of the Companies Act 2006 and the terms of our engagement by the Company. Our audit work has been undertaken so that we might state to the Company's members those matters we are required to state to them in an auditor's report, and the further matters we are required to state to them in accordance with the terms agreed with the Company, and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the Company and the Company's members as a body, for our audit work, for this report, or for the opinions we have formed.

**Richard Pinks (Senior Statutory Auditor)**
**for and on behalf of KPMG LLP, Statutory Auditor**
*Chartered Accountants*
*15 Canada Square*
London E14 5GL
25 April 2023

## INCOME STATEMENT
for the year ended 31 December 2022

| | Notes | 2022<br>$ Million | 2021<br>$ Million |
|---|---|---|---|
| Commission income and fees | **4** | 894 | 1,470 |
| Net dealing income | **6** | 3,253 | 2,834 |
| Interest receivable | **5** | 949 | 280 |
| Interest payable | **5** | (1,472) | (1,087) |
| Gross profit | | 3,624 | 3,497 |
| Operating expenses | **7** | (3,298) | (3,082) |
| Impairment of investments in subsidiary | **20** | — | — |
| Net finance income on pension | **8** | 10 | 7 |
| Other income | | 7 | 12 |
| Operating profit on ordinary activities before taxation | | 343 | 434 |
| Tax on profits on ordinary activities | **11** | (65) | (31) |
| Profit after taxation for the financial year | | 278 | 403 |

The accompanying notes on pages 32 to 106 form an integral part of these financial statements.

# CITIGROUP GLOBAL MARKETS LIMITED

## STATEMENT OF COMPREHENSIVE INCOME

for the year ended 31 December 2022

| | Notes | 2022<br>$ Million | 2021<br>$ Million |
|---|---|---|---|
| Profit after taxation for the financial year | | 278 | 403 |
| Other Comprehensive Income | | | |
| **Items that will not be reclassified subsequently to profit or loss:** | | | |
| Gross (losses)/gains on remeasurement of defined benefit pension asset | **8** | (195) | 99 |
| Deferred tax benefit/(charge) associated with remeasurement of pension asset | 8 | 53 | (27) |
| Deferred tax charge associated with rate change on remeasurement of pension asset | 8 | 29 | (31) |
| Gains on debt valuation adjustment (DVA) attributed to the change in credit risk | | 342 | 21 |
| Deferred tax charge associated with loss on DVA | | (92) | (6) |
| Deferred tax (charge)/benefit associated with rate change on DVA | | (13) | 11 |
| Total other comprehensive income | | 124 | 67 |
| Total comprehensive gain for the financial year | | 402 | 470 |

The net movement in the Statement of Comprehensive Income in respect of the pension scheme reflects changes in the actual and expected returns on scheme assets and liabilities and the related tax impact associated with the balance sheet valuation of the defined pension asset.

The accompanying notes on pages 32 to 106 form an integral part of these financial statements.

# CITIGROUP GLOBAL MARKETS LIMITED

## STATEMENT OF CHANGES IN EQUITY

for the year ended 31 December 2022

| | Notes | Share Capital $ Million | Other equity instruments $ Million | Capital reserve $ Million | Equity reserve $ Million | Retained earnings $ Million | Total $ Million |
|---|---|---|---|---|---|---|---|
| **At 1 January 2021** | | **1,500** | **2,300** | **12,999** | **1,264** | **2,704** | **20,767** |
| Profit after taxation for the year | | | | | | 403 | 403 |
| Gross gains on remeasurement of defined benefit pension asset | **8** | — | — | — | — | 99 | 99 |
| Deferred tax loss associated with remeasurement of pension asset | | — | — | — | — | (27) | (27) |
| Deferred tax loss associated with rate change on remeasurement of pension asset | | — | — | — | — | (31) | (31) |
| Gain on debt valuation adjustment (DVA) | | — | — | — | — | 21 | 21 |
| Tax loss associated with gains on DVA | | — | — | — | — | (6) | (6) |
| Tax benefit associated with rate change on DVA | | — | — | — | — | 11 | 11 |
| **Total comprehensive expense** | | — | — | — | — | 67 | 67 |
| Share based payment transactions | **9** | — | — | — | (3) | — | (3) |
| Capital contribution | 28 | — | — | 5,500 | — | — | 5,500 |
| Conversion of Capital reserve into Share capital | **28** | 18,499 | — | (18,499) | — | — | — |
| Other equity instruments issued | **28** | — | 2,000 | — | — | — | 2,000 |
| Dividend on other equity instruments | | — | — | — | — | (195) | (195) |
| Loss on debt valuation adjustment (DVA) disposal | | — | — | — | — | (28) | (28) |
| Tax benefit associated with loss on DVA disposal | | — | — | — | — | 8 | 8 |
| **At 31 December 2021** | | **19,999** | **4,300** | **—** | **1,261** | **2,959** | **28,519** |
| Profit after taxation for the year | | — | — | — | — | 278 | 278 |
| Gross losses on remeasurement of defined benefit pension asset | **8** | — | — | — | — | (195) | (195) |
| Deferred tax benefit associated with remeasurement of pension asset | | — | — | — | — | 53 | 53 |
| Deferred tax loss associated with rate change on remeasurement of pension asset | | — | — | — | — | 29 | 29 |
| Gain on debt valuation adjustment (DVA) | | — | — | — | — | 342 | 342 |
| Tax loss associated with gains on DVA | | — | — | — | — | (92) | (92) |
| Tax loss associated with rate change on DVA | | — | — | — | — | (13) | (13) |
| **Total comprehensive income** | | — | — | — | — | 124 | 124 |
| Share based payment transactions | **9** | — | — | — | 85 | — | 85 |
| Deferred tax benefit/(loss) associated with share based payment transactions | | — | — | — | (23) | — | (23) |
| Dividend on other equity instruments | | — | — | — | — | (263) | (263) |
| Loss on debt valuation adjustment (DVA) disposal | | — | — | — | — | — | — |
| Tax benefit associated with loss on DVA disposal | | — | — | — | — | — | — |
| **At 31 December 2022** | | **19,999** | **4,300** | **—** | **1,323** | **3,098** | **28,720** |

The other equity instruments relate to Additional Tier 1 notes. Further information is included in Note 28 'Capital and reserves'. The capital reserve includes capital contributions from the parent company, which are distributable. The equity reserve includes the fair value movement of the share based incentives issued, and other fair value movements captured in equity.

The accompanying notes on pages 32 to 106 form an integral part of these financial statements.

## BALANCE SHEET
for the year ended 31 December 2022

| | Notes | 31 December 2022<br>$ Million | 31 December 2021<br>$ Million |
|---|---|---|---|
| **Assets** | | | |
| Financial assets at amortised cost | | | |
| – cash at bank | **12** | 7,076 | 8,463 |
| – collateralised financing transactions | **15** | 91,817 | 76,862 |
| Financial assets mandatorily at fair value through profit or loss | | | |
| – derivatives | **13** | 197,965 | 157,281 |
| – inventory | **14** | 57,500 | 64,751 |
| – equity securities held for investment | **16** | 122 | 106 |
| Financial assets designated at fair value through profit or loss | **13** | 80,372 | 81,701 |
| Investments in subsidiary and related undertakings | **20** | 4,330 | 3,830 |
| Pension asset | **8** | 305 | 547 |
| Other assets | **18** | 82,305 | 57,740 |
| **Total Assets** | | **521,792** | **451,281** |
| **Liabilities and Equity** | | | |
| Financial liabilities at amortised cost | | | |
| – bank loans and overdrafts | **15** | 10,644 | 7,201 |
| – collateralised financing transactions | **15** | 62,240 | 63,067 |
| Financial liabilities mandatorily at fair value through profit or loss | | | |
| – derivatives | **13** | 198,725 | 161,797 |
| – securities sold but not yet purchased | **15** | 52,347 | 65,997 |
| Financial liabilities designated at fair value through profit or loss | **15** | 78,434 | 69,388 |
| Other liabilities | **23** | 79,582 | 46,712 |
| Subordinated loans | **27** | 11,100 | 8,600 |
| **Total Liabilities** | | **493,072** | **422,762** |
| **Capital and reserves** | | | |
| Called up share capital | **28** | 19,999 | 19,999 |
| Other equity instruments | **28** | 4,300 | 4,300 |
| Capital reserve | **28** | — | — |
| Retained earnings and other reserves | | 4,421 | 4,220 |
| **Shareholders' funds** | | **28,720** | **28,519** |
| **Total Liabilities and Shareholders' Funds** | | **521,792** | **451,281** |

The accompanying notes on pages 32 to 106 form an integral part of these financial statements.

The financial statements on pages 27 to 106 were approved by the Directors on 25 April 2023 and were signed on their behalf by:

J D K Bardrick
Director and Chief Executive Officer
Registered Number: 01763297

# CITIGROUP GLOBAL MARKETS LIMITED

## STATEMENT OF CASH FLOWS
for the year ended 31 December 2022

| | Notes | 2022 $ Million | 2021 $ Million |
|---|---|---|---|
| **Cash flows from operating activities:** | | | |
| Profit before taxation | | 343 | 434 |
| *Adjustments for:* | | | |
| Depreciation and amortisation | **7** | 56 | 53 |
| Provision charged and other movements during the year | **24** | 47 | (5) |
| (Income)/expense related to Pension | **8** | 195 | (99) |
| Net impairment charge/(release) on investment securities | **20** | — | — |
| Net impairment loss on loans and advances | **7** | 13 | 6 |
| Net loss/(gain) on other fair value items | **16** | (16) | (7) |
| Other non-cash movements including exchange rate movements | | (6) | 11 |
| Net interest income | **5** | 523 | 807 |
| | | 1,155 | 1,200 |
| *Changes in:* | | | |
| Financial assets at amortised cost | | (14,968) | (4) |
| Financial assets mandatorily at fair value through profit or loss | | (33,432) | 65,639 |
| Financial assets designated at fair value through profit or loss | | 1,329 | (4,397) |
| Other assets | | (24,013) | (5,809) |
| Financial liabilities at amortised cost | | 2,964 | (14,416) |
| Financial liabilities mandatorily at fair value through profit or loss | | 23,277 | (58,293) |
| Financial liabilities designated at fair value through profit or loss | | 9,046 | 5,524 |
| Other liabilities | | 32,409 | 5,700 |
| | | (2,233) | (4,856) |
| Interest received | | 423 | 4,443 |
| Interest paid | | (814) | (1,444) |
| Income taxes paid | | (65) | (125) |
| **Net cash used in operating activities** | | **(2,689)** | **(1,982)** |
| **Cash flows from investing activities** | | | |
| Dividends received from investments | | 13 | 8 |
| Acquisition of investment securities | **20** | (500) | (1,705) |
| Acquisition of intangible assets | **19** | (99) | (83) |
| **Net cash used in investing activities** | | **(586)** | **(1,780)** |
| **Cash flows from financing activities** | | | |
| Issue of Additional Tier 1 capital | **28** | — | 2,000 |
| Capital contribution received from parent | **28** | — | 5,500 |
| Proceeds from issue of subordinated liabilities | **27** | 2,500 | (2,000) |
| Dividends paid on other equity instruments | | (263) | (195) |
| **Net cash from financing activities** | | **2,237** | **5,305** |
| **Net increase in cash and cash equivalents** | | (1,038) | 1,543 |
| Cash at bank including bank overdrafts at 1 January | | 6,970 | 5,427 |
| **Cash at bank including bank overdrafts at 31 December** | | **5,932** | **6,970** |

Under IAS 7, Bank overdrafts which are repayable on demand and which form an integral part of an entity's cash management are also included as a component of cash and cash equivalents in the Statement of Cash Flows.

### 1. Principal accounting policies

*(a) Basis of presentation*

The financial statements of the Company have been prepared in accordance with UK-adopted international accounting standards, and International Financial Reporting Standards adopted pursuant to Regulation (EC) No 1606/2002 as it applies in the European Union ("EU-adopted IFRS"). The financial statements have been prepared on a going concern basis and, in accordance with the Companies Act 2006 as applicable to CGML.

The financial statements have been prepared in US Dollars, which is the functional and presentational currency of the Company, and any reference to $ in these financial statements refers to US Dollars. The Company has rounded figures to the nearest million $, unless otherwise stated.

As permitted under section 401 of the Companies Act 2006, consolidated financial statements have not been prepared because the Company is a wholly owned subsidiary of the ultimate parent, Citigroup Inc., which prepares consolidated financial statements under United States Generally Accepted Accounting Principles (US GAAP). The Company meets the criteria for exemption from the obligation to prepare and deliver group accounts that is available to a company included in non-European Economic Area (EEA) group accounts of a larger group. These financial statements therefore present information about the Company as an individual undertaking and not about its group. Citigroup Inc. makes its financial statements available to the public on a quarterly basis.

As was reported in the ultimate parent company's (Citigroup's) Annual Report on SEC Form 10-K for the year ended 31 December 2022, various geopolitical and macroeconomic challenges and uncertainties continue to adversely impact economic conditions in the U.S. and globally. The U.S. and other countries have continued to experience significantly elevated levels of inflation, resulting in central banks implementing a series of interest rates increases, with additional increases expected in the near term. In addition to causing a humanitarian crisis, the war in Ukraine continues to disrupt energy and food markets. An economic rebound in China remains uncertain, due to the ongoing impacts from COVID-19, the amount of leverage in its economy and stress in the property sector. These and other factors have adversely affected financial markets, negatively impacted global economic growth rates, contributed to lower consumer confidence and increased the risk of recession in Europe, the U.S. and other countries. These and other factors could adversely affect Citi's customers, clients, businesses, funding costs, expenses and results during 2023.

To assess any potential impact on the Company, the Directors reassessed the components of capital, liquidity and the financial position of the Company and have concluded that the going concern basis is still appropriate. The reassessment was completed with reference to the stress testing processes within the ICAAP and ILAAP which demonstrated that CGML has sufficient capital and liquidity buffers to withstand the current market conditions. In this reassessment, the Directors considered severe but plausible downside scenarios, including stress tests aligned to the ICAAP for which the Company uses an internal model. The stress scenarios are considered to be at least as severe as the Bank of England's Scenario for banks and building societies not part of concurrent stress testing scenario. This analysis indicated that the Company would maintain capital and liquidity headroom throughout the period covered by the forecasts, even in plausible downside scenarios.

The Directors are confident that the Company will have sufficient funds to continue to meet its liabilities as they fall due for at least 12 months from the date of approval of the financial statements and therefore, have prepared the financial statements on a going concern basis. In addition, Citigroup Inc. continues to provide confirmation that it will provide sufficient funding to the Company to ensure that it maintains a sound financial situation and is in a position to meet its debt obligations for the foreseeable future.

**1. Principal accounting policies** (continued)

*(b) Changes in accounting policy and disclosures*

The accounting policies adopted are consistent within the accounts and with those of the previous financial year, except for certain amendments and improvements to the IFRS standards implemented as at 1 January 2022, which did not have a material impact on the Company unless otherwise noted below. There were no other material or amended standards or interpretations that resulted in a change in accounting policy for the year ended 31 December 2022.

***Standards and amendments issued and effective from 1 January 2022***

There are a number of accounting standards that have been amended by the International Accounting Standards Board ("IASB"), which became effective from 1 January 2022. They include:

- Onerous Contracts – Cost of Fulfilling a Contract (Amendments to IAS 37)
- Annual Improvements to IFRS Standards 2018-2020;
- Property, Plant and Equipment: Proceeds before Intended Use (Amendments to IAS 16);
- Reference to the Conceptual Framework (Amendments to IFRS 3).

The above amendments did not have material impact on the Company's financial statements..

***Standards and amendments issued but not yet effective as at 31 December 2022***

The accounting standards and amendments set out below have been issued by the IASB, but are not yet effective for the Company. The Company does not plan on early adoption of these standards. These standards either have no impact or not expected to have material impact to the Company upon adoption.

- IFRS 17 Insurance Contracts;
- Initial Application of IFRS 17 and IFRS 9 – Comparative Information (Amendments to IFRS 17) ;
- Classification of Liabilities as Current or Non-current (Amendments to IAS 1) (not yet endorsed by the EU);
- Sale or Contribution of Assets between an Investor and its Associate or Joint Venture (Amendments to IFRS 10 and IAS 28) (not yet endorsed);
- Disclosure of Accounting Policies (Amendments to IAS 1 and IFRS Practice Statement 2);
- Definition of Accounting Estimates (Amendments to IAS 8);
- Deferred Tax related to Assets and Liabilities arising from a Single Transaction (Amendments to IAS 12).

**(c) Financial instruments**

*Classification and measurement*

From a classification and measurement perspective, IFRS 9 requires all financial assets, except equity instruments and derivatives, to be assessed based on a combination of the entity's business model for managing the assets and the instruments' contractual cash flow characteristics (whether the contractual cash flows are solely payments of principal and interest (SPPI)). For SPPI, 'principal' is defined as the fair value of the financial asset on initial recognition and 'interest' is defined as consideration for the time value of money and the credit risk associated with the principal amount outstanding during a period of time. Interest can also include consideration for other basic lending risks (for example, liquidity risk) and costs (for example, administrative costs) associated with holding the financial asset for a particular period of time and a profit margin that is consistent with a basic lending arrangement.

**1. Principal accounting policies** (continued)

**(c) Financial instruments** (continued)

Categories under IFRS 9: fair value through profit or loss (FVTPL), fair value through other comprehensive income (FVOCI), and amortised cost. IFRS 9 also allows entities to irrevocably designate financial assets that qualify for amortised cost or FVOCI instruments as FVTPL, if doing so eliminates or significantly reduces a measurement or recognition inconsistency (an accounting mismatch). This election is referred to as the Fair Value Option (FVO). The majority of the financial instruments of the Company are measured at fair value through profit or loss. The Company has no financial instruments categorized as FVOCI.

Financial liabilities which do not meet the definition of trading liabilities can be designated at FVTPL using the FVO, if one of the following criteria are met: (1) the designation eliminates or significantly reduces a measurement or recognition inconsistency (accounting mismatch); (2) a group of financial liabilities is managed and its performance is evaluated on a fair value basis in accordance with a documented risk management or investment strategy; or (3) the instrument contains one or more embedded derivatives which are not bifurcated. Financial liabilities which are designated at FVTPL, under the FVO, include collateralised financing transactions and hybrid financial liabilities.

Further, movements on gains or losses arising from an entity's own credit risk relating to liabilities designated at FVTPL are presented in other comprehensive income (OCI) with no subsequent reclassification to the income statement.

The financial assets held at amortised cost meet the SPPI test and are held to collect contractual cash flows.

*FVTPL*

Where the asset is not held within a business model whose objective is to hold to collect the contractual cash flows or within a business model whose objective is to both collect the cash flows and to sell the assets, then the asset will be classified as FVTPL. Moreover, any instrument for which the contractual cash flow characteristics do not comprise solely payments of principal and interest (that is, they fail the SPPI test) must be classified in the FVTPL category.

*Financial assets and liabilities held for trading*

Financial instruments that have been acquired principally for the purpose of selling or repurchasing in the near term, or form part of a portfolio of financial instruments that are managed at fair value together and for which there is evidence of short term profit taking are classified as "held for trading". Financial assets classified as "held for trading" include collateralised financing transactions, government bonds, non-government bonds, equities and derivatives. Financial liabilities classified as "held for trading" include derivatives, hybrid financial liabilities and short sales (securities sold but not yet purchased). A short sale is a sale of securities that the seller does not own at the time of sale. A short sale must be covered through the delivery of the securities sold short or a due bill, which is a promise to deliver specific securities to a customer later.

Trading assets and liabilities are initially recognised at fair value on settlement date and subsequently re-measured at fair value. Any changes in fair value between trade date and settlement date are reported in the income statement. Gains and losses realised on disposal or redemption and unrealised gains and losses from changes in fair value (including any foreign currency retranslation gains and losses) are reported in the income statement. Any initial gain or loss on financial instruments where valuation is dependent on valuation techniques using unobservable parameters are deferred over the life of the contract or until the instrument is redeemed, transferred or sold or the fair value becomes observable.

*Derivatives and Hybrid financial instruments*

Derivative contracts used in trading activities are recognised at fair value on the date the derivative is entered into and are subsequently re-measured at fair value. All derivatives are carried as assets when fair value is positive and as liabilities when fair value is negative. Gains and losses realised on disposal or redemption and unrealised gains and losses from changes in fair value are reported in the income statement.

**1. Principal accounting policies** (continued)

**(c) Financial instruments** (continued)

Where an embedded derivative exists within a financial liability host contract, the host contract and embedded derivative are measured as a package under the fair value option.

*Equity securities held for investment*

Strategic investments including investments in exchanges, clearing houses and settlement houses are required to be held at fair value through the profit or loss account.

*Other financial liabilities and subordinated loans*

Financial liabilities and subordinated loans are measured at amortised cost using the effective interest rate, except those which are "held for trading", which are held at fair value through the profit or loss account.

*Amortised Cost*

A financial asset debt instrument shall be classified and subsequently measured at amortised cost (unless designated under FVO) only if both of the following conditions are met:

a) Business Model test: the financial asset debt instrument is held under a business model whose objective is to hold assets in order to collect contractual cash flows; and
b) SPPI test.

*Loans and receivables*

Loans and receivables incorporate trade debtors, including settlement receivables, and are initially recognised at fair value including direct and incremental transaction costs and subsequently measured at amortised cost using the effective interest rate method, and subject to expected credit loss impairment under IFRS 9.

*Repurchase and resale agreements and securities lending/borrowing*

Repurchase and resale agreements are treated as collateralised financing transactions and measured at amortised cost. Securities which have been sold with an agreement to repurchase continue to be shown on the balance sheet and the sale proceeds are recorded as a collateralised financing transaction within other liabilities. Securities acquired in purchase and resale transactions are not recognised on the balance sheet and the purchase is recorded as a collateralised financing transaction within other assets. The difference between the sale price and the repurchase price is recognised over the life of the transaction and is charged or credited to the income statement as interest payable or receivable.

Similarly, when securities are lent or borrowed in exchange for cash, this is also treated as collateralised financing. Securities lent are not derecognised from the balance sheet and the cash inflow is recognised as a collateralised borrowing. Securities borrowed are not recognised on the balance sheet and the cash inflow is recognised as a collateralised lending. The securities lending fees payable and receivable are charged or credited to the income statement as interest payable or receivable. However, the Company measures a portion of its repurchase and resale agreements at fair value. Financial instruments are measured at fair value through profit or loss when they meet one or more of the criteria set out below:

- the assets or liabilities are managed, evaluated and reported internally on a fair value basis.
- the designation eliminates or significantly reduces an accounting mismatch that would otherwise arise.

That portion of the Company's repurchase and resale agreements which are hedged with instruments measured at fair value and managed as a combined business strategy have been designated as fair value through profit or loss.

**1. Principal accounting policies** (continued)

**(c) Financial instruments** (continued)

*Determination of fair value*

Where the classification of a financial instrument requires it to be stated at fair value, this is determined by reference to the quoted market value in an active market wherever possible. Where no such active market exists for the particular instrument, the Company uses a valuation technique to arrive at the fair value, including the use of prices obtained in recent arms' length transactions, discounted cash flow analysis, option pricing models and other valuation techniques commonly used by market participants. In case the transaction price in the market in which these transactions are undertaken is different from the fair value in the Company's principal market for those instruments, the fair value of these transactions are also estimated by using valuation techniques. See Note 15 'Financial assets and liabilities accounting classifications and fair values' for further details.

*Collateral*

The Company receives collateral from customers as part of its business activities. Collateral can take the form of cash, securities or other assets. Where cash collateral is received this is recorded on the balance sheet and, where required by collateral agreements, is reported as restricted cash. The Company does not recognise non-cash collateral received on its balance sheet.

Where cash collateral is posted to a third party, the Company derecognises cash from its balance sheet. Non-cash collateral posted to a third party remains on the Company's balance sheet.

*Offsetting financial instruments*

Financial assets and liabilities are offset and the net amount reported in the balance sheet only when there is currently a legally enforceable right to offset the recognised amounts and there is an intention to settle on a net basis or realise the asset and settle the liability simultaneously. The legal right to set off the recognised amounts must be enforceable in both the normal course of business, in the event of default, insolvency or bankruptcy of both the Company and its counterparty. In all other situations they are presented gross.

All offsetting applied by the Company relates to derivatives and repurchase and reverse repurchase agreements. A significant portion of offsetting is applied to interest rate derivatives and related cash margin balances, which are cleared through central clearing parties such as the London Clearing House. The Company also offsets repurchase and reverse repurchase agreements for which the Company has the right to set off and has the intent to settle on a net basis or to realise an asset and settle a liability simultaneously.

*Derecognition of financial assets and financial liabilities*

Financial assets are derecognised when the right to receive cash flows from the assets has expired or when the Company has transferred its contractual right to receive the cash flows of the financial assets and either substantially all the risks and rewards of ownership have been transferred or substantially all the risks and rewards have neither been retained nor transferred but control is not retained.

If the Company enters into a transaction that results in it retaining significantly all of the risks and rewards of a financial asset it will continue to recognise that financial asset and will recognise a financial liability equal to the consideration received under the transaction. Financial liabilities are derecognised when they are extinguished, that is when the obligation is substantially modified, exchanged, discharged, cancelled or expired.

*Impairment*

The IFRS 9 impairment standard applies to any debt instruments measured at amortised cost or at fair value through other comprehensive income and also to off balance sheet loan commitments and financial guarantees. The standard requires an estimation of an expected credit loss (ECL) that is unbiased and probability weighted, including information about past events, current conditions and reasonable and supportable forecasts of future events and economic conditions at the reporting date. The estimate will also consider the time value of money.

**1. Principal accounting policies** (continued)

**(c) Financial instruments** (continued)

ECL will be measured on each reporting date according to a three-Stage expected credit loss impairment model under which each financial asset is classified in one of the stages below:

- Stage 1 – From initial recognition of a financial asset to the date on which the asset has experienced a significant increase in credit risk relative to its initial recognition, a loss allowance is recognized equal to the credit losses expected to result from defaults expected over the next 12 months. Interest is calculated based on the gross carrying amount of the asset.
- Stage 2 – Following a significant increase in credit risk relative to the risk at initial recognition of the financial asset, a loss allowance is recognized equal to the full credit losses expected over the remaining life of the asset. Interest is calculated based on the gross carrying amount of the asset.

  The credit losses for financial assets in Stage 1 and Stage 2 are measured as the present value of all cash shortfalls (i.e. the difference between the cash flows due to the entity in accordance with the contract and the cash flows that the Company expects to receive).
- Stage 3 – When a financial asset is considered to be credit-impaired, a loss allowance equal to the full lifetime expected credit losses will be recognized. Credit losses are measured as the difference between the gross carrying amount and the present value of estimated future cash flows. Interest revenue is calculated based on the carrying amount of the asset, net of the loss allowance, rather than on its gross carrying amount.

Evidence that a financial asset is impaired includes observable data that comes to the attention of the Company such as:

- Significant financial difficulty of the issuer or obligor;
- A breach of contract, such as a default or delinquency in interest or principal payments;
- It becomes probable that the borrower will enter bankruptcy or other financial reorganisation;
- The disappearance of an active market for that financial asset because of financial difficulties; or
- Observable data indicating that there is a measurable decrease in the estimated future cash flows from a portfolio of financial assets since the initial recognition of those assets, although the decrease cannot yet be identified with the individual financial assets in the portfolio, including:
  - adverse changes in the payment status of borrowers in the portfolio; and
  - national or local economic conditions that correlate with defaults on the assets in the portfolio.

*Staging*

Financial assets can move in both directions through the stages of the IFRS 9 impairment model depending on the assessment of whether there is a significant increase of credit risk since initial recognition or whether the asset is credit impaired subsequently changes.

In order to determine the ECL reporting stage for an obligation, the Company determines whether the asset is already impaired (Stage 3) or not (Stage 1 and 2). Stage 2 is determined by the existence of a significant credit deterioration (or credit improvement) compared with the credit rating at initial recognition. Stage 1 assets do not have significant credit deterioration compared with that at initial recognition. All newly acquired or originated financial assets that are not purchased or originated credit impaired (POCI) are recognised in Stage 1 initially.

Additional qualitative reviews are also performed to assess the staging results and make adjustments, as necessary, to better reflect the positions which have significantly increased in risk.

Changes in the required credit loss allowance, including the impact of movements between Stage 1 and Stage 2, are recorded in the income statement as an adjustment to the allowance for credit losses.

**1. Principal accounting policies** (continued)

**(c) Financial instruments** (continued)

Because of the nature of business activities and the financial assets on the Company's balance sheet (high credit quality reverse repo asset loans and short term trade receivables), the recognition of expected credit losses has a minimal impact. For the vast majority of its exposures, the Company has taken advantage of practical expedients allowed by IFRS 9 in which either: (a) lifetime expected credit losses are recognised irrespective of changes in credit risk (applicable to receivables such as trade date or brokerage receivables), or (b) twelve-month expected credit losses are recognised where credit risk is low at the reporting date (applicable to reverse repos and securities borrowed).

**(d) Commodities**

Commodities are initially recognised under inventory at fair value on settlement date and subsequently re-measured at fair value less costs to sell. Realised gains and losses on sales of commodities inventory are included in net dealing income.

**(e) Fee and commission income**

The primary components of fee and commission income are investment banking fees and brokerage commissions.

Fee and commission income is recognised when the right to consideration has been obtained in exchange for performance.

Investment banking fees are substantially composed of underwriting and advisory revenues. Such fees are recognised at the point in time when Company's performance under the terms of a contractual arrangement is completed, which is typically at the closing of a transaction. Reimbursed expenses related to these transactions are recorded as revenue and are included within investment banking fees.

Brokerage commissions primarily include commissions and fees from the following: executing transactions for clients on exchanges and over-the-counter markets; sales of mutual funds and other annuity products; and assisting clients in clearing transactions, providing brokerage services and other such activities. Brokerage commissions are recognised at the point in time the associated service is fulfilled, generally on trade-execution date.

The services described above are generally provided by the Company in a principal capacity, whereby it has primary responsibility for fulfilling the contract with the customer.

**(f) Interest receivable and payable and the effective interest method**

Interest income and expense is recognised in the income statement for all financial assets classified as loans and receivables and non-trading financial liabilities, using the effective interest rate method. The Effective Interest Rate (EIR) is the rate that exactly discounts the estimated future cash payments and receipts through the expected life of the financial asset or financial liability to the carrying amount of the financial asset or financial liability. The calculation of the effective interest rate includes incremental and directly attributable transaction costs and fees paid or received that are an integral part of the effective interest rate. When calculating the EIR, the Company estimates future cash flows considering all contracted terms of the financial instrument, but no future credit losses. For assets which are initially recognized as purchased or credit impaired, interest revenue is calculated through the use of a credit-adjusted effective interest rate which takes into consideration expected credit losses. A credit-adjusted EIR is the interest rate that exactly discounts estimated future cash payments or receipts through the expected life of the financial asset to the amortised cost of a financial asset that is a purchased or originated credit-impaired financial asset.

Interest arising on financial assets or financial liabilities that are "held for trading" or "designated at fair value" is reported within net dealing income.

**1. Principal accounting policies** (continued)

**(g) Net dealing income**

Net dealing income comprises gains and losses related to trading assets, trading liabilities and financial assets and liabilities designated at fair value and commodities, and includes all realised and unrealised fair value changes, dividends and foreign exchange differences. For derivatives that are not part of hedging programmes, both the interest element and the fair value movements are recognised as part of net dealing income.

**(h) Tangible and Intangible assets**

Tangible fixed assets are measured at cost, less accumulated depreciation. The cost of developed software includes directly attributable internal costs and the cost of external consultants. Depreciation is provided at rates calculated to write-off the cost, less the estimated residual value of each asset, on a straight line basis over its expected economic useful life, as follows:

| | | |
|---|---|---|
| Premises improvements | – | lesser of the life of the lease or 10 years |
| Equipment | – | lesser of the life of the equipment or 10 years |
| Capitalised software | – | 2 to 10 years |

At each reporting date the Company assesses whether there is any indication that tangible or intangible fixed assets are impaired.

**(i) Investments in subsidiaries**

Investments in subsidiary undertakings are stated at cost less impairment. The Company determines whether it is necessary to recognise an impairment loss on its investment in shares in subsidiary undertakings by comparing the carrying value of the investment with the value in use, determined by the net asset value of the subsidiary undertaking at the reporting date.

**(j) Taxation**

Income tax payable on profits is recognised as an expense based on the applicable tax laws in each jurisdiction in the period in which profits arise.

Deferred tax assets and liabilities are recognised for taxable and deductible temporary differences between the tax bases of assets and liabilities and their carrying amounts in the financial statements. Deferred tax assets are recognised to the extent that it is probable that there will be sufficient profits available against which these differences can be utilised.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply in the period in which the asset will be realised or the liability will be settled based on tax rates that are enacted or substantively enacted at the balance sheet date. Deferred tax balances are not discounted.

**1. Principal accounting policies** (continued)

**(k) Pension and other post retirement benefit costs**

CGML operates both a defined benefit and a defined contribution pension scheme.

The cost of CGML's defined contribution pension scheme is expensed as the related service is provided and recognised within operating expenses in the income statement. The defined benefit obligation is calculated annually by independent actuaries using the projected unit credit method. The present value of the defined benefit obligation is determined by discounting the estimated future cash outflows using interest rates of high quality corporate bonds that are denominated in the currency in which the benefits will be paid and that have terms to maturity approximating to the term of the related pension liability. Remeasurement gains and losses are recognised immediately in the Statement of Other Comprehensive Income (OCI). The current service cost and any past service costs are included in the income statement within operating expenses. The interest income on pension scheme assets, net of the impact of the interest cost on the pension scheme liabilities, is included within Net finance income on pension.

A surplus is recognised on the balance sheet where an economic benefit is available as a reduction in future contributions or as a refund of monies to Citi.

**(l) Foreign currencies**

Transactions in foreign currencies are recorded using the rate of exchange at the date of transaction. Monetary assets and liabilities denominated in currencies other than US Dollars are translated into US Dollars using the year end spot exchange rates. Non-monetary assets and liabilities denominated in currencies other than US Dollar that are classified as "held for trading" or "designated at fair value" are translated into US Dollars using the year end spot rate. Non-monetary assets and liabilities denominated in currencies other than US Dollars that are not measured at fair value have been translated at the relevant historical exchange rates. Any gains or losses on exchange are taken to the income statement as incurred.

**(m) Share-based incentive plans**

The Company participates in a number of Citi equity settled share-based incentive plans under which Citigroup grants shares to its employees in exchange for services from employees. Pursuant to a separate Stock Plans Affiliate Participation Agreement (SPAPA), the Company makes a cash settlement to Citigroup for the fair value of the share-based incentive awards delivered to the employees under these plans.

The Company applies equity-settled accounting for its share based incentive plans, with separate accounting for its associated obligations to make payments to Citigroup Inc as part of a recharge arrangement. The Company recognises the fair value of the awards at grant date with a credit to the intercompany payable (recharge liability) to Citigroup Inc. All amounts paid to Citigroup Inc. and the associated obligations are recognised over the vesting period as compensation expense. Subsequent changes in the fair value of the recharge liability in respect of all unexercised awards are reviewed annually and any changes in value are recognised in the equity reserve, again over the vesting period. The SPAPA is also updated annually. The total expense is recognised over the vesting period, which is the period over which all of the specified vesting conditions are to be satisfied.

**1. Principal accounting policies** (continued)

**(m) Share-based incentive plans** (continued)

For Citi's share based incentive plans that have a graded vested period each "tranche" of the award is treated as a separate award. Where a plan has a cliff vest, the award only has a single "tranche". The expense is recognised as follows:

| Vesting Period of Award | % of expense recognised in Income Statement | | | | | | |
|---|---|---|---|---|---|---|---|
| | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 | Year 7 |
| 2 Years (vesting in 2 Tranches) | 75% | 25% | | | | | |
| 3 Years (vesting in 3 Tranches) | 61% | 28% | 11% | | | | |
| 4 Years (vesting in 4 Tranches) | 52% | 27% | 15% | 6% | | | |
| 5 Years (vesting in 5 Tranches) | 46% | 26% | 16% | 9% | 4% | | |
| 7 Years (vesting in 4 Tranches) | 19% | 19% | 19% | 19% | 13% | 8% | 4% |

However, employees who meet certain age plus years of service requirements (retirement eligible employees) may terminate active employment and continue vesting in their awards provided they comply with specified non-compete provisions. The cost of share based incentive plans are recognised over the requisite service period. For awards granted to retiree eligible employees, the services are provided prior to grant date, and subsequently the costs are accrued in the year prior to the grant date.

EU Short Term awards are a form of Capital Accumulation Programme (CAP) awarded to qualifying staff. The award is accounted for similarly to CAP awards but is delivered in the form of immediately vested restricted shares subject to a six month sale restriction.

**(n) Cash at bank**

Cash and balances at central banks or other financial institutions comprise balances with original maturity of less than three months and are carried at amortised cost on the Company's balance sheet.

**(o) Provisions**

Provisions are recognised for present obligations arising as consequences of past events where it is more likely than not that a transfer of economic benefit will be necessary to settle the obligation, which can be reliably estimated. Provisions are measured at the best estimate of the outflow of resources that will be required to settle the obligation.

**(p) Modification of financial liabilities**

When a financial liability is modified, or there is an exchange of debt instruments between the same lender and borrower, the original financial liability is derecognised—and a new liability recognised—if the two debt instruments have 'substantially different' terms. This determination considers both a quantitative comparison of the debt's cash flows before and after the modification, as well as consideration of qualitative factors such as risk profile, maturity, or existence of embedded derivatives.

Where terms are substantially different, the existing liability is derecognised, and any difference between the carrying value and the value of the replacement debt is recognized in profit or loss at the date of modification.

When the contractual cash flows of a financial liability are renegotiated or otherwise modified and the renegotiation or modification does not result in the derecognition of that financial liability in accordance with IFRS 9, the Company shall recalculate the gross carrying amount of the financial liability, and any difference is also recognized in profit or loss at the date of modification.

### 2. Use of assumptions, estimates and judgements

The results of the Company are sensitive to the accounting policies, assumptions and estimates that underlie the preparation of its financial statements. The accounting policies used in the preparation of the financial statements are described in detail above.

The preparation of financial statements requires management to make judgements, estimates and assumptions that affect the application of accounting policies and the reported amounts of assets, liabilities, income and expenses. Actual results may differ from these estimates.

Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised in the period in which the estimate is revised and in any future periods affected.

Valuation of financial instruments and credit valuation adjustments are sources of estimation uncertainties that require management to make highly complex or subjective judgements, which have (or may have) the most significant effect on the amounts recognized in the financial statements. The Company's accounting policy for valuation of financial instruments is described in Note 1(c) with further information disclosed in Note 15.

During 2022, the Company recorded net CVA gain of $111 million (2021: $52 million gain). There were additionally net FVA gain of $3 million (2021: $32 million losses). The total adjustment recorded in the balance sheet at the year-end was $(97) million (2021: $(57) million).

The valuation of the defined benefit obligation in respect of the CGML PLAS Pension Plan is dependent on key actuarial assumptions, including discount rates, inflation rate - retail price index ('RPI'), pay increase and mortality assumptions. Any change to these assumptions can significantly impact the measurement of the defined benefit pension obligation. Thus, measurement of the defined benefit obligation inherently includes a high degree of estimation uncertainty.

Below is a summary of the main financial and demographic assumptions adopted for the PLAS Pension Plan.

| % per annum | 2022 | 2021 |
|---|---|---|
| Discount rate | 5 | 2 |
| Inflation rate (RPI) | 3 | 4 |
| Inflation rate (CPI) | 3 | 3 |

The discount rate assumption for 2022 was based on a standard AON GBP Single Agency AA curve. The RPI inflation assumption for 2022 was set by reference to the Bank of England's implied inflation curve. No allowance is made for inflation risk premium. The methodology used to derive the discount rate and inflation assumptions is consistent with that used in the previous year.

The post-retirement mortality or demographic assumptions take into consideration the PLAS Pension Plan post-retirement mortality experience and recent evidence from published mortality surveys. An allowance has been made for future mortality improvements based on the 2021 core projection model published by the Continuous Mortality Investigation Bureau subject to a long-term trend of 1.25% per annum in future improvements (2021: 1.5% per annum). There are no considerations for the long-term impact of COVID-19 on the mortality assumptions as COVID-19 is deemed to have a knock-on effect. The table below shows the assumed life expectancy at 65 for members of the PLAS Pension Plan:

| Life expectancy: | 2022 | 2021 |
|---|---|---|
| Male currently aged 65 | 24 | 24 |
| Female currently aged 65 | 25 | 25 |

## 3. Turnover and results

As permitted by paragraph 4 of Schedule 1 to the Companies Act 2006 The Large and Medium-sized Companies and Groups (Accounts and Reports) Regulations 2008 (SI 2008 No 410), the format of the income statement and the Balance sheet have been adapted to the circumstances of the Company. Instead of turnover, the Directors have reported fee and commission income, net dealing income and interest receivable less interest payable in determining the gross profit of the Company.

## 4. Fee and commission income

| | 2022<br>$ Million | 2021<br>$ Million |
|---|---|---|
| Investment Banking | | |
| Advisory Fees | 235 | 357 |
| Underwriting Fees | 349 | 630 |
| Other Investment Banking Fee | (44) | 69 |
| | 540 | 1,056 |
| Brokerage commissions and fees | 230 | 294 |
| Other revenue | 124 | 120 |
| **Total fee and commission income** | 894 | 1,470 |
| *Of which, revenue from contracts with customers* | *747* | *1,179* |

**Revenue from contracts with customers**

| | 2022<br>$ Million | 2021<br>$ Million |
|---|---|---|
| Investment Banking | | |
| Advisory Fees | 163 | 238 |
| Underwriting Fees | 349 | 630 |
| Other Investment Banking Fee | (5) | 9 |
| | 507 | 877 |
| Brokerage commissions and fees | 237 | 299 |
| Other revenue | 3 | 3 |
| **Total revenue from contracts with customers** | 747 | 1,179 |

Included within Other assets are contract assets amounted to $91 million (2021: $47 million) and included within Other liabilities are contract liabilities amounted to $85 million (2021: $109 million).

### 5. Interest income and interest expense

| | 2022 $ Million | 2021 $ Million |
|---|---|---|
| **Interest income comprises:** | | |
| Interest on collateralised financing transactions, debtors and cash assets measured at amortised cost | 949 | 280 |
| | 949 | 280 |
| **Interest expense comprises:** | | |
| Interest on collateralised financing transactions and borrowings measured at amortised cost | 904 | 866 |
| Interest on subordinated debt | 568 | 221 |
| | 1,472 | 1,087 |

Interest income and expense is recognised in the income statement for all financial assets classified as loans and receivables and non-trading financial liabilities, using the effective interest rate method.

Included within interest receivable is interest received on client money. Interest receivable and payable increased significantly in 2022, in line with the market in which the Company operates, thus effecting Citi's cost of funding as well.

### 6. Net dealing income

| | 2022 $ Million | 2021 $ Million |
|---|---|---|
| Net dealing income mandatorily at fair value through profit and loss | 3,018 | 2,742 |
| Net dealing income designated at fair value through profit or loss | 235 | 92 |
| | 3,253 | 2,834 |

The financial liabilities designated at fair value through profit or loss are fully collateralised (see Note 29 'Financial instruments and risk management') such that there are no changes in the fair value of these liabilities attributable to changes in their credit risk.

## 7. Operating expenses

| | 2022 $ Million | 2021 $ Million |
|---|---|---|
| Compensation and benefits expenses: | | |
| Fixed | | |
| Salaries | 756 | 724 |
| Payroll taxes | 195 | 198 |
| Benefits | 32 | (8) |
| Deferred cash | 101 | 117 |
| Share-based incentive expense (Note 9) | 152 | 159 |
| Pension costs | | |
| – defined benefit scheme (Note 8) | 7 | 12 |
| – defined contribution scheme | 64 | 57 |
| Medical expenses | 38 | 36 |
| Severance | 22 | 16 |
| Variable | | |
| Discretionary incentive compensation | 234 | 242 |
| Share-based incentive expense (Note 9) | 60 | 66 |
| Agency & temporary staffing | 30 | 24 |
| Other business specific variable compensation | 1 | 1 |
| Total compensation and benefits expenses | 1,692 | 1,644 |
| Transactional expenses | 394 | 366 |
| Technology/Communications | 188 | 170 |
| Consumption charges | 242 | 253 |
| Tax charges | 95 | 174 |
| Other operating expenses | 687 | 475 |
| **Total operating expenses** | **3,298** | **3,082** |
| Other operating expenses include: | | |
| Depreciation (Note 19) | 56 | 53 |
| IFRS 9 reserve | 13 | 6 |
| Fees payable to the company's auditor for the audit of the company's annual accounts: | | |
| In support of the Citigroup Inc global audit | 3.31 | 3.08 |
| Audit of these financial statements | 1.66 | 1.54 |
| Fees payable to the company's auditor and its associates for other services: | | |
| Audit related assurance services | 1.80 | 1.82 |
| Other assurance services | 0.05 | 0.20 |

Consumption charges include service fees for the provision of realty services, software and technology costs mainly from other Citi affiliates.

The Company employed an average of 4,226 (2021: 3,604) employees during the year.

The following table shows an analysis of the monthly average number of direct employees of the Company:

| | 2022 | 2021 |
|---|---|---|
| **Institutional Clients Group** | **3,736** | **3,163** |
| Global Rates | 957 | 127 |
| Global Spread Products | 114 | 123 |
| Equity Markets & Securities Services | 471 | 1,125 |
| Commodities | 68 | 71 |
| Banking, Capital Markets and Advisory | 747 | 641 |
| Business Support | 1,379 | 1,076 |
| **Infrastructure Operations and Global Functions** | **490** | **441** |

### 8. Pension

**Defined benefit and contribution schemes**

The Citigroup (UK) Pension Plan was established in September 2000 and provides defined contribution benefits to all new hires. The contributions that Citi is required to make are known, although the pension benefit will vary depending upon the investment returns achieved by investment choices made by the employee.

The Citigroup Global Markets Limited Pension and Life Assurance Scheme ("the Scheme") is a funded pension scheme providing benefits on both a defined benefit and defined contribution basis. The defined benefit arrangements are generally non-contributory and based on accrual of 1/60th of final pensionable salary for each year of pensionable service in the Scheme. The defined contribution arrangement provides age-related employer contributions ranging from 6% to 13% of pensionable salary for those aged 20 and 55 respectively, increasing by 1% for each 5 year age band. Additionally, employee contributions are matched up to a maximum of 3% at a rate of £1:£1 for those over age 45 and 50p:£1 for those under age 45. The Scheme also provides lump sum death benefits to active members, based on a multiple of salary, which the members can select. The Scheme is now closed to new entrants. The Scheme operates under trust law and is managed and administered by CG Pension Trustees Limited (the Trustee) on behalf of the members in accordance with the terms of the Trust Deed and Rules and relevant legislation. The Plan's assets are held by the trust. Employees are not required to contribute to the Scheme, which is contracted out of the State Earnings Related Pension Scheme.

Cash contributions to the Scheme are reviewed every three years as part of an actuarial valuation. Following each actuarial valuation, the Company agrees what contributions are required to fund ongoing benefit accrual and agrees a deficit recovery plan with the Trustee Board if necessary. The most recent actuarial funding valuation of the Scheme at 5 April 2020 revealed a surplus of £47.9 million so no recovery plan was required. The Company agreed that it would pay £7.24 million per annum from 1 June 2018 to 31 July 2021 and £6.3 million per annum from 1 August 2021 onwards to cover the cost of ongoing benefit accrual. Payments to the Scheme will continue in line with the Schedule of Contributions until a new funding agreement is reached with the Trustees as part of the triennial valuation process. From 1 June 2018, it was also agreed that the Scheme's investment management expenses would be met from Scheme assets.

The pension cost in respect of defined benefit obligations is assessed in accordance with the advice of a qualified external actuary using a Projected Unit method with a triennial review. The most recent full actuarial assessment of the liabilities of the scheme was at 5 April 2020.

The Scheme exposes Citi to a number of risks, the most significant being;

- Asset Volatility - the Scheme's obligations are calculated using a discount rate set with reference to corporate bond yields; if assets underperform this yield, this will create a deficit.
- Bond Yields - a decrease in corporate bond yields will increase the value placed on the Scheme's obligations for accounting purposes. Provided that government bond yields decrease by the same margin as corporate bond yields, this will largely be offset by an increase in the value of the Scheme's assets.
- Inflation Risk - a significant proportion of the Scheme's obligations are linked to inflation such that higher inflation will lead to higher liabilities (although in most cases, caps on the level of inflationary increases are in place to protect against extreme inflation).
- Life Expectancy - the majority of the Scheme's obligations are to provide benefits for the life of the member, so increases in life expectancy will result in an increase in the liabilities.

Expected regular employer contributions to be paid into the Scheme during 2022 are $8 million (2021: $10 million).

The Scheme duration is an indicator of the weighted-average time until benefit payments are made. For the Scheme as a whole, the duration is 15 years.

The mortality assumptions are based on standard mortality tables which allow for expected future mortality improvements. The assumptions are that a member currently aged 65 will live on average for a further 23.6 years for males and 25.0 years for females. Members currently aged 45 are expected to live a further 24.7 years and 26.3 years from age 65 for males and females respectively.

**8. Pension** (continued)

Assumptions that are affected by economic conditions (financial assumptions) are based on market expectations at the balance sheet date, for the period over which the obligations are settled.

The financial assumptions used in calculating the defined benefit scheme liabilities as at 31 December 2022 are as follows:

| | 2022 | 2021 |
|---|---|---|
| Discount rate for scheme liabilities | 4.75% | 1.95% |
| Interest income rate on scheme assets | 4.75% | 1.95% |
| Inflation - RPI | 3.40% | 3.50% |
| Inflation - CPI | 2.90% | 3.00% |
| Rate of general long-term increase in salaries | 2.90% | 1.50% |
| Rate of increase to pensions in payment | | |
| – Pensions accrued from 1 May 2005 | 2.40% | 2.50% |
| – Pensions accrued prior to 1 May 2005 | 3.10% | 3.20% |

Following a public consultation, in November 2020, the government confirmed that it would accept the UK Statistics Authority's proposal that the Retail Price Index (RPI) should be aligned with the Consumer Price Index (including housing costs) (CPIH) from 2030.

The fair value of Scheme assets, which includes offsetting Liability Driven Investments ("LDIs") at the reporting date are set out as follows:

| | Fair value | |
|---|---|---|
| | 2022 $ Million | 2021 $ Million |
| Listed assets | | |
| Government bonds | 1,096 | 2,070 |
| Other | 7 | 15 |
| Unlisted assets | | |
| Government bonds | (387) | (747) |
| Corporate bonds | 450 | 734 |
| Insured Pensions | 1 | 1 |
| Total market value of assets | 1,167 | 2,073 |

Analysis of amounts recognised in the income statement account:

| | 2022 $ Million | 2021 $ Million |
|---|---|---|
| Current service cost | 5 | 7 |
| Past service cost | — | 3 |
| Administrative Expenses | 2 | 2 |
| Expense recognised in the profit and loss account | 7 | 12 |

**8. Pension** (continued)

Analysis of other finance income:

| | 2022 $ Million | 2021 $ Million |
|---|---|---|
| Interest income on pension scheme assets | 37 | 31 |
| Interest expense on pension scheme liabilities | (27) | (24) |
| **Net finance income on pension** | **10** | **7** |

Analysis of amount recognised in Statement of Comprehensive Income:

| | 2022 $ Million | 2021 $ Million |
|---|---|---|
| Return on scheme assets below of that recognised in net interest income | (681) | (5) |
| Actuarial gains due to changes in financial assumptions | 530 | 85 |
| Actuarial gains due to changes in demographic assumptions | — | 1 |
| Actuarial (losses)/gains due to liability experience | (44) | 18 |
| Total remeasurement (losses)/gains recognised in Statement of Comprehensive Income | (195) | 99 |
| Deferred tax adjustment on pension in Statement of Comprehensive Income | 53 | (27) |
| Deferred tax charge associated with rate change on remeasurement of pension asset | 29 | (31) |
| **Total (losses)/gains recognised in Statement of Comprehensive Income net of tax** | **(113)** | **41** |

Changes in the pension scheme liabilities or assets that do not arise from regular pension cost, net interest on net defined benefit liabilities or assets, past service costs, settlements or contributions to the scheme, are remeasurements - such remeasurements are recognised in other comprehensive income. Remeasurements comprise experience adjustments (differences between previous actuarial assumptions and actual occurrence), the effects of changes in actuarial assumptions and actual return on scheme assets (excluding amounts included in the interest on the assets).

Reconciliation to the balance sheet:

| | 2022 $ Million | 2021 $ Million |
|---|---|---|
| Total market value of assets | 1,167 | 2,073 |
| Present value of scheme liabilities | (862) | (1,526) |
| **Gross pension asset** | **305** | **547** |
| Related deferred tax liability | (86) | (181) |
| Net pension asset | 219 | 366 |

**8. Pension** (continued)

| | 2022<br>$ Million | 2021<br>$ Million |
|---|---|---|
| Surplus in scheme at beginning of the year | 547 | 449 |
| Current service cost | (5) | (7) |
| Contributions | 8 | 9 |
| Past service cost | — | (3) |
| Curtailments | (2) | (2) |
| Other finance income | 10 | 7 |
| Remeasurement (losses)/gains | (195) | 99 |
| Foreign exchange adjustment | (58) | (5) |
| **Surplus in scheme at end of year** | **305** | **547** |

CGML recognises a surplus in accordance with the requirements of IFRIC 14. The trustees of the Scheme do not have the unilateral right to commence wind-up of the Scheme. Thus, CGML assumes that the Scheme will continue in existence until the last benefit payments are made to members, at which point any residual assets will be returned to the employer in line with the rules of the Scheme.

The changes to the present value of the defined obligation during the year are as follows:

| | 2022<br>$ Million | 2021<br>$ Million |
|---|---|---|
| Opening defined benefit obligation | 1,526 | 1,685 |
| Current service cost | 5 | 7 |
| Past service cost | — | 3 |
| Interest expense | 27 | 24 |
| Remeasurement gains on scheme liabilities | (487) | (104) |
| Net benefits paid out | (48) | (75) |
| Curtailments | 2 | 2 |
| Foreign exchange adjustment | (163) | (16) |
| Closing defined benefit obligation | 862 | 1,526 |

The changes to the fair value of scheme assets during the year are as follows:

| | 2022<br>$ Million | 2021<br>$ Million |
|---|---|---|
| Opening fair value of scheme assets | 2,073 | 2,134 |
| Interest income on pension scheme assets | 36 | 31 |
| Remeasurement gains on scheme assets | (682) | (5) |
| Contributions by the employer | 8 | 9 |
| Net benefits paid out | (48) | (75) |
| Administrative expenses | (2) | (2) |
| Foreign exchange adjustment | (218) | (19) |
| Closing fair value of scheme assets | 1,167 | 2,073 |

**8. Pension** (continued)

The actual return on assets is as follows:

| | 2022<br>$ Million | 2021<br>$ Million |
|---|---|---|
| Interest income on pension scheme assets | 36 | 31 |
| Remeasurement losses on scheme assets | (682) | (5) |
| Actual return on assets | (646) | 26 |

The interest income on scheme assets is set using the discount rate assumption. In 2022, asset values decreased by $672 million due to a rise in bond yields during the year. In 2021, asset values decreased by $5 million due to a slight rise in bond yields decreased during the year.

The table below sets out the history of experience gains and losses:

| | 2022<br>$ Million | 2021<br>$ Million | 2020<br>$ Million | 2019<br>$ Million | 2018<br>$ Million |
|---|---|---|---|---|---|
| (Losses)/gains on scheme assets due to experience | (681) | (5) | 184 | 132 | (75) |
| Gains/(losses) on scheme liabilities due to experience | (44) | 18 | (31) | 14 | (46) |
| Gains/(losses) on scheme liabilities due to assumptions | 530 | 86 | (185) | (190) | 133 |
| Remeasurements recognised in Statement of Comprehensive Income | (195) | 99 | (32) | (44) | 12 |
| Related deferred tax | 82 | (58) | — | 11 | (3) |
| Total gains/(losses) recognised in Statement of Comprehensive Income net of tax | (113) | 41 | (32) | (33) | 9 |

**8. Pension** (continued)

The key assumptions used for IAS 19 are the discount rate, inflation and mortality. If different assumptions were used, this could have a material effect on the results disclosed. The sensitivity of the results to these assumptions is set out in the table below.

| Sensitivity to key assumptions | 2022 Change in defined benefit obligation increase/ (decrease) $ Million | 2021 Change in defined benefit obligation increase/ (decrease) $ Million |
|---|---|---|
| Effect of increasing the discount rate assumption by 1% | (114) | (260) |
| Effect of decreasing the discount rate assumption by 1% | 141 | 343 |
| Effect of increasing the salary increase assumption by 1% | 5 | 11 |
| Effect of decreasing the salary increase assumption by 1% | (5) | (10) |
| Effect of increasing the life expectancy assumption by 1 year | 28 | 56 |
| Effect of increasing the pension increase assumption by 1% | 98 | 230 |
| Effect of decreasing the pension increase assumption by 1% | (81) | (184) |
| Effect of increasing the inflation assumption by 1% | 74 | 168 |
| Effect of decreasing the inflation assumption by 1% | (67) | (142) |

In valuing the liabilities of the pension fund, mortality assumptions have been made as indicated above. If life expectancy had been changed to assume that all members of the fund lived for one year longer, the value of the reported liabilities would have increased by $28 million (2021: increase of $56 million).

The sensitivity information shown above is approximate and has been determined taking into account the duration of the liabilities and the overall profile of the Scheme membership. The methods and assumptions used in preparing the sensitivity analysis above have not changed from the prior year.

**9. Share-based incentive plans**

As part of the Company's remuneration programme, it participates in a number of Citigroup share-based incentive plans. These plans involve the granting of restricted or deferred share awards and share payments. Such awards are used to attract, retain and motivate officers and employees to provide incentives for their contributions to the long-term performance and growth of the Company, and to align their interests with those of the shareholders. The award programmes are administered by the Personnel and Compensation Committee of the Citigroup Inc. Board of Directors, which is composed entirely of non-employee directors.

In the share award programme Citigroup issues common shares in the form of restricted share awards, deferred share awards and share payments. For all stock award programmes during the applicable vesting period, the shares awarded are not issued to participants (in the case of a deferred stock award) or cannot be sold or transferred by the participants (in the case of a restricted stock award), until after the vesting conditions have been satisfied. Recipients of deferred share awards do not have any shareholder rights until shares are delivered to them, but they generally are entitled to receive dividend-equivalent payments during the vesting period. Recipients of restricted share awards are entitled to a limited voting right and to receive dividend or dividend-equivalent payments during the vesting period. Once a share award vests the shares become freely transferable, but in the case of certain employees, may be subject to transfer restriction by their terms or share ownership commitment.

In prior years, certain stock-based awards were subject to discretionary clawback provisions and as such subject to variable accounting. Under variable accounting the associated value of the award liability moves in line with changes in Citigroup's common stock price until the date that the award vests. Any fluctuation from the grant date value of the award until the award is fully vested is recognised through the income statement.

**9. Share-based incentive plans** (continued)

In April 2017 Citigroup made amendments to its UK awards prospectus which enabled the adoption of fixed accounting for all remaining, previously awarded, variable accounting unvested awards using a modification price of $59.39 (set at the end of April when the decision was confirmed). The difference between the grant price of all remaining, previously awarded, variable accounting unvested awards and the modification price was recognised through the income statement, any further fluctuations in share price from the modification price to the vesting date would be recognised in equity, in line with other non-variable accounting share based payment award types.

**(i) Stock award programme**

The Company participates in the Citigroup Capital Accumulation Programme (CAP), under which shares of Citigroup common stock are awarded in the form of restricted or deferred stock to participating employees.

Generally CAP awards of restricted or deferred stock constitute a percentage of annual incentive compensation and vest over a three or four year period beginning on or about the first anniversary of the award date. Except in specific circumstances, continuous employment within Citigroup is required for CAP and other stock award programmes to vest.

The programme provides that employees who meet certain age plus years-of-service requirements (retirement-eligible employees) may terminate active employment and continue vesting in their awards provided they comply with specified non-compete provisions. Awards granted to retirement-eligible employees are accrued in the year prior to the grant date in the same manner as cash incentive compensation is accrued.

For all stock award programmes, during the applicable vesting period, the shares awarded cannot be sold or transferred by the participant, and the award is subject to cancellation if the participant's employment is terminated. After the award vests, the shares become freely transferable (subject to specific sale restrictions). From the date of award, the recipient of a restricted stock award can direct the vote of the shares and receive regular dividends to the extent dividends are paid on Citigroup common stock. Recipients of deferred stock awards receive dividend equivalents to the extent dividends are paid on Citigroup common stock, but cannot vote.

Stock awards granted generally vest 25% per year over four years or 33% per year over 3 years.

As part of remuneration since 2010, the Company entered into an arrangement referred to as an "EU Short Term" award. The award will be delivered in the form of immediately vested restricted shares subject to a six month sale restriction.

| | **2022** | **2021** | **2020** | **2019** | **2018** |
|---|---|---|---|---|---|
| Shares awarded | 3,758,010 | 4,083,428 | 2,750,205 | 3,042,789 | 2,921,491 |
| Weighted average fair market value per share | $62.92 | $59.95 | $74.41 | $59.66 | $72.78 |

**(ii) Stock option programme**

In prior years, the Company made discretionary grants of options to eligible employees pursuant to the broad-based Citigroup Employee Option Grant (CEOG) Programme under the Citigroup Stock Incentive Plan. The last options granted under the plan were in 2011. There are no options outstanding. Full details on the history of CEOG can be found in the Company's prior year financial statements.

### 9. Share-based incentive plans (continued)

#### (iii) Profit and loss statement impact

The table below details the profit and loss impact of the share based incentive plans.

| | 2022<br>$ Million | 2021<br>$ Million |
|---|---|---|
| Stock Awards | | |
| Granted in 2022 | 177 | |
| Granted in 2021 | 32 | 180 |
| Granted in 2020 | 9 | 30 |
| Granted in 2018 | 2 | 8 |
| Granted in 2017 | — | 1 |
| Granted in 2016 | — | — |
| Accrued Expenses | (8) | 5 |
| Total Expense (Note 7) | 212 | 224 |
| *From which Fixed Share-based incentive expense* | 152 | 159 |
| *From which Variable Share-based incentive expense* | 60 | 66 |
| Fair value adjustment of intercompany recharges in equity reserve | 85 | (3) |
| Deferred tax impact of fair value adjustment in equity reserve | (23) | — |
| **Net fair value adjustment of intercompany recharges in equity reserve** | 62 | (3) |
| Total carrying amount of equity-settled transaction liability | 378 | 446 |
| Total carrying amount of cash-settled transaction liability | 10 | — |

### 10. Directors' remuneration

Directors' remuneration in respect of services to the Company was as follows:

| | 2022<br>$'000 | 2021<br>$'000 |
|---|---|---|
| Aggregate emoluments | 4,663 | 6,393 |
| Contributions to defined contribution pension scheme | 46 | 79 |
| | 4,709 | 6,472 |

The contributions to the money purchase pension schemes are accruing to eight of the Directors (2021: seven). Five of the Directors (2021: six) of the Company participate in parent company share plans.

The remuneration of the highest paid Director was $1,644,055 (2021: $2,393,088) and accrued pension of $39,749 (2021: $1,979).

The Directors benefit from qualifying third party indemnity provisions in place during the financial year and at the date of this report.

The above remuneration is based on the apportionment of time incurred by the Directors for services to the Company, both in their capacity as a Director and, where applicable, their normal employment.

## 11. Tax on profit on ordinary activities

### (a) Analysis of tax charge in the year

| | 2022 $ Million | 2021 $ Million |
|---|---|---|
| **Current tax:** | | |
| UK corporation tax | 48 | 118 |
| Adjustment in respect of UK corporation tax for previous years | (15) | (10) |
| Double taxation relief | (50) | (95) |
| Overseas current tax | 67 | 96 |
| Adjustment in respect of overseas tax for previous years | 1 | (1) |
| Total current tax | 51 | 108 |
| | | |
| **Deferred tax:** | | |
| Origination and reversal of temporary differences | | |
| – movement on Pension Asset | (13) | 2 |
| – movement on other temporary differences (Note 22) | (35) | (46) |
| – rate change adjustment | 31 | (52) |
| Adjustment in respect of deferred tax for earlier years: | 31 | 19 |
| Total deferred tax | 14 | (77) |
| | | |
| Tax charge on ordinary activities | 65 | 31 |

### (b) Factors affecting tax charge for the year

The table below illustrates how the tax chargeable on operating profit for the year is impacted by non-taxable items and available reliefs.

| | 2022 $ Million | 2021 $ Million |
|---|---|---|
| Profit on ordinary activities before tax | 343 | 434 |
| | | |
| Profit on ordinary activities multiplied by the standard rate of corporation tax in the UK of 27% (2021: 27%) | 93 | 117 |
| | | |
| **Effects of:** | | |
| | | |
| Expenses not deductible for tax purposes | 25 | 9 |
| Income not taxable | (42) | (2) |
| Foreign withholding tax not creditable | 17 | 1 |
| Adjustments in relation to previous years | 16 | 8 |
| Foreign exchange | — | 1 |
| Rate change adjustment | 31 | (50) |
| Current tax on AT1 coupon | (75) | (53) |
| | | |
| Total tax charge for year | 65 | 31 |

**11. Tax on profit on ordinary activities** (continued)

**(c) Aggregate current and deferred tax relating to items recognised directly in equity**

| | 2022 $ Million | 2021 $ Million |
|---|---|---|
| Deferred tax on remeasurement of pension in Statement of comprehensive income | (82) | 58 |
| Deferred tax associated with loss on DVA in Statement of comprehensive income | 105 | (5) |
| Deferred tax associated with Share based payment transactions in equity | 23 | — |
| Corporation Tax on IFRS 9 transitional adjustments | 2 | 2 |
| Deferred Tax on IFRS 9 transitional adjustments | (2) | (2) |
| Corporation tax on DVA adjustment in Retained Earnings | — | (8) |
| Total current and deferred tax charge/(credit) recognised in equity | 46 | 45 |

**(d) Factors that will affect future tax charges**

The UK tax rate in the year was 27%. This includes a surcharge of 8% on the profits of banking companies applicable from 1 January 2016. The main rate of corporation tax in the UK (excluding the surcharge) has been 19% from 1 April 2017. Finance Act 2021, which received Royal. Assent on 10 June 2021, introduced an increase in the UK corporation tax rate to 25% from 1 April 2023. Finance Act 2022, which received. Royal Assent on 24 February 2022, introduced a decrease in the bank surcharge from 8% to 3% from 1 April 2023. The impact of both rate changes have been reflected in the rate used to calculate closing deferred tax, as this is the rate substantively enacted at the Balance Sheet date.

**12. Cash at bank**

The following amounts are included within cash at bank:

| | 2022 $ Million | 2021 $ Million |
|---|---|---|
| Cash at bank held by other financial institutions | 5,183 | 6,090 |
| Cash at bank held by other group undertakings | 1,893 | 2,373 |
| | 7,076 | 8,463 |

Included within cash held by other financial institutions is $1,735 million (2021: $2,620 million) that is held on behalf of financial institutions and reported as restricted cash. Included within cash held by other group undertakings is $21 million (2021: $245 million) on behalf of financial institutions and reported as restricted cash.

## 13. Derivatives

| | 2022 Fair Value Asset $ Million | 2022 Fair Value Liability $ Million | 2021 Fair Value Asset $ Million | 2021 Fair Value Liability $ Million |
|---|---|---|---|---|
| Interest rate derivatives | 134,473 | 107,356 | 88,005 | 91,967 |
| Foreign exchange derivatives | 21,515 | 22,792 | 14,711 | 12,861 |
| Credit derivatives | 12,083 | 11,828 | 16,252 | 16,610 |
| Equity derivatives | 16,512 | 18,148 | 19,479 | 21,835 |
| Commodity derivatives | 13,382 | 38,601 | 18,834 | 18,524 |
| | 197,965 | 198,725 | 157,281 | 161,797 |

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

- Swap contracts - commitments to settle in cash at a future date or dates ranging from a few days to a number of years, based on differentials between specified instruments or indices, as applied to a notional principal amount;
- Option contracts - the right but not the obligation to buy or sell within a specified time a financial asset at a fixed price over a specified time period; and
- Futures and forward contracts - commitments to buy or sell at a future date a financial asset at a fixed price.

Derivative transactions may be OTC agreements which are bilaterally negotiated with counterparties and either settled with those counterparties or novated and cleared through CCPs. Others are standardised contracts traded on an exchange with the CCP as the counterparty to the trade. Derivatives expose CGML to market, credit or liquidity risks which are described further in Note 29 'Financial instruments and risk management' and which may impact the amount, timing and certainty of future cash flows.

## 14. Financial assets at fair value through profit or loss

Financial assets measured at fair value through profit or loss form part of the trading portfolio of the Company and comprise marketable securities and other financial assets. The following amounts are included in financial assets held at fair value.

| | 2022 Total $ Million | 2021 Total $ Million |
|---|---|---|
| **Financial assets mandatorily at fair value through profit and loss** | | |
| Derivatives (Note 13) | 197,965 | 157,281 |
| Inventory | | |
| Government bonds | 23,964 | 28,937 |
| Non-government bonds | 11,412 | 11,486 |
| Equities | 20,558 | 20,990 |
| Commodities | 1,539 | 3,248 |
| Commercial Paper | 27 | 90 |
| | 57,500 | 64,751 |
| Equity securities held for investment (Note 16) | 122 | 106 |
| **Financial assets designated at fair value through profit or loss** | | |
| Collateralised financing transactions | 80,372 | 81,701 |
| | 335,959 | 303,839 |

Included in Derivatives are listed instruments amounting to $5,904 million (2021: $6,465 million). Included in Inventory are listed instruments amounting to $48,117 million (2021: $60,435 million).

### 15. Financial assets and liabilities accounting classifications and fair values

The table below sets out the Company's classification of each class of financial assets and liabilities, and their fair values. Those measured at fair value, whether mandatorily or designated as such, are further allocated to levels in the fair value hierarchy in the table on the following page.

| 31 December 2022 | Mandatorily at FVTPL $ Million | Designated at FVTPL $ Million | Amortised cost $ Million | Mandatorily at FVTPL - equity investments $ Million | Total carrying amount $ Million | Fair value $ Million |
|---|---|---|---|---|---|---|
| Cash | — | — | 7,076 | — | 7,076 | 7,076 |
| Derivatives | 197,965 | — | — | — | 197,965 | 197,965 |
| Inventory | 57,500 | — | — | — | 57,500 | 57,500 |
| Equity securities held for investment | — | — | — | 122 | 122 | 122 |
| Collateralised financing transactions | — | 80,372 | 91,817 | — | 172,189 | 172,189 |
| Cash collateral pledged | — | — | 65,000 | — | 65,000 | 65,000 |
| Trade debtors | — | — | 15,881 | — | 15,881 | 15,881 |
| Other debtors | — | — | 644 | — | 644 | 644 |
| | 255,465 | 80,372 | 180,418 | 122 | 516,377 | 516,377 |
| Bank loans and overdrafts | — | — | 10,644 | — | 10,644 | 10,035 |
| Derivatives | 198,725 | — | — | — | 198,725 | 198,725 |
| Securities sold but not yet purchased | 52,347 | — | — | — | 52,347 | 52,347 |
| Collateralised financing transactions | — | 52,123 | 62,240 | — | 114,363 | 114,363 |
| Hybrid financial liabilities | — | 26,311 | — | — | 26,311 | 26,311 |
| Cash collateral held | — | — | 62,682 | — | 62,682 | 62,682 |
| Trade creditors | — | — | 12,080 | — | 12,080 | 12,080 |
| Other creditors and accruals | — | — | 2,196 | — | 2,196 | 2,196 |
| Subordinated loans | — | — | 11,100 | — | 11,100 | 11,926 |
| | 251,072 | 78,434 | 160,942 | — | 490,448 | 490,665 |

**15. Financial assets and liabilities accounting classifications and fair values** (continued)

| 31 December 2021 | Mandatorily at FVTPL $ Million | Designated at FVTPL $ Million | Amortised cost $ Million | Mandatorily at FVTPL - equity investments $ Million | Total carrying amount $ Million | Fair value $ Million |
|---|---|---|---|---|---|---|
| Cash | — | — | 8,463 | — | 8,463 | 8,463 |
| Derivatives | 157,281 | — | — | — | 157,281 | 157,281 |
| Inventory | 64,751 | — | — | — | 64,751 | 64,751 |
| Equity securities held for investment | — | — | — | 106 | 106 | 106 |
| Collateralised financing transactions | — | 81,701 | 76,862 | — | 158,563 | 158,563 |
| Cash collateral pledged | — | — | 35,263 | — | 35,263 | 35,263 |
| Trade debtors | — | — | 21,160 | — | 21,160 | 21,160 |
| Other debtors | — | — | 376 | — | 376 | 376 |
| | 222,032 | 81,701 | 142,124 | 106 | 445,963 | 445,963 |
| Bank loans and overdrafts | — | — | 7,201 | — | 7,201 | 7,302 |
| Derivatives | 161,797 | — | — | — | 161,797 | 161,797 |
| Securities sold but not yet purchased | 65,997 | — | — | — | 65,997 | 65,997 |
| Collateralised financing transactions | — | 43,245 | 63,067 | — | 106,312 | 106,312 |
| Hybrid financial liabilities | — | 26,143 | — | — | 26,143 | 26,143 |
| Cash collateral held | — | — | 27,948 | — | 27,948 | 27,948 |
| Trade creditors | — | — | 16,385 | — | 16,385 | 16,385 |
| Other creditors and accruals | — | — | 2,044 | — | 2,044 | 2,044 |
| Subordinated loans | — | — | 8,600 | — | 8,600 | 9,743 |
| | 227,794 | 69,388 | 125,245 | — | 422,427 | 423,671 |

**15. Financial assets and liabilities accounting classifications and fair values** (continued)

The following table shows an analysis of financial assets and liabilities measured at fair value by level in the hierarchy:

| 31 December 2022 | Level 1 $ Million | Level 2 $ Million | Level 3 $ Million | Total $ Million |
|---|---|---|---|---|
| **Financial assets mandatorily at fair value** | | | | |
| Derivatives | 22 | 194,423 | 3,520 | 197,965 |
| Government bonds | 20,504 | 3,412 | 48 | 23,964 |
| Non-government bonds | 987 | 9,982 | 443 | 11,412 |
| Equities | 19,383 | 1,101 | 74 | 20,558 |
| Commodities | — | 1,539 | — | 1,539 |
| Commercial Paper | — | 27 | — | 27 |
| | 40,896 | 210,484 | 4,085 | 255,465 |
| **Financial assets designated at fair value** | | | | |
| Collateralised financing transactions | — | 79,987 | 385 | 80,372 |
| **Other financial assets at fair value through P&L** | | | | |
| Equity securities held for investment | — | — | 122 | 122 |
| | 40,896 | 290,471 | 4,592 | 335,959 |
| | | | | |
| **Financial liabilities mandatorily at fair value** | | | | |
| Derivatives | 22 | 193,716 | 4,987 | 198,725 |
| Securities sold but not yet purchased | 47,478 | 4,856 | 13 | 52,347 |
| | 47,500 | 198,572 | 5,000 | 251,072 |
| **Financial liabilities designated at fair value** | | | | |
| Collateralised financing transactions | — | 52,123 | — | 52,123 |
| Hybrid financial liabilities | — | 22,316 | 3,995 | 26,311 |
| | 47,500 | 273,011 | 8,995 | 329,506 |

**15. Financial assets and liabilities accounting classifications and fair values** (continued)

| 31 December 2021 | Level 1 $ Million | Level 2 $ Million | Level 3 $ Million | Total $ Million |
|---|---|---|---|---|
| **Financial assets mandatorily at fair value** | | | | |
| Derivatives | 7 | 154,310 | 2,964 | 157,281 |
| Government bonds | 19,950 | 8,958 | 29 | 28,937 |
| Non-government bonds | 1,206 | 9,619 | 661 | 11,486 |
| Equities | 20,632 | 316 | 42 | 20,990 |
| Commodities | — | 3,248 | — | 3,248 |
| Commercial Paper | — | 90 | — | 90 |
| | 41,795 | 176,541 | 3,696 | 222,032 |
| **Financial assets designated at fair value** | | | | |
| Collateralised financing transactions | — | 81,609 | 92 | 81,701 |
| **Other financial assets at fair value through P&L** | | | | |
| Equity securities held for investment | — | — | 106 | 106 |
| | 41,795 | 258,150 | 3,894 | 303,839 |
| **Financial liabilities mandatorily at fair value** | | | | |
| Derivatives | 27 | 158,035 | 3,735 | 161,797 |
| Securities sold but not yet purchased | 50,399 | 15,558 | 40 | 65,997 |
| | 50,426 | 173,593 | 3,775 | 227,794 |
| **Financial liabilities designated at fair value** | | | | |
| Collateralised financing transactions | — | 43,245 | — | 43,245 |
| Hybrid financial liabilities | — | 21,972 | 4,171 | 26,143 |
| | 50,426 | 238,810 | 7,946 | 297,182 |

During the 12 months ended December 31, 2022, above the $100 million threshold, a total balance of $3.2 billion was transferred to Level 2 from Level 1 and $13.7 billion was transferred to Level 1 from Level 2. Transfers between Level 1 and Level 2 were driven by changes in Bloomberg Valuation Service (BVAL) scores, which reflects changes in the amount and consistency of the market inputs used to calculate each price.

The following table shows an analysis of financial assets and liabilities classified as held at amortised cost by level in the hierarchy:

| 31 December 2022 | Level 1 $ Million | Level 2 $ Million | Level 3 $ Million | Total $ Million |
|---|---|---|---|---|
| **Financial assets at amortised cost** | | | | |
| Cash | — | 7,076 | — | 7,076 |
| Collateralised financing transactions | — | 91,817 | — | 91,817 |
| Cash collateral pledged | — | 65,000 | — | 65,000 |
| Trade debtors | — | 15,881 | — | 15,881 |
| Other debtors | — | 644 | — | 644 |
| | — | 180,418 | — | 180,418 |
| **Financial liabilities at amortised cost** | | | | |
| Bank loans and overdrafts | — | 10,644 | — | 10,644 |
| Collateralised financing transactions | — | 62,240 | — | 62,240 |
| Cash collateral held | — | 62,682 | — | 62,682 |
| Trade creditors | — | 12,080 | — | 12,080 |
| Other creditors and accruals | — | 2,196 | — | 2,196 |
| Subordinated loans | — | 11,100 | — | 11,100 |
| | — | 160,942 | — | 160,942 |

**15. Financial assets and liabilities accounting classifications and fair values** (continued)

| 31 December 2021 | Level 1 $ Million | Level 2 $ Million | Level 3 $ Million | Total $ Million |
|---|---|---|---|---|
| **Financial assets at amortised cost** | | | | |
| Cash | — | 8,463 | — | 8,463 |
| Collateralised financing transactions | — | 76,862 | — | 76,862 |
| Cash collateral pledged | — | 35,263 | — | 35,263 |
| Trade debtors | — | 21,160 | — | 21,160 |
| Other debtors | — | 376 | — | 376 |
| | — | 142,124 | — | 142,124 |
| **Financial liabilities at amortised cost** | | | | |
| Bank loans and overdrafts | — | 7,201 | — | 7,201 |
| Collateralised financing transactions | — | 63,067 | — | 63,067 |
| Cash collateral held | — | 27,948 | — | 27,948 |
| Trade creditors | — | 16,385 | — | 16,385 |
| Other creditors | — | 2,044 | — | 2,044 |
| Subordinated loans | — | 8,600 | — | 8,600 |
| | — | 125,245 | — | 125,245 |

Given the short term nature and characteristics of collateralised financing transactions, trade debtors, other debtors, trade creditors, other creditors and accruals the fair value has been assumed to approximate the carrying value. The fair value of subordinated loans has been calculated using the present value of future estimated cash flows, discounted using a discount rate of USD 3 month Overnight Indexed Swap (OIS) plus the Company's credit spread as at 31 December 2022.

*Fair Value Measurement*

IFRS 13 – *Fair Value Measurement,* defines fair value, establishes a consistent framework for measuring fair value and requires disclosures about fair value measurements. Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date, and therefore represents an exit price. Among other things, the standard requires the Company to maximise the use of observable inputs and minimise the use of unobservable inputs when measuring fair value.

Under IFRS 13, the probability of default of a counterparty is factored into the valuation of derivative positions and, the impact of the Company's own credit risk is also factored into the valuation of derivatives and other liabilities that measured at fair value.

Fair Value Hierarchy

IFRS 13 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.

The 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.

**15. Financial assets and liabilities accounting classifications and fair values** (continued)

Fair Value Hierarchy (continued)

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:

- 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.

Determination of Fair Value

For assets and liabilities carried at fair value, the Company measures fair value using the procedures set out below, irrespective of whether the assets and liabilities are measured at fair value as a result of an election, a non-recurring lower of-cost-or-market (LOCOM) adjustment, or because they are required to be measured at fair value.

When available, the Company uses quoted market prices from active markets to determine fair value and classifies such items as Level 1. In some specific cases where a market price is available, the Company will apply practical expedients (such as matrix pricing) to calculate fair value, in which case the items may be classified as Level 2.

The Company may also apply a price-based methodology that utilizes, where available, quoted prices or other market information obtained from recent trading activity in positions with the same or similar characteristics to the position being valued. If relevant and observable prices are available , those valuations may be classified as Level 2. However, when there are one or more significant unobservable "price" inputs,those valuations will be classified as Level 3. Furthermore, when a quoted price is considered stale, a significant adjustment to the price of a similar security may be necessary to reflect differences in the terms of the actual security or loan being valued, or alternatively, when prices from independent sources maybe insufficient to corroborate the valuation, the "price" inputs are considered unobservable and the fair value measurements are classified as Level 3.

If quoted market prices are not available, fair value is based upon internally developed valuation techniques that use, where possible, current market-based parameters, such as interest rates, currency rates and option volatilities. Items valued using such internally generated valuation techniques are classified according to the lowest level input or value driver that is significant to the valuation. Thus, an item may be classified as Level 3 even though there may be some significant inputs that are readily observable.

Fair value estimates from internal valuation techniques are verified, where possible, to prices obtained from independent vendors or brokers. Vendors' and brokers' valuations may be based on a variety of inputs ranging from observed prices to proprietary valuation models, and the Company assesses the quality and relevance of this information in determining the estimate of the fair value. The following section describes the valuation methodologies used by the Company to measure various financial instruments at fair value. Where appropriate, the description includes details of the valuation models, the key inputs to those models and any significant assumptions.

*Market valuation adjustments*

Generally, the unit of account for a financial instrument is the individual financial instrument. The Company applies market valuation adjustments that are consistent with the unit of account, which does not include adjustment due to the size of the Company's position, except as follows.

**15. Financial assets and liabilities accounting classifications and fair values** (continued)

*Market valuation adjustments (continued)*

IFRS 13 permits an exception, through an accounting policy election, to measure the fair value of a portfolio of financial assets and financial liabilities on the basis of the net open risk position when certain criteria are met. Citi has elected to measure certain portfolios of financial instruments that meet those criteria, such as derivatives, on the basis of the net open risk position. The Company applies market valuation adjustments, including adjustments to account for the size of the net open risk position, consistent with market participant assumptions.

Valuation adjustments are applied to items classified as Level 2 or Level 3 in the fair value hierarchy to ensure that the fair value reflects the price at which the net open risk position could be exited. These valuation adjustments are based on the bid/offer spread for an instrument in the market. When Citi has elected to measure certain portfolios of financial investments, such as derivatives, on the basis of the net open risk position, the valuation adjustment may take into account the size of the position.

Credit valuation adjustments (CVA) and funding valuation adjustments (FVA) are applied to the relevant population of over-the-counter (OTC) derivative instruments where adjustments to reflect counterparty credit risk, own credit risk and term funding risk are required to estimate fair value. This principally includes derivatives with a base valuation (e.g., discounted using overnight indexed swap (OIS)) requiring adjustment for these effects, such as uncollateralized interest rate swaps. The CVA represents a portfolio-level adjustment to reflect the risk premium associated with the counterparty's (assets) or Company's (liabilities) non-performance risk.

The FVA represents a market funding risk premium inherent in the uncollateralized portion of a derivative portfolio and in certain collateralized derivative portfolios that do not include standard credit support annexes (CSAs), such as where the CSA does not permit the reuse of collateral received. Company's FVA methodology leverages the existing CVA methodology to estimate a funding exposure profile. The calculation of this exposure profile considers collateral agreements in which the terms do not permit the Company to reuse the collateral received, including where counterparties post collateral to third-party custodians. Company's CVA and FVA methodologies consist of two steps:

- First, the exposure profile for each counterparty is determined using the terms of all individual derivative positions and a Monte Carlo simulation or other quantitative analysis to generate a series of expected cash flows at future points in time. The calculation of this exposure profile considers the effect of credit risk mitigants and sources of funding, including pledged cash or other collateral and any legal right of offset that exists with a counterparty through arrangements such as netting agreements. Individual derivative contracts that are subject to an enforceable master netting agreement with a counterparty are aggregated as a netting set for this purpose, since it is those aggregate net cash flows that are subject to non performance risk. This process identifies specific, point-in-time future cash flows that are subject to non performance and term funding risk, rather than using the current recognized net asset or liability as a basis to measure the CVA and FVA.
- Second, for CVA, market-based views of default probabilities derived from observed credit spreads in the credit default swap (CDS) market are applied to the expected future cash flows determined in step one. Citi's own credit CVA is determined using Citi-specific CDS spreads for the relevant tenor. Generally, counterparty CVA is determined using CDS spread indices for each credit rating and tenor. For certain identified netting sets where individual analysis is practicable (e.g., exposures to counterparties with liquid CDSs), counterparty-specific CDS spreads are used. For FVA, a term structure of spreads is applied to the expected funding exposures (e.g., the market liquidity spread used to represent the term funding premium associated with certain OTC derivatives).

The CVA and FVA are designed to incorporate a market view of the credit and funding risk, respectively, inherent in the derivative portfolio. However, most unsecured derivative instruments are negotiated bilateral contracts and are not commonly transferred to third parties. Derivative instruments are normally settled contractually or, if terminated early, are terminated at a value negotiated bilaterally between the counterparties. Thus, the CVA and FVA may not be realized upon a settlement or termination in the normal course of business.

**15. Financial assets and liabilities accounting classifications and fair values** (continued)

*Market valuation adjustments (continued)*

In addition, all or a portion of these adjustments may be reversed or otherwise adjusted in future periods in the event of changes in the credit or funding risk associated with the derivative instruments.

*Securities Purchased Under Agreements to Resell and Securities Sold Under Agreements to Repurchase*

No quoted prices exist for these instruments, since fair value is determined using a discounted cash flow technique. Cash flows are estimated based on the terms of the contract, taking into account any embedded derivative or other features. These cash flows are discounted using interest rates appropriate to the maturity of the instrument as well as the nature of the underlying collateral. Generally, when such instruments are recorded at fair value, they are classified within Level 2 of the fair value hierarchy, as the inputs used in the valuation are readily observable. However, certain long-dated positions are classified within Level 3 of the fair value hierarchy

*Trading Account Assets and Liabilities—Trading Securities and Trading Loans*

When available, the Company uses quoted market prices in active markets to determine the fair value of trading securities; such items are classified as Level 1 of the fair value hierarchy. Examples include government securities and exchange-traded equity securities.

For bonds and secondary market loans traded over the counter, the Company generally determines fair value utilizing various valuation techniques, including discounted cash flows, price-based and internal models. Fair value estimates from these internal valuation techniques are verified, where possible, to prices obtained from independent sources, including third-party vendors.

A price-based methodology utilizes, where available, quoted prices or other market information obtained from recent trading activity of assets with similar characteristics to the bond or loan being valued. The yields used in discounted cash flow models are derived from the same price information. Trading securities and loans priced using such methods are generally classified as Level 2. However, when the primary inputs to the valuation are unobservable, or prices from independent sources are insufficient to corroborate valuation, a loan or security is generally classified as Level 3. Fair value estimates from these internal valuation techniques are verified, where possible, to prices obtained from independent sources, including third-party vendors.

When the Company's principal exit market for a portfolio of loans is through securitization, the Company uses the securitization price as a key input into the fair value of the loan portfolio. The securitization price is determined from the assumed proceeds of a hypothetical securitization within the current market environment. Where such a price verification is possible, loan portfolios are typically classified as Level 2 in the fair value hierarchy.

*Trading Account Assets and Liabilities — Derivatives*

Exchange-traded derivatives, measured at fair value using quoted (i.e., exchange) prices in active markets, where available, are classified as Level 1 of the fair value hierarchy.

Derivatives without a quoted price in an active market and derivatives executed over the counter are valued using internal valuation techniques. These derivative instruments are classified as either Level 2 or Level 3 depending on the observability of the significant inputs to the model.

The valuation techniques depend on the type of derivative and the nature of the underlying instrument. The principal techniques used to value these instruments are discounted cash flows and internal models, such as derivative pricing models (e.g., Black-Scholes and Monte Carlo simulations).

The key inputs depend upon the type of derivative and the nature of the underlying instrument and include interest rate yield curves, foreign exchange rates, volatilities and correlation.

**15. Financial assets and liabilities accounting classifications and fair values** (continued)

*Investments*

The investments category includes available-for-sale debt and marketable equity securities whose fair values are generally determined by utilizing similar procedures described for trading securities above or, in some cases, using vendor pricing as the primary source.

Also included in investments are non-public investments in private equity and real estate entities. Determining the fair value of non-public securities involves a significant degree of management's judgment, as no quoted prices exist and such securities are not generally traded. In addition, there may be transfer restrictions on private equity securities. The Company's process for determining the fair value of such securities utilizes commonly accepted valuation techniques, including guideline public company analysis and comparable transactions. In determining the fair value of non public securities, the Company also considers events such as a proposed sale of the investee company, initial public offerings, equity issuances or other observable transactions. Private equity securities are generally classified as Level 3 of the fair value hierarchy.

In addition, the Company holds investments in certain alternative investment funds that calculate NAV per share, including hedge funds, private equity funds and real estate funds. Investments in funds are generally classified as nonmarketable equity securities carried at fair value. The fair values of these investments are estimated using the NAV per share of the Company's ownership interest in the funds where it is not probable that the investment will be realized at a price other than the NAV.

*Short-Term Borrowings and Long-Term Debt*

Where fair value accounting has been elected, the fair value of non-structured liabilities is determined by utilizing internal models using the appropriate discount rate for the applicable maturity. Such instruments are classified as Level 2 of the fair value hierarchy when all significant inputs are readily observable.

The Company determines the fair value of hybrid financial instruments, including structured liabilities, using the appropriate derivative valuation methodology (described above in "Trading Account Assets and Liabilities—Derivatives") given the nature of the embedded risk profile. Such instruments are classified as Level 2 or Level 3 depending on the observability of significant inputs to the model.

*Collateralised financing transactions*

No quoted prices exist for such financial instruments and so fair value is determined using a discounted cash-flow technique. Cash flows are estimated based on the terms of the contract, taking into account any embedded derivative or other features. Expected cash flows are discounted using market rates appropriate to the maturity of the instrument as well as the nature and amount of collateral taken or received. Generally, when such instruments are held at fair value, they are classified within Level 2 of the fair value hierarchy as the inputs used in the valuation are readily observable.

*Changes in Level 3 Fair Value Category*

The following tables present the changes in the Level 3 fair value category for the years ended 31 December 2022 and 31 December 2021. Gains and losses presented below include changes in the fair value related to both observable and unobservable inputs. CGML often hedges positions with offsetting positions that are classified in a different level.

## 15. Financial assets and liabilities accounting classifications and fair values (continued)

*Changes in Level 3 Fair Value Category (continued)*

| 2022 | At 1 January 2022 | Gain/(loss) recorded in the profit and loss statement | | Purchases | Sales | Issuances | Settlements | Transfers into Level 3 | Transfers out of Level 3 | At 31 December 2022 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Realised | Unrealised | | | | | | | |
| | $ Million | $ Million | $ Million | $ Million | $ Million | $ Million | $ Million | $ Million | $ Million | $ Million |
| **Financial assets mandatorily at fair value** | | | | | | | | | | |
| Derivatives | 2,964 | (1,341) | 2,108 | 274 | (27) | 85 | — | 2,376 | (2,919) | 3,520 |
| Government bonds | 29 | (21) | (29) | 148 | (81) | — | — | 49 | (47) | 48 |
| Non-government bonds | 661 | 72 | (118) | 1,117 | (1,308) | — | — | 408 | (389) | 443 |
| Equities | 42 | 80 | (34) | 123 | (169) | — | — | 81 | (49) | 74 |
| **Financial assets designated at fair value** | | | | | | | | | | |
| Collateralised financing transactions | 92 | (13) | 181 | 169 | — | — | (211) | 174 | (7) | 385 |
| **Other assets at fair value through P&L** | | | | | | | | | | |
| Equity securities held for investment | 106 | — | (7) | 23 | — | — | — | — | — | 122 |
| | 3,894 | (1,223) | 2,101 | 1,854 | (1,585) | 85 | (211) | 3,088 | (3,411) | 4,592 |

| | At 1 January 2022 | (Gain)/loss recorded in the profit and loss statement | | Purchases | Sales | Issuances | Settlements | Transfers into Level 3 | Transfers out of Level 3 | At 31 December 2022 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Realised | Unrealised | | | | | | | |
| **Financial liabilities held for trading** | $ Million | $ Million | | $ Million | $ Million | $ Million | $ Million | $ Million | $ Million | $ Million |
| Derivatives | 3,735 | (1,327) | 2,841 | 264 | 71 | 353 | — | 2,327 | (3,278) | 4,987 |
| Securities sold but not yet purchased | 40 | (3) | 7 | 19 | 7 | (10) | (64) | 38 | (20) | 13 |
| **Financial liabilities designated at fair value** | | | | | | | | | | |
| Hybrid financial liabilities | 4,180 | 138 | (1,163) | — | — | 3,249 | (2,814) | 539 | (134) | 3,995 |
| | 7,955 | (1,192) | 1,685 | 283 | 78 | 3,592 | (2,878) | 2,904 | (3,432) | 8,995 |

### 15. Financial assets and liabilities accounting classifications and fair values (continued)

*Changes in Level 3 Fair Value Category (continued)*

| 2021 | At 1 January 2021 | Gain/(loss) recorded in the profit and loss statement: Realised | Gain/(loss) recorded in the profit and loss statement: Unrealised | Purchases | Sales | Issuances | Settlements | Transfers into Level 3 | Transfers out of Level 3 | At 31 December 2021 |
|---|---|---|---|---|---|---|---|---|---|---|
| | $ Million | $ Million | $ Million | $ Million | $ Million | $ Million | $ Million | $ Million | $ Million | $ Million |
| **Financial assets mandatorily at fair value** | | | | | | | | | | |
| Derivatives | 3,008 | 289 | (129) | 199 | (34) | — | (751) | 2,848 | (2,466) | 2,964 |
| Government bonds | 24 | 23 | 3 | 30 | (90) | — | — | 138 | (99) | 29 |
| Non-government bonds | 485 | 76 | (122) | 1,567 | (1,197) | — | — | 200 | (348) | 661 |
| Equities | 21 | 23 | 5 | 39 | (141) | — | — | 106 | (11) | 42 |
| **Financial assets designated at fair value** | | | | | | | | | | |
| Collateralised financing transactions | 93 | (11) | 14 | 217 | — | — | (224) | 64 | (61) | 92 |
| **Other assets at fair value through P&L** | | | | | | | | | | |
| Equity securities held for investment | 99 | — | 7 | — | — | — | — | — | — | 106 |
| | 3,730 | 400 | (222) | 2,052 | (1,462) | — | (975) | 3,356 | (2,985) | 3,894 |

| | At 1 January 2021 | (Gain)/loss recorded in the profit and loss statement: Realised | (Gain)/loss recorded in the profit and loss statement: Unrealised | Purchases | Sales | Issuances | Settlements | Transfers into Level 3 | Transfers out of Level 3 | At 31 December 2021 |
|---|---|---|---|---|---|---|---|---|---|---|
| **Financial liabilities held for trading** | $ Million | $ Million | | $ Million | $ Million | $ Million | $ Million | $ Million | $ Million | $ Million |
| Derivatives | 2,918 | 191 | 1,020 | 157 | (2) | — | (374) | 2,858 | (3,033) | 3,735 |
| Securities sold but not yet purchased | 123 | 18 | (81) | 10 | (10) | 30 | (41) | 24 | (33) | 40 |
| **Financial liabilities designated at fair value** | | | | | | | | | | |
| Collateralised financing transactions | 4,492 | (104) | (177) | — | — | 2,371 | (1,900) | 266 | (777) | 4,171 |
| | 7,533 | 105 | 762 | 167 | (12) | 2,401 | (2,315) | 3,148 | (3,843) | 7,946 |

2022 opening balances have been adjusted for collaterised financial transactions to reflect instruments in their original classes, that were previously classified as “unsettled”, being issued after the financial period close.

*Level 3 Fair Value Transfers*

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

- During the 12 months ended December 31, 2022, transfers of Equity Derivative contracts were $2.7 billion ($0.5 billion asset, $2.2 billion liability) from Level 3 to Level 2. This was due to unobservable inputs such as forward, volatility, correlation becoming insignificant relative to their overall valuation, and market changes have resulted in some inputs becoming more observable. In other instances, market changes have resulted in some inputs becoming less observable, and some unobservable inputs becoming more significant to the overall valuation of the instruments (e.g., when an option becomes deep-in or deep-out of the money). This has resulted in $1.9 billion ($0.6 billion asset, $1.3 billion liability) of Equity Derivative contracts being transferred from Level 2 to Level 3.
- During the 12 months ended December 31, 2022, transfers of Commodity derivative contracts were $1.7 billion ($1.1 billion asset, $0.6 billion liability) from Level 3 to Level 2. This was due to increased observability on forwards and swap contracts based on trade data, and unobservable inputs on option contracts becoming insignificant to their overall valuation.
- During the 12 months ended December 31, 2022, transfers of Interest Rate Derivative contracts were $1.5 billion ($0.7 billion asset, $0.7 billion liability) from Level 3 to Level 2. This was due to unobservable inputs becoming insignificant relative to their overall valuation, and market changes have resulted in some inputs becoming more observable.

**15. Financial assets and liabilities accounting classifications and fair values** (continued)

Level 3 transfer-ins on assets and liabilities were driven by significance testing, Level 3 transfer-outs on assets and liabilities were driven by significance testing, methodology changes and increased trading activity observability.

**Fair Value Hierarchy Classification**

*Unobservable inputs*

During the year, total changes in fair value, representing a gain of $385 million (2021: $688 million loss) was recognised in the income statement relating to items where fair value was estimated using a valuation technique that incorporated one or more significant inputs based on unobservable market data. As these valuation techniques were based upon assumptions, changing the assumptions would change the estimate of fair value. The potential impact of using reasonably possible assumptions in line with those used for the Company's Regulatory Prudential Adjustment for the valuation techniques for both observable and unobservable market data has been quantified as approximately $731 million downside and $847 million upside (2021: $647 million downside and $659 million upside). The main contributors to this impact were Equity Markets, Credit Trading and Interest Rates Trading businesses.

*Uncertainty of Fair Value Measurements Relating to Unobservable Inputs*

Valuation uncertainty arises when there is insufficient or disperse market data to allow a precise determination of the exit value of a fair-valued position or portfolio in today's market. This is especially prevalent in Level 3 fair value instruments, where uncertainty exists in valuation inputs that may be both unobservable and significant to the instrument's (or portfolio's) overall fair value measurement.

The uncertainties associated with key unobservable inputs on the Level 3 fair value measurements may not be independent of one another. In addition, the amount and direction of the uncertainty on a fair value measurement for a given change in an unobservable input depends on the nature of the instrument as well as whether the Company holds the instrument as an asset or a liability. For certain instruments, the pricing, hedging and risk management are sensitive to the correlation between various inputs rather than on the analysis and aggregation of the individual inputs.

The following section describes some of the most significant unobservable inputs used by the Company in Level 3 fair value measurements.

*Correlation*

Correlation is a measure of the extent to which two or more variables change in relation to each other. A variety of correlation-related assumptions are required for a wide range of instruments, including equity and credit baskets, foreign exchange options, Credit Index Tranches and many other instruments. For almost all of these instruments, correlations are not directly observable in the market and must be calculated using alternative sources, including historical information. Estimating correlation can be especially difficult where it may vary over time, and calculating correlation information from market data requires significant assumptions regarding the informational efficiency of the market (e.g., swaption markets). Uncertainty therefore exists when an estimate of the appropriate level of correlation as an input into some fair value measurements is required.

Changes in correlation levels can have a substantial impact, favorable or unfavorable, on the value of an instrument, depending on its nature. A change in the default correlation of the fair value of the underlying bonds comprising a CDO structure would affect the fair value of the senior tranche. For example, an increase in the default correlation of the underlying bonds would reduce the fair value of the senior tranche, because highly correlated instruments produce greater losses in the event of default and a portion of these losses would become attributable to the senior tranche. That same change in default correlation would have a different impact on junior tranches of the same structure.

**15. Financial assets and liabilities accounting classifications and fair values** (continued)

*Volatility*

Volatility represents the speed and severity of market price changes and is a key factor in pricing options. Volatility generally depends on the tenor of the underlying instrument and the strike price or level defined in the contract. Volatilities for certain combinations of tenor and strike are not observable and need to be estimated using alternative methods, such as comparable instruments, historical analysis or other sources of market information. This leads to uncertainty around the final fair value measurement of instruments with unobservable volatilities.

The general relationship between changes in the value of an instrument (or a portfolio) to changes in volatility also depends on changes in interest rates and the level of the underlying index. Generally, long option positions (assets) benefit from increases in volatility, whereas short option positions (liabilities) will suffer losses. Some instruments are more sensitive to changes in volatility than others. For example, an at-the-money option would experience a greater percentage change in its fair value than a deep-in-the-money option. In addition, the fair value of an option with more than one underlying security (e.g., an option on a basket of equities) depends on the volatility of the individual underlying securities as well as their correlations.

*Yield*

In some circumstances, the yield of an instrument is not observable in the market and must be estimated from historical data or from yields of similar securities. This estimated yield may need to be adjusted to capture the characteristics of the security being valued. Whenever the amount of the adjustment is significant to the value of the security, the fair value measurement is classified as Level 3. Adjusted yield is generally used to discount the projected future principal and interest cash flows on instruments, such as asset-backed securities. Adjusted yield is impacted by changes in the interest rate environment and relevant credit spreads.

*Prepayment*

Voluntary unscheduled payments (prepayments) change the future cash flows for the investor and thereby change the fair value of the security. The effect of prepayments is more pronounced for residential mortgage-backed securities. Prepayment is generally negatively correlated with delinquency and interest rate. A combination of low prepayments and high delinquencies amplifies each input's negative impact on a mortgage securities' valuation. As prepayment speeds change, the weighted average life of the security changes, which impacts the valuation either positively or negatively, depending upon the nature of the security and the direction of the change in the weighted average life.

*Recovery*

Recovery is the proportion of the total outstanding balance of a bond or loan that is expected to be collected in a liquidation scenario. For many credit securities (e.g., commercial mortgage backed securities), the expected recovery amount of a defaulted property is typically unknown until a liquidation of the property is imminent. The assumed recovery of a security may differ from its actual recovery that will be observable in the future. Generally, an increase in the recovery rate assumption increases the fair value of the security. An increase in loss severity, the inverse of the recovery rate, reduces the amount of principal available for distribution and, as a result, decreases the fair value of the security.

*Credit Spread*

Credit spread is a component of the security representing its credit quality. Credit spread reflects the market perception of changes in prepayment, delinquency and recovery rates, therefore capturing the impact of other variables on the fair value. Changes in credit spread affect the fair value of securities differently depending on the characteristics and maturity profile of the security. For example, credit spread is a more significant driver of the fair value measurement

## 15. Financial assets and liabilities accounting classifications and fair values (continued)

*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 as of 31 December 2022 and 31 December 2021. Note that these tables represent key drivers by disclosures line and may not agree back to the Changes in Level 3 Fair Value Category table.

| 2022 | Fair Value $ Million | Methodology | Input | Range of Inputs Min | Range of Inputs Max | Unit |
|---|---|---|---|---|---|---|
| **Assets** | | | | | | |
| Derivative assets | 3,520 | | | | | |
| Equity Derivatives | | Model-based | Equity Volatility | — | 300.7 | % |
| | | Model-based | Equity-FX Correlation | -95.0 | 50.0 | % |
| | | Model-based | Equity Forward | 68.3 | 271.6 | % |
| | | Model-based | Equity-Equity Correlation | -4.0 | 98.7 | % |
| | | Model-based | Commodity-FX Correlation | -40.0 | 40.0 | % |
| Commodity Derivatives | | Model-based | Forward Price | 14.3 | 385.5 | % |
| | | Model-based | Commodity Volatility | 10.4 | 151.5 | % |
| | | Model-based | Commodity Correlation | -32.0 | 91.9 | % |
| Credit Derivatives | | Model-based | Credit Spread | 2.5 | 955.1 | bps |
| Foreign Exchange Derivatives | | Model-based | IR Basis | -4.2 | 9.7 | % |
| Interest Rate Derivatives | | Model-based | Inflation Volatility | 0.4 | 2.7 | % |
| Inventory | 565 | | | | | |
| Other Bonds Notes & Debentures | | Model-based | Equity Volatility | 0.0 | 300.7 | % |
| | | Model-based | Equity-FX Correlation | -95.0 | 50.0 | % |
| Equity Securities | | Price-based | Price | 0.0 | 9,087.8 | $ |
| **Liabilities** | | | | | | |
| Derivative liabilities | 4,987 | | | | | |
| Commodity Derivatives | | Model-based | Forward Price | 14.3 | 385.5 | % |
| | | Model-based | Commodity Volatility | 10.4 | 151.5 | % |
| | | Model-based | Commodity Correlation | -32.0 | 91.9 | % |
| | | Model-based | Commodity-FX Correlation | -40.0 | 40.0 | % |
| Equity Derivatives | | Model-based | Equity Volatility | — | 300.7 | % |
| | | Model-based | Equity-Equity Correlation | -4.0 | 98.7 | % |
| | | Model-based | Commodity-FX Correlation | -40.0 | 40.0 | % |
| | | Model-based | Equity-FX Correlation | -95.0 | 50.0 | % |
| | | Model-based | Equity Forward | 68.3 | 271.6 | % |
| | | Model-based | Dividend amount | 0.1 | 279.5 | $ |
| | | Model-based | FX Volatility | 0.1 | 97.7 | % |
| | | Model-based | Equity-IR Correlation | -18.8 | 60.0 | % |
| | | Price-based | Price | — | 4,917.6 | $ |
| Credit Derivatives | | Model-based | Credit Spread | 2.5 | 955.1 | bps |
| Foreign Exchange Derivatives | | Model-based | IR Normal Volatility | 0.3 | 1.8 | % |
| | | Model-based | IR Basis | -4.2 | 9.7 | % |
| Interest Rate Derivatives | | Model-based | IR Normal Volatility | 0.3 | 1.5 | % |
| | | Model-based | Inflation Volatility | 0.4 | 2.7 | % |
| Securities sold but not yet purchased | 13 | Price-based | Price | 0.0 | 9,087.8 | $ |
| | | Model-based | Equity Volatility | — | 300.7 | % |
| | | Model-based | Equity Forward | 68.3 | 271.6 | % |

**15. Financial assets and liabilities accounting classifications and fair values** (continued)

| | | | | | | |
|---|---|---|---|---|---|---|
| Hybrid financial liabilities | 3,995 | Model-based | Equity Volatility | — | 300.7 | % |
| | | Model-based | FX Volatility | 0.1 | 97.7 | % |
| | | Model-based | Equity-IR Correlation | -18.8 | 60.0 | % |
| | | Model-based | Equity-FX Correlation | -95.0 | 50.0 | % |
| | | Model-based | Equity Forward | 68.3 | 271.6 | % |
| | | Model-based | IR Normal Volatility | 0.3 | 1.8 | % |
| | **Fair Value** | | | **Range of Inputs** | | |
| **2021** | **$ Million** | **Methodology** | **Input** | **Min** | **Max** | **Unit** |
| **Assets** | | | | | | |
| Equity Derivatives | 2,964 | | | | | |
| Derivative assets | | | | | | |
| | | Model-based | Equity Volatility | 0.1 | 290.6 | % |
| | | Model-based | Equity-FX Correlation | -95.0 | 80.0 | % |
| | | Model-based | Equity Forward | 58.0 | 165.8 | % |
| Commodity Derivatives | | Model-based | Forward Price | 8.0 | 599.4 | % |
| | | Model-based | Commodity Volatility | 10.9 | 188.3 | % |
| | | Model-based | Commodity Correlation | -50.5 | 89.8 | % |
| Credit Derivatives | | Model-based | Credit Spread | 1.0 | 874.7 | bps |
| Foreign Exchange Derivatives | | Model-based | Yield | -0.7 | 0.6 | % |
| Inventory | 732 | | | | | |
| Non-government bonds | | Model-based | Equity Volatility | 0.1 | 290.6 | % |
| | | Model-based | Equity-FX Correlation | -95.0 | 80.0 | % |
| | | Model-based | Equity Forward | 58.0 | 165.8 | % |
| Equity | | Price-based | Price | 0.0 | 12,874.6 | $ |
| Liabilities | | | | | | |
| Derivative liabilities | 3,735 | | | | | |
| Commodity Derivatives | | Model-based | Forward Price | 8.0 | 599.4 | % |
| | | Model-based | Commodity Volatility | 10.9 | 188.3 | % |
| | | Model-based | Commodity Correlation | -50.5 | 89.8 | % |
| Equity Derivatives | | Model-based | Equity Volatility | 0.1 | 290.6 | % |
| | | Model-based | FX Volatility | 0.1 | 41.8 | % |
| | | Model-based | Equity-IR Correlation | -3.5 | 60.0 | % |
| | | Model-based | Equity-Equity Correlation | -6.5 | 99.0 | % |
| | | Model-based | Commodity Correlation | -50.5 | 89.8 | % |
| | | Model-based | Equity-FX Correlation | -95.0 | 80.0 | % |
| | | Model-based | Equity Forward | 58.0 | 165.8 | % |
| | | Model-based | Dividend amount | 0.1 | 264.5 | $ |
| Credit Derivatives | | Model-based | Credit Spread | 1.0 | 874.7 | bps |
| Foreign Exchange Derivatives | | Model-based | Yield | -0.7 | 0.6 | % |
| Interest Rate Derivatives | | Model-based | IR-FX Correlation | -31.9 | 51.6 | % |
| Securities sold but not yet purchased | 40 | Price-based | Price | — | 12,874.6 | $ |
| Hybrid financial liabilities | 4,171 | Model-based | Equity Volatility | 0.1 | 290.6 | % |
| | | Model-based | FX Volatility | 0.1 | 41.8 | % |
| | | Model-based | Equity-IR Correlation | -3.5 | 60.0 | % |
| | | Model-based | Commodity Correlation | -50.5 | 89.8 | % |
| | | Model-based | Equity-FX Correlation | -95.0 | 80.0 | % |
| | | Model-based | Equity Forward | 58.0 | 165.8 | % |
| | | Model-based | IR Normal Volatility | 0.2 | 0.9 | % |

### 16. Equity securities held for investment

| | Unlisted Investments 2022 $ Million | Unlisted Investments 2021 $ Million |
|---|---|---|
| **Fair value** | | |
| At 1 January | 106 | 99 |
| Additions | — | — |
| Disposals | — | — |
| Gains recognised in income statement | 16 | 7 |
| At 31 December | 122 | 106 |

### 17. Involvement with unconsolidated structured entities

The table below describes the types of Variable Interest Entities (VIEs) that are not controlled by CGML but in which it holds an interest.

| | | 2022 | | 2021 | |
|---|---|---|---|---|---|
| **Type of structured entity** | **Nature and purpose** | **Total VIE assets $ Million** | **CGML exposure $ Million** | **Total VIE assets $ Million** | **CGML exposure $ Million** |
| Investment Funds | Fund/Limited Partnership Structure | 148 | — | 200 | 1 |
| Client Intermediation | Credit Derivative Repack Vehicle/Credit Derivatives | — | — | 213 | 211 |
| Collateralized Loan Obligations | Synthetic CDO | 2 | 1 | 2 | 1 |
| | | 150 | 1 | 415 | 213 |

*Investment funds*

The objective of these funds is to seek income and capital gains from investing in US government securities. Funding is provided by investors in the fund, who are professional or institutional investors. CGML is the derivative swap counterparty to the fund which is the source of its exposure. The derivative transactions are FX options and swaps.

*Client Intermediation*

Client intermediation transactions represent a range of transactions designed to provide investors with specified returns based on the returns of an underlying security, referenced asset or index. The Company's involvement in these transactions includes being the counterparty to the entity's derivative instruments. The derivative transactions are FX options and swaps.

*Collateralised Loan Obligations (CLOs)*

A collateralised loan obligation (CLO) is a VIE that purchases a portfolio of assets consisting primarily of non-investment grade corporate loans. CLOs issue multiple tranches of debt and equity to investors to fund the asset purchases and pay upfront expenses associated with forming the CLO. Citi serves as a structuring and placement agent with respect to the CLOs. Typically, the debt and equity of the CLOs are sold to third-party investors.

**17. Involvement with unconsolidated structured entities (continued)**

The Company generally does not have the power to direct the activities that most significantly impact the economic performance of the CLOs, as this power is generally held by a third-party asset manager of the CLO.

**18. Other Assets**

The following amounts are included in Other Assets:

| | **2022 $ Million** | **2021 $ Million** |
|---|---|---|
| Cash collateral pledged | 65,000 | 35,263 |
| Trade debtors | 15,843 | 21,155 |
| Other debtors | 834 | 603 |
| Prepayments and accrued income | 30 | 23 |
| Corporation tax receivable | 126 | 113 |
| Deferred tax asset (Note 22) | 183 | 337 |
| Intangible fixed assets (Note 19) | 289 | 244 |
| Tangible fixed assets - equipment (Note 19) | — | 1 |
| Tangible fixed assets - premises improvement (Note 19) | — | 1 |
| | 82,305 | 57,740 |

Included within Trade Debtors are receivables from central clearing counterparties, securities trading receivables outside standard settlement, and other brokerage receivables.

Other Assets includes the following balances due from other Citi affiliates:

| | **2022 $ Million** | **2021 $ Million** |
|---|---|---|
| Trade debtors | 6,587 | 5,159 |
| Cash collateral pledged | 4,813 | 4,488 |
| Other debtors | 397 | 206 |
| | 11,797 | 9,853 |

## 19. Intangible and Tangible fixed assets

The movement in Intangible and Tangible fixed assets for 2022 was as follows:

| 2022 | Intangible | Tangible Fixed Assets | |
|---|---|---|---|
| | Software | Equipment | Premises improvements |
| | $ Million | $ Million | $ Million |
| **Cost** | | | |
| At 1 January 2022 | 753 | 6 | 13 |
| Additions | 99 | — | — |
| At 31 December 2022 | 852 | 6 | 13 |
| **Accumulated amortisation/depreciation** | | | |
| At 1 January 2022 | 509 | 5 | 12 |
| Charges for the year (Note 7) | 54 | 1 | 1 |
| At 31 December 2022 | 563 | 6 | 13 |
| **Net book value** | | | |
| At 31 December 2022 | 289 | — | — |

The movement in Intangible and Tangible fixed assets for 2021 was as follows:

| 2021 | Intangible | Tangible Fixed Assets | |
|---|---|---|---|
| | Software | Equipment | Premises improvements |
| | $ Million | $ Million | $ Million |
| **Cost** | | | |
| At 1 January 2021 | 670 | 6 | 13 |
| Additions | 83 | — | — |
| At 31 December 2021 | 753 | 6 | 13 |
| **Accumulated amortisation/depreciation** | | | |
| At 1 January 2021 | 457 | 5 | 11 |
| Charges for the year (Note7) | 52 | — | 1 |
| At 31 December 2021 | 509 | 5 | 12 |
| **Net book value** | | | |
| At 31 December 2021 | 244 | 1 | 1 |

## 20. Investments in subsidiary and related undertakings

| | 2022<br>$ Million | 2021<br>$ Million |
|---|---|---|
| **Cost** | | |
| At 1st January | 3,830 | 2,125 |
| Additions | 500 | 1,705 |
| At 31st December | 4,330 | 3,830 |
| **Impairment** | | |
| At 1st January | — | — |
| At 31st December | — | — |
| **Net book value** | | |
| At 31st December | 4,330 | 3,830 |

Details of all related undertakings held at 31 December 2022 as required by CA2006 SI 2008 No 410 Sch 4 Para 1 are set out below. All undertakings have a year end of 31 December and all of the Company's holdings are of ordinary shares.

On 2 August 2022, CGML made a capital contribution of $500 million to its subsidiary, CGME.

During 2021 CGML made a total of $1,703 million of capital contribution to CGME.

Citigroup Global Markets Luxembourg S.a.R.L was liquidated on 7 December 2021.

*Directly held subsidiary undertakings (all 100% owned)*

| Name | Registered address |
|---|---|
| Citigroup Global Markets Europe AG | 16 Reuterweg, Frankfurt am Main 30323, Germany |
| Citigroup Global Markets Funding Luxembourg SCA | 31, Z.A. Bourmicht, L-8070 Bertrange, Luxembourg |
| Citigroup Global Markets Funding Luxembourg GP S.a.R.L. | 31, Z.A. Bourmicht, L-8070 Bertrange, Luxembourg |
| Citi Global Wealth Management S.A.M. | Monte Carlo Palace, 7-9 Boulevard des Moulins, MC98000 Monaco |

## 21. Pledged assets

*Collateral accepted as security for assets*

The fair value of financial assets including government bonds, Eurobonds and other corporate bonds, equities, and cash accepted that were permitted to be sold or re-pledged in the absence of default was $302 billion (2021: $342 billion). The fair value of the collateral accepted that had been re-pledged at 31 December 2022, was $237 billion (2021: $292 billion). The Company was obliged to return equivalent securities. Where the collateral was used in secured financing transactions, these transactions were conducted under terms that are usual and customary to standard lending and securities borrowing and lending activities.

Where the collateral was used for derivative transactions, this was conducted under industry-standard ISDA (International Swaps and Derivatives Association and CSA (Credit Support Annex) agreements.

*Financial assets pledged to secure liabilities*

The total value of purchased financial assets including government bonds, Eurobonds and other corporate bonds, equities and cash that were pledged as collateral for liabilities at 31 December 2022, was $65 billion (2021: $80 billion). These transactions were conducted under terms that are usual and customary to standard lending and securities borrowing and lending activities.

The table below sets out an analysis of balance sheet encumbered (pledged) and unencumbered (not pledged) assets.

*The asset encumbrance analyses below is unaudited.*

An asset shall be treated as encumbered if it has been pledged or if it is subject to any form of arrangement to secure, collateralise or credit enhance any transaction from which it cannot be freely withdrawn. Correspondingly an asset shall be deemed to be unencumbered where CGML is not subject to any legal, contractual, regulatory, or other restriction preventing it from liquidating, selling, transferring, assigning or, generally, disposing of such asset via active outright sale or repurchase agreement.

**21. Pledged assets** (continued)

| **2022** | **Encumbered $ Million** | **Non-encumbered $ Million** | **Total $ Million** |
|---|---|---|---|
| **Assets** | | | |
| Cash at bank and in hand | — | 7,076 | 7,076 |
| Equity instruments | 18,146 | 2,412 | 20,558 |
| Debt securities | 27,133 | 9,809 | 36,942 |
| Collateralised financing transactions | — | 172,189 | 172,189 |
| Other assets | 19,634 | 265,393 | 285,027 |
| **Total** | 64,913 | 456,879 | 521,792 |
| **Collateral Received** | | | |
| Equity instruments | 42,978 | 2,094 | 45,072 |
| Debt securities | 194,405 | 49,096 | 243,501 |
| Other collateral received | — | 13,088 | 13,088 |
| **Total** | 237,383 | 64,278 | 301,661 |

| **2021** | **Encumbered $ Million** | **Non-encumbered $ Million** | **Total $ Million** |
|---|---|---|---|
| **Assets** | | | |
| Cash at bank and in hand | — | 8,463 | 8,463 |
| Equity instruments | 18,535 | 2,455 | 20,990 |
| Debt securities | 39,918 | 3,843 | 43,761 |
| Collateralised financing transactions | — | 158,563 | 158,563 |
| Other assets | 21,560 | 197,944 | 219,504 |
| **Total** | 80,013 | 371,268 | 451,281 |
| **Collateral Received** | | | |
| Equity instruments | 45,819 | 1,430 | 47,249 |
| Debt securities | 245,692 | 34,585 | 280,277 |
| Other collateral received | — | 14,983 | 14,983 |
| **Total** | 291,511 | 50,998 | 342,509 |

**22. Deferred tax asset**

The movement in deferred tax in the year is as follows:

| | **2022 $ Million** | **2021 $ Million** |
|---|---|---|
| At 1 January | 337 | 251 |
| Deferred tax movement related to IFRS 9 adjustments | — | — |
| Income statement movement relating to deferred tax | (28) | 79 |
| Deferred tax movement in equity | (126) | 7 |
| At 31 December | 183 | 337 |

Deferred tax is recognised on the Company's temporary differences as it is considered probable that taxable profits will arise against which these can be utilised. The deferred tax asset is recognised at the tax rates at which the temporary differences are expected to reverse.

There is also a deferred tax liability of $86 million on the pension asset which is reflected in Note 8 Pension.

### 22. Deferred tax asset (continued)

The deferred tax asset in the balance sheet comprises:

| | 2022<br>$ Million | 2021<br>$ Million |
|---|---|---|
| Accelerated tax depreciation | 20 | 5 |
| Deferred compensation | 211 | 277 |
| DVA in OCI | (44) | 61 |
| Provisions and other temporary differences | (4) | (6) |
| | 183 | 337 |

The deferred tax movement in the income statement comprises:

| | 2022<br>$ Million | 2021<br>$ Million |
|---|---|---|
| Accelerated tax depreciation | (15) | 11 |
| Deferred compensation | 18 | (84) |
| Provisions and other temporary differences | 25 | (6) |
| | 28 | (79) |

The deferred tax movement in equity comprises:

| | 2022<br>$ Million | 2021<br>$ Million |
|---|---|---|
| DVA in Statement of comprehensive income | 103 | (7) |
| Share based payment transactions in Equity reserve | 23 | — |
| | 126 | (7) |

### 23. Other Liabilities

The following amounts are included within Other Liabilities. Included within 'Other creditors and accruals' is the accrual in respect of the bank levy.

| | 2022<br>$ Million | 2021<br>$ Million |
|---|---|---|
| Cash collateral held | 62,682 | 27,948 |
| Trade creditors | 12,087 | 16,392 |
| Other creditors and accruals | 4,569 | 2,079 |
| Payroll taxes | 74 | 72 |
| Corporation tax payable | — | — |
| Deferred tax liability on pensions (Note 8) | 86 | 181 |
| Provisions for liabilities and charges (Note 24) | 84 | 40 |
| | 79,582 | 46,712 |

Trade Creditors includes customer margin trading payables, securities trading payables outside standard settlement and other brokerage payables.

**23. Other Liabilities** (continued)

Included within Other Liabilities are the following balances due to other Citi affiliates:

| | 2022 $ Million | 2021 $ Million |
|---|---|---|
| Cash collateral held | 3,365 | 2,015 |
| Trade creditors | 3,287 | 5,053 |
| Other creditors and accruals | 2,636 | 212 |
| | 9,288 | 7,280 |

**24. Provisions for liabilities**

| | Restructuring provision $ Million | Litigation provisions $ Million | Other provisions $ Million | Total $ Million |
|---|---|---|---|---|
| At 1 January 2022 | 7 | 28 | 5 | 40 |
| Charge to profits | 23 | 53 | — | 76 |
| Provisions utilised | (15) | (9) | (5) | (29) |
| Exchange adjustments | (1) | (2) | — | (3) |
| At 31 December 2022 | 14 | 70 | — | 84 |

For reasons of privilege and confidentiality, no further information is disclosed in respect of the litigation provision. Notwithstanding, Citigroup Inc. files periodic reports with the U.S. Securities and Exchange Commission ("SEC") as required by the Securities Exchange Act 1934 which include details of any material regulatory proceedings, investigations and litigations concerning Citigroup and its subsidiaries. Copies of Citigroup's reports are on file with the SEC and are available at http://www.citigroup.com/citi/investor/sec.htm. Other provisions are held in respect of accounting reconciliation and control procedures as part of the balance sheet substantiation process.

**25. Derecognition of financial assets and financial liabilities**

**Transferred financial assets that are not derecognised in their entirety**

There are certain instances where the Company continues to recognise financial assets that it has transferred.

CGML enters into collateralised financing transactions where it sells or lends debt or equity securities with a concurrent agreement to repurchase them. As significantly all of the risks and rewards of the underlying securities are retained, a collateralised financing liability is recognised and the securities remain on balance sheet. As at 31 December 2022, the Company recognised $18 billion of assets (2021: $35 billion), with an associated $26 billion of collateralised financing liabilities (2021: $33 billion).

CGML also enters into collateralised financing transactions where it sells debt or equity securities and simultaneously undertakes a swap transaction for the same underlying instrument. As significantly all of the risks and rewards of the underlying securities are retained, a collateralised financing liability is recognised and the securities remain on balance sheet. As at 31 December 2022 the Company recognised $1,114 million of inventory (2021: $335 million) with associated collateralised financing liabilities of $1,114 million (2021: $341 million) for transactions of this nature.

### 26. Trading financial assets and liabilities

Any initial gain or loss on financial instruments where valuation is dependent on techniques using unobservable parameters is deferred over the life of the contract or until the instrument is redeemed, transferred, or sold or the fair value becomes observable. In case the transaction price in the market in which these transactions are undertaken is different from the fair value in the Company's principal market for those instruments, the fair value of these transactions are also estimated by using valuation techniques.

The table below sets out the aggregate difference yet to be recognised in profit or loss at the beginning and end of the year with a reconciliation of the changes of the balance during the year for those financial assets and liabilities classified as trading.

| | 2022<br>$ Million | 2021<br>$ Million |
|---|---|---|
| Unamortised balance at 1 January | 159 | 41 |
| Deferral on new transactions | 341 | 160 |
| Recognised in the income statement during the period: | | |
| – amortisation | (218) | (42) |
| Unamortised balance at 31 December | 282 | 159 |

### 27. Subordinated loans

The subordinated loans form part of the Company's regulatory capital resources held to meet its capital and minimum eligible liability requirements. The loans, on which interest is payable at market rates on quarterly basis, are due to other group undertakings. The following amounts were included within subordinated loans:

| Subordinated Loans | Currency | $ Million | Weighted Average Interest Rate | Weighted Average Maturity (Years) |
|---|---|---|---|---|
| 31 December 2022 | USD | 11,100 | 6.49% | 8.35 |
| 31 December 2021 | USD | 8,600 | 2.14% | 7.40 |

As at 31 December 2022, subordinated loans consists of a) $8,500 million (2021: $6,000) of Minimum Requirements for Own Funds and Eligible Liabilities (MREL) eligible subordinated loans (MREL loans) from Citicorp LLC and b) $2,600 million of Tier 2 subordinated loans (Tier 2 loans) from Citicorp LLC.

On 4 March and 9 September 2022 CGML issued $1,000 and $1,500 million of MREL loans to Citicorp LLC (2021: $2,000).

The MREL loans rank as senior subordinated claims, which are subordinate to the claims of senior creditors, but rank ahead of Own Funds Instruments, which comprise Common Equity Tier 1 instruments, Additional Tier 1 instruments (see Note 28) and Tier 2 instruments.

The Tier 2 loans rank as subordinated claims, which are subordinated to senior creditors and MREL loans but rank ahead of Common Equity Tier 1 instruments and Additional Tier 1 instruments.

In the event that the Company's Own Funds Instruments have been written down, or if the Company or certain of its direct or indirect parent entities are subject to Resolution Proceedings in the UK or elsewhere, then all or a portion of the subordinated loans and/or interest on them shall be reduced or cancelled as instructed by the UK Resolution Authority (Bank of England).

There are no other circumstances under which early repayment may be demanded by the lender.

### 28. Capital and reserves

#### (a) Called up share capital

CGML's share capital comprises:

| | 2022 | 2021 |
|---|---|---|
| **Allotted, called-up and fully paid:** | **$ Million** | **$ Million** |
| 19,998,975,176 ordinary shares of a par value of $1 each | 19,999 | 19,999 |
| | 19,999 | 19,999 |

The shares have attached to them full voting, dividend and capital distribution (including on winding up) rights. They do not confer any rights of redemption.

#### (b) Other equity instruments

On 16 September 2021, the Company issued $2,000 million of Additional Tier 1 Notes to Citicorp LLC, another Citi entity. There were no new issuances in 2022. As at 31 December 2022 and 2021, the other equity instruments of CGML consist of a) $2,000 million of Additional Tier 1 Notes to Citicorp LLC b) $2,300 million of Additional Tier 1 Notes to Pipestone LLC, another Citi entity.

The notes are perpetual with no fixed redemption date, and are redeemable at the issuer's option subject to approval from the PRA. Interest is fixed every 5 years, interest payments are not cumulative and the issuer may cancel any interest payment at its sole discretion. The notes do not confer any voting rights.

In the event that CGML's Common Equity Tier 1 (CET1) ratio falls below 7.0%, the notes will be written down to zero. If a winding up occurs under these circumstances, no payment will be made to the noteholders. If a winding up takes place under any other circumstances, the noteholders will rank *pari passu* with the holders of the most senior class(es) of preference shares (if any) and ahead of all other classes of issued shares, but junior to the claims of senior creditors, for the amount of the principal and any accrued but unpaid interest on the notes.

#### (c) Capital reserve

There were no changes in the structure of the Company's capital reserves in 2022. During 2021, CGML received $5.5 billion from its parent, Citigroup Global Markets Holdings Bahamas Limited (CGMHBL).

## 29. Financial instruments and risk management

*Risk Management Overview and Culture*

For Citi, effective risk management is of primary importance to its overall operations. Accordingly, the Company'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 the Company engages in, and the risks those activities generate, must be consistent with Citi's mission and value proposition, the key principles that guide it and the Company's risk appetite.

Citi's Culture and Values drive a strong risk and control environment and are at the heart of our risk frameworks , underpinning the way Citi conducts business. It consists of the shared attitudes, values and expected behaviours that promote open discussions and decisions in line with Citi's Strategy, Mission, Value Proposition, Leadership Principles and Risk Appetite. Citi's Company-wide risk governance framework consists of the key policies, standards and processes through which Citi identifies, assesses, measures, monitors and controls risks across the Company. CGML adopted and follows Citi's globally set policies, tailored as appropriate for the Company. It also emphasises Citi's risk culture and lays out standards, procedures and programmes that are designed to set, reinforce and enhance the Company's risk culture, integrate its values and conduct expectations into the organisation, providing employees with tools to assist them with making prudent and ethical risk decisions and to escalate issues appropriately.

Citi selectively takes risks in support of its underlying customer-centric strategy. Citi's objective is to ensure that those risks are consistent with its mission and value proposition and principle of responsible finance; that they are identified, assessed, measured, monitored, and controlled; and that they are captured in Citi's risk/reward assessment.

While the management of risk is the collective responsibility of all employees, Citi and the Company assign accountability into three lines of defence:

- first line of defence: the business owns all of its risks and is responsible for the management of those risks;
- second line of defence: the Company's independent Risk and Compliance functions establish standards for the management of risks and effectiveness of controls; and
- third line of defence: Citi's Internal Audit function independently provides assurance, based on a risk-based audit plan, that processes are reliable and governance and controls are effective.

The Company applies Citi's global risk management framework, tailored as appropriate for the Company, based on the following principles established by the Chief Risk Officer:

- a defined risk appetite, aligned with business strategy;
- accountability through a common framework to manage risks;
- risk decisions based on transparent, accurate and rigorous analytics;
- a common risk capital model to evaluate risks;
- expertise, stature, authority and independence of risk managers; and
- risk managers empowered to make decisions and escalate issues.

**29. Financial instruments and risk management** (continued)

Risk Appetite Framework

The Company's risk capacity and risk appetite framework includes principle-based qualitative boundaries to guide behaviour and quantitative boundaries within which the Company will operate, focusing on ensuring it has sufficient capital resources for the risks to which the Company could be exposed. The Company's Board of Directors sets the Company's risk capacity and risk appetite, and incorporates management judgement regarding prudent risk taking and growth in light of the business environment within which the Company operates.

*Risk Appetite Framework* (continued)

The Company's Board of Directors, with input from senior Citi and Company management, sets overarching expectations and holds management accountable for ensuring the risk profile remains within this appetite.

*CGML Risk Committee*

The CGML Risk Committee assists the Board in fulfilling its responsibility for oversight of the risks the Company faces including, but not limited to, market, liquidity, credit, and operational risks; their alignment with the Company's strategy, capital adequacy and the macroeconomic environment; and the development of a strategy to manage these risks. The CGML Risk Committee meets at a minimum quarterly.

*Managing Risk across Businesses, Regions, Products and Legal entities*

Citi manages risk across four dimensions: businesses, regions, products and legal entities. The Company's risk management framework aims to recognise the range of the Company's global business activities by combining corporate oversight with independent risk management functions within each business.

CGML utilises Citi's overarching risk management model and organisation, with its multi-dimensional risk oversight, people, processes and systems in order to ensure robust oversight of entity risks. In addition, CGML has developed entity specific risk management and controls detailed in CGML's Risk Management Framework, to ensure that there is local challenge to risk taking and that Citi's approach is appropriate for CGML. The EMEA Chief Risk Officer (CRO) is the UK Senior Manager for Risk and together with the UK CRO and other Risk senior management delegates are responsible for the independent review and challenge of the risks facing CGML, including market risk, counterparty credit risk, credit risk, operational risk and liquidity risk. With respect to Compliance Risk, CGML has a dedicated Compliance Officer with direct access to the Board and Board Risk and Audit Committee members. The CGML Compliance Officer also has a matrix reporting line to the EMEA Chief Compliance Officer who is the UK Senior Manager for Compliance.

CGML has through its Risk Management Framework and escalation guidelines developed protocols and processes for prompt and consistent escalation of matters or issues across both financial and non-financial risk types. The early recognition, escalation and resolution of issues or concerns is key to mitigate risks and is critical to CGML's business model. Timely escalation enables the UK Senior Managers to make informed assessment on the legal entity impact, underlying root causes and required corrective actions. In addition to the timely escalation protocols and process, CGML also has an integrated series of committees across the risk types, that comprises both first line business and second line expertise in their memberships in order to provide oversight of the management and escalation of risks to both the CGML Risk Committee and the CGML Board.

*Risk Aggregation and Stress Testing*

The Citi Chief Risk Officer is responsible for monitoring and controlling major risk exposures and concentrations across the organisation. This means aggregating risks, within and across businesses, as well as subjecting those risks to alternative stress scenarios in order to assess the potential economic impact they may have on Citi. This aggregation is also performed at a Company level under the accountability of the Company's CRO.

**29. Financial instruments and risk management** (continued)

*Risk Aggregation and Stress Testing* (continued)

Stress tests are undertaken across Citi and the Company and cover mark-to-market, available-for-sale, and amortised cost portfolios. These firm-wide stress reports seek to measure the potential impact to Citi, the Company and its component businesses, of stresses such as the risk of very large movements in a number of key risk factors (e.g. interest rates, credit spreads, equities, commodities prices), as well as the potential impact of a range of historical and hypothetical forward-looking systemic stress scenarios.

Supplementing the stress testing described above, risk management works with input from the businesses and finance to provide periodic updates to senior management and the Company's Board of Directors on significant potential exposures across the Company arising from risk concentrations, financial market participants and other systemic issues. These risk assessments are forward-looking exercises, intended to inform senior management and the Board of Directors about the potential economic impacts to the Company that may occur, directly or indirectly, as a result of hypothetical scenarios, based on judgmental analysis from independent risk managers.

Market Risk

Market risk 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 interest rates, exchange rates, equity and commodity prices or credit spreads.

Price risk equates to Market Risk (Trading), as defined above, plus the Financial Statement Reporting Risks associated with independent price verification and profit attribution analysis.

The Company's derivative transactions are principally carried out in equity, interest rate, credit, FX and commodity markets.

Market risk is assessed and quantified through a complementary set of tools, including factor sensitivities, Value at Risk (VaR), Stressed VaR (SVaR) and stress testing.

The Stress Testing process for Market Risk (Trading) is classified into 2 key categories:

- Global Systemic Stress Testing (GSST) – top-down systemic stresses; and
- Business Specific Stress Testing (BSST) – bottom-up business specific stresses.

Both categories of stress testing can be based upon either a range of historical periods of market stress or purely hypothetical future market events.

GSSTs are designed to quantify the potential impact of extreme market movements on a firm-wide basis and are constructed using both historical periods of market stress and hypothetical projections of adverse economic scenarios.

BSSTs are developed in response to Business tailored or market specific concerns and are performed periodically. Such stress scenarios are usually idiosyncratic in nature and are designed to probe the risks of each specific portfolio, particularly risks that are not fully captured by other measures like VaR or GSST.

Stress testing is performed regularly to help identify and quantify the impact of extreme market movements. Stress testing is performed on both individual portfolios, as well as on aggregations of portfolios and businesses, as appropriate. It is the responsibility of independent market risk management, in conjunction with the business, to develop stress scenarios, review the output of periodic stress testing exercises, and use the information to make judgments concerning the on-going suitability of exposure levels and limits.

In addition, the Company has a defined risk appetite framework which is supplemented by regular stress testing and daily monitoring against predefined limits with daily reporting to the UK CRO and senior management and quarterly reporting to the Board of Directors.

**29. Financial instruments and risk management** (continued)

*Market Risk* (continued)

Each business that uses the Company in client-facing transactions is required to establish, with approval from the independent market risk management function, a market risk limit framework for identified risk factors. This framework must clearly define approved risk profiles, include permitted product lists, and must remain within the parameters of the overall market risk appetite. The established limits are monitored by market risk management. Exposure that approaches or exceeds limit or trigger levels is escalated within market risk management and to the Company's Market Risk Manager and UK CRO, with necessary actions taken.

In all cases, the businesses are responsible for the market risks taken and for remaining within their approved market risk limit framework. Management of this process begins with the employees who work most closely with the Group's customers, products and markets and extends up to the senior executives who manage these businesses with a complementary aggregation up to the country level.

The following types of transactions are also subject to pre-trade market risk approvals where they meet the criteria in the associated policies and procedures below:

- Equity and Debt capital market transactions in conformance with the ICG Global Commitment Committee Policy and Procedures.
- Non-recourse collateralised financings in conformance with the ICG Convergence Risk Guidelines and Procedures for Collateralised Financing Transactions.
- Transactions considered as large, complex and illiquid in conformance with the Citi Standard for Pre-Trade Approval of Large, Complex and Illiquid Trades.

Transactions with estimated stress losses above defined levels require escalation to UK Chief Risk Officer, EMEA Chief Risk Officer, the Company's Chief Executive Officer and to the Company's board.

Company's VaR reports are circulated daily for monitoring of the VaR usage against the overall VaR limit. As well as an overall VaR limit, the Company has factor sensitivity limits and trigger levels in place for each market risk factor that are monitored daily. Factor sensitivities are defined as the change in the value of a position for a defined change in a market risk factor (e.g. the change in the value of a Treasury bill for a one basis point change in interest rates). It is the responsibility of each business to seek to ensure that factor sensitivities are calculated and reported for all relevant risks taken within a trading portfolio.

*VaR Methodology*

VaR is the estimate of the potential decline in the value of a position or a portfolio under normal market conditions, within a defined confidence level, and over a specific time period. Citi uses a three year look back period for correlations between risk factors and the greater of three-year or, in most instances, effectively 30-day volatility. These market risk factors include material first and second-order risk sensitivities of various asset classes/risk types (such as interest rate, credit spread, foreign exchange, equity, and commodity risks). Citi uses a single, independently approved Monte Carlo simulation VaR model. 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-month and correlation parameters updated monthly. Citi's confidence interval is 99% and uses a 1-day time horizon in its management reporting.

*VaR Limitations*

Although extensive back-testing of VaR hypothetical portfolios is performed, with varying concentrations by industry, risk rating and other factors, the VaR measure cannot necessarily provide an indication of the potential size of loss when it occurs. Hence a varied set of factor sensitivity limits and stress tests are used, in addition to VaR limits.

A VaR limit is in place for the Company, to ensure that any excesses are discussed and resolved between risk officers, the business and entity management. This limit is complemented by the factor sensitivity limits or triggers referred to above.

**29. Financial instruments and risk management** (continued)

*Stressed VaR (continued)*

Although it provides a valuable guide to risk, VaR should also be viewed in the context of its limitations:

- the use of historical data as a proxy for estimating future events may not encompass all potential events, particularly those of an extreme nature;
- the use of a one day holding period assumes that all positions can be liquidated or their risks offset in one day. This may not fully reflect the market risk arising at times of severe illiquidity, when a one day holding period may be insufficient to fully liquidate or hedge positions;
- the use of a 99% confidence level, by definition, does not take into account losses that might occur beyond this confidence level;
- VaR is calculated on the basis of exposures outstanding at close of business and therefore does not necessarily reflect intra-day exposures; and
- VaR is unlikely to reflect loss potential on exposures that only arise under significant market movements.

*Stressed VaR*

Stressed Value-at-Risk is a VaR-based risk measure subject to the same confidence level and holding period applicable to the VaR-based measure, but with model inputs calibrated to historical data from a continuous 12-month period that reflects a period of significant financial stress appropriate to the firm's current portfolio. SVaR, like VaR, is produced daily with the selection of stress period for SVaR being evaluated at least quarterly.

Market Risk Analytics, Risk Data Governance and Management, and the Market Risk Managers are jointly responsible for overseeing the production of the SVaR calculations and are ultimately responsible for ensuring their integrity.

The following table summarises market risk by disclosing the Company's average Economic VaR during the reporting period on a month-end basis, together with the VaR as at 31 December, broken down into component Value at Risk (CVaR). CVaR represents the correlation or diversification adjusted standalone VaR contribution from a particular sub-portfolio.

| | 2022 $ Million | | | | | |
|---|---|---|---|---|---|---|
| | **Equity risk** | **Interest rate risk** | **Foreign exchange risk** | **Commodity risk** | **Credit risk** | **Overall VaR** |
| Average | 14.4 | 10.4 | 1.2 | 5.8 | 7.4 | 39.2 |
| As at 31 December | 19.1 | 6.9 | 1.1 | 3.7 | 9.9 | 40.7 |
| Peak | 28.0 | 21.2 | 5.1 | 17.2 | 15.7 | 54.6 |

| | 2021 $ Million | | | | | |
|---|---|---|---|---|---|---|
| | **Equity risk** | **Interest rate risk** | **Foreign exchange risk** | **Commodity risk** | **Credit risk** | **Overall VaR** |
| Average | 19.3 | 9.9 | 0.7 | 2.8 | 6.7 | 39.4 |
| As at 31 December | 22.5 | 7.8 | 2.4 | 2.7 | 7.8 | 43.2 |
| Peak | 36.3 | 22.4 | 3.2 | 13.6 | 13.5 | 54.6 |

**29. Financial instruments and risk management** (continued)

*Liquidity risk*

Liquidity risk is defined as the risk that the firm 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 the financial condition of the firm.

Citi operates a centralised treasury model, whereby the overall balance sheet is managed by Corporate Treasury through its Global Franchise and Regional and Country Treasurers. The EMEA Regional Treasurer is supported by the UK Treasurer who is responsible for the UK legal vehicles balance sheets and liquidity profile as well as those of CGML's subsidiaries.

The UK Treasurer heads the UK Legal Entity Treasury and Markets Business Treasury group, which is responsible for managing CGML's liquidity on a day-to-day basis.

The UK Legal Entity Treasury team is specifically responsible for the CGML's daily funding, liquidity risk management including intraday liquidity, liquidity stress testing, and providing oversight to the Fixed Income and Equity Finance desks including setting and monitoring limits.

The Legal Entity Treasury team in London is also responsible for managing the relationship with internal and external stakeholders. Internal stakeholders consist of Citi's senior management and Governance committees, the Finance desks, and New York Treasury. External stakeholders comprise of auditors, credit rating agencies and regulatory authorities. This team also provides oversight and governance to the teams in Budapest and Mumbai, to ensure adherence to the overall liquidity risk management framework.

CGML follows the Global standard liquidity operating framework or the liquidity stress continuum for managing liquidity integrating exit from business-as-usual to Stress and Recovery and Resolution as part of one holistic management framework.

A combination of metric monitoring, limits, triggers, and stress testing are utilised to identify, measure, monitor and manage liquidity risk arising from various sources. Limits and triggers are used to control risks and stress assumptions are used to calibrate the level of adequate liquidity buffer under different stress scenarios. To provide for resilience under stress, CGML holds a buffer of high-quality liquid assets, which is comprised predominantly of US, European and UK government bonds.

Global Liquidity Management ('GLM') provides first line of defence oversight of Citi's liquidity management framework in order to ensure compliance to Liquidity Risk Management Policy. The individual business lines and Corporate Treasury are first line of defence for liquidity risk within CGML, while second line oversight is provided by Finance CRO. The UK Asset and Liability Committee ('ALCO') is the primary governance committee for liquidity management. Oversight is provided by the UK Executive Committee, CGML Risk Committee and the Board.

*Funding and Liquidity Objectives*

Adequate liquidity and sources of funding are essential to Citi's businesses. Funding and liquidity risks arise from multiple factors, many of which are beyond Citi's direct control, such as disruptions in the financial markets, changes in key funding sources, credit spreads, alterations to Citi's credit ratings and political and economic conditions across the globe.

Citi's funding and liquidity objectives are to maintain adequate liquidity to:

(i) fund its existing asset base;

(ii) grow its core businesses;

(iii) maintain sufficient excess liquidity, structured appropriately, to enable operation under a wide variety of market conditions, including both short and long-term market disruptions; and

(iv) satisfy regulatory requirements.

**29. Financial instruments and risk management** (continued)

*Liquidity risk (continued)*

These Citi-wide primary liquidity objectives have been adopted by CGML and approved as part of the Liquidity Risk Management Policy.

CGML funds itself through a combination of equity, long-term subordinated debt, long-term and short- term unsecured intercompany borrowings, short-term unsecured third-party borrowings ('BVU'), structured notes through CGMFL and secured financing. Long-term structural liquidity is formed of subordinated debt, stockholder's equity, and greater than 1 year to maturity intercompany loans. Day-to-day funding fluctuations are managed through short-term intercompany loans from Citicorp LLC.

Citigroup employs a 'single face to the market' approach for long-term benchmark unsecured borrowing. The long-term funding is down streamed to CGML from several funding sources. Long-term group borrowings and capital are considered stable given the nature of these sources. Senior unsecured and Subordinated debt is drawn from Citicorp LLC and subject to approved intercompany extension of credit agreements.

In order to meet its internal liquidity-related stress testing requirements and ratios, the Company holds a pool of liquid assets including highly liquid government bonds. This asset pool is reviewed on a daily basis and adjusted as necessary to maintain CGML's key liquidity ratios and metrics within the Board approved risk appetite. Increases to the asset pool are typically funded through increased intercompany unsecured long-term borrowing.

*Liquidity Risk Management Framework*

The Company's liquidity risk management framework is defined by Citi's Global Liquidity Risk Management Policy (the Policy), which is owned by the Citi Treasury Chief Risk Officer and is applicable to Citigroup Inc. and its consolidated subsidiaries. Key aspects of the global framework include liquidity risk appetite, measurement, limit and trigger setting, planning and monitoring. The Policy and any material amendments to it must be approved by the Citigroup Board of Directors.

The UK ALCO is the primary governance committee for CGML's balance sheet management and reviews the current and prospective funding requirements for the Company, as well as the capital position and statement of financial position. Among its key responsibilities are:

- Drive efficient and prudential Balance Sheet trends and mix;
- Oversee and influence liquidity levels, structure, and metrics;
- Influence investment allocation of the liquidity pool in High Quality Liquid Assets;
- Review and approve the summary Annual Funding and Liquidity Plan, CFP and frequency of intraday liquidity monitoring;
- Set and monitor liquidity and non-trading market risk limits and triggers;
- Formulate recommendations regarding dividends, capital infusions and other capital management;
- Oversee prudent interest rate and foreign exchange risk positions of the non-trading book; and
- Review and approve transfer pricing processes including approvals of deposit Beta and transfer pricing vectors.

**29. Financial instruments and risk management** (continued)

*Liquidity risk (continued)*

Citi's UK management team and the UK ALCO monitor changes in the economic environment and any corresponding impact on the asset quality of Citi's local and consolidated balance sheets, including CGML. The UK ALCO also functions as a forum for senior management to ensure adherence to corporate wide policies and procedures, regulatory requirements, and rating agency commitments.

The membership of the UK ALCO includes the UK Citi Country Officer (CCO) and CGML Chief Executive Officer (CEO) (chair), UK Country Finance Officer (CFO), UK Treasurer, UK Chief Risk Officer, Independent Liquidity Risk Manager, Finance Desk Heads and other key business and functional heads.

The UK ALCO meets on a monthly basis. Items of critical importance are escalated from ALCO to UK ExCo at the discretion of the chair and from ExCo to the Board.

The ultimate responsibility for liquidity rests with the Board. CGML's Board reviews Citi's Liquidity Risk Management Policy and the Company's Internal Liquidity Adequacy Assessment Process (ILAAP) document and approves the Liquidity Risk Appetite Framework, the Funding and Liquidity Plan, the Contingency Funding Plan, and any relevant CGML-specific liquidity policies.

*Liquidity Risk Measurement*

Liquidity risk metrics allow the Company to measure and monitor the key drivers of liquidity risk on a current and forward looking basis. Stress metrics are a key tool for measurement of liquidity risk. The Company's use of stress testing and scenario analysis is intended to quantify the potential impact of a liquidity stress event on the Company's balance sheet and liquidity position, and to identify viable funding alternatives that can be utilised. These scenarios include:

- potential significant changes in key funding sources;
- market triggers (such as credit rating downgrades);
- changes to uses of funding; and
- political and economic conditions, including stressed market conditions as well as Company-specific events.

Some tests span liquidity events over a full year, while others may cover a more intense shock over a shorter period such as 30 days. These tests incorporate all material risks and can identify potential mismatches between liquidity sources and uses over a variety of time horizons, allowing Treasury to manage liquidity risk within the stress horizons. The stress tests and potential mismatches may be calculated with varying frequencies, with several important tests performed daily. They are also performed for the material currencies that constitute CGML's balance sheet.

The company conducts both PRA required stress tests (Liquidity Coverage Ratio ("LCR") and Net Stable Funding Ratio ("NSFR")) and Citi's enterprise-wide internal stress tests (Resolution Liquidity Adequacy and Positioning ("RLAP") and Term Liquidity Stress Test ("TLST")) to appropriately reflect Citi's business model and internal liquidity risk management. The two main internal scenario-based liquidity risk metrics are:

- RLAP: Internal stress test metric used to measure the short-term (30-days) survival horizon under a Severe Market Disruption Stress Scenario. The Policy requires CGML to maintain self-sufficiency or a minimum of $0 surplus in each day within the 30-day horizon. Monitoring must be performed daily.
- TLST: Citi's longer-term (1-year) and comparatively less severe (as against RLAP) Internal Liquidity Stress Tests (ILST) where the firm's long and short-term ratings are assumed to be downgraded by two notches and one notch, respectively, from current levels and the firm is expected to continue to operate as a going concern. The Policy requires CGML to maintain self-sufficiency or a minimum of $nil surplus under TLST in each tenor bucket within the 12-month horizon. Monitoring must be performed daily.

Stress metrics are supplemented by internally developed concentration metrics that allow for comprehensive management of funding risks beyond stress horizons.

**29. Financial instruments and risk management** (continued)

*Liquidity risk (continued)*

*Maturity analysis of financial instruments*

The following table assigns the Company's assets and liabilities to a combination of the relevant contractual and/or behavioural maturity groupings based on the remaining period from the balance sheet date. It should be noted that in managing liquidity risk, management uses certain assumptions based on a combination of contractual and behavioural maturity profiles, as shown below. The majority of the financial instruments disclosed below are presented on a contractual basis, with the exception of derivatives, inventory and securities sold but not yet purchased. Due to the nature of the business, behavioural maturity is considered the best reflection of the liquidity of these financial instruments.

| 31 December 2022 | Total $ Million | On demand $ Million | 3 months & less $ Million | 3 - 12 months $ Million | 1 – 5 years $ Million | More than 5 years $ Million |
|---|---|---|---|---|---|---|
| Cash | 7,076 | 7,076 | — | — | — | — |
| Collateralised financing transactions at amortised cost | 91,817 | 72,607 | 4,864 | 14,346 | — | — |
| Derivatives | 197,965 | — | 197,965 | — | — | — |
| Inventory | 57,500 | 57,500 | — | — | — | — |
| Collateralised financing transactions at fair value | 80,372 | 33,891 | 41,637 | 3,952 | 892 | |
| Equity securities held for investment | 122 | — | — | — | — | 122 |
| Cash collateral pledged | 65,000 | — | 65,000 | — | — | — |
| Trade debtors | 15,881 | — | 15,881 | — | — | — |
| Other debtors | 644 | — | 644 | — | — | — |
| **Total financial assets** | 516,377 | 171,074 | 325,991 | 18,298 | 892 | 122 |

| | Total $ Million | On demand $ Million | 3 months & less $ Million | 3 - 12 months $ Million | 1 – 5 years $ Million | More than 5 years $ Million |
|---|---|---|---|---|---|---|
| Bank loans and overdrafts | 10,644 | 1,144 | 1,000 | 5,000 | 1,500 | 2,000 |
| Collateralised financing transactions at amortised cost | 62,240 | 37,963 | 6,359 | 17,513 | 405 | — |
| Derivatives | 198,725 | — | 198,725 | — | — | — |
| Securities sold but not yet purchased | 52,347 | — | 52,347 | — | — | — |
| Collateralised financing transactions at fair value | 52,123 | 15,861 | 30,008 | 5,286 | 968 | — |
| Hybrid financial liabilities | 26,311 | — | 1,738 | 3,812 | 10,541 | 10,220 |
| Cash collateral held | 62,682 | — | 62,682 | — | — | — |
| Trade creditors | 12,080 | — | 12,080 | — | — | — |
| Other creditors and accruals | 2,196 | — | 2,196 | — | — | — |
| Subordinated loans | 11,100 | — | — | — | 1,000 | 10,100 |
| **Total financial liabilities** | 490,448 | 54,968 | 367,135 | 31,611 | 14,414 | 22,320 |
| **Net liquidity gap** | 25,929 | 116,106 | (41,144) | (13,313) | (13,522) | (22,198) |
| **Cumulative liquidity gap** | | 116,106 | 74,962 | 61,649 | 48,127 | 25,929 |

### 29. Financial instruments and risk management (continued)

| 31 December 2021 | Total $ Million | On demand $ Million | 3 months & less $ Million | 3 - 12 months $ Million | 1 – 5 years $ Million | More than 5 years $ Million |
|---|---|---|---|---|---|---|
| Cash | 8,463 | 8,463 | — | — | — | — |
| Collateralised financing transactions at amortised cost | 76,862 | 47,764 | 5,589 | 23,509 | — | — |
| Derivatives | 157,281 | — | 157,281 | — | — | — |
| Inventory | 64,751 | 64,751 | — | — | — | — |
| Collateralised financing transactions at fair value | 81,701 | 40,677 | 34,973 | 5,203 | 848 | |
| Equity securities held for investment | 106 | — | — | — | — | 106 |
| Cash collateral pledged | 35,263 | — | 35,263 | — | — | — |
| Trade debtors | 21,160 | — | 21,160 | — | — | — |
| Other debtors | 376 | — | 376 | — | — | — |
| **Total financial assets** | 445,963 | 161,655 | 254,642 | 28,712 | 848 | 106 |

| | Total $ Million | On demand $ Million | 3 months & less $ Million | 3 - 12 months $ Million | 1 – 5 years $ Million | More than 5 years $ Million |
|---|---|---|---|---|---|---|
| Bank loans and overdrafts | 7,201 | 1,671 | 1,025 | 1,505 | 500 | 2,500 |
| Collateralised financing transactions at amortised cost | 63,067 | 28,490 | 6,619 | 25,363 | 2,595 | — |
| Derivatives | 161,797 | — | 161,797 | — | — | — |
| Securities sold but not yet purchased | 65,997 | — | 65,997 | — | — | — |
| Collateralised financing transactions at fair value | 43,245 | 16,636 | 20,473 | 4,994 | 1,142 | — |
| Hybrid financial liabilities | 26,143 | — | 4,334 | 4,674 | 8,280 | 8,855 |
| Cash collateral held | 27,948 | — | 27,948 | — | — | — |
| Trade creditors | 16,385 | — | 16,385 | — | — | — |
| Other creditors and accruals | 2,044 | — | 2,044 | — | — | — |
| Subordinated loans | 8,600 | — | — | — | 1,500 | 7,100 |
| **Total financial liabilities** | 422,427 | 46,797 | 306,622 | 36,536 | 14,017 | 18,455 |
| **Net liquidity gap** | 23,536 | 114,858 | (51,980) | (7,824) | (13,169) | (18,349) |
| **Cumulative liquidity gap** | | 114,858 | 62,878 | 55,054 | 41,885 | 23,536 |

**29. Financial instruments and risk management** (continued)

The table below assigns the Company's liabilities to relevant maturity groupings based on the remaining contractual future undiscounted cash flows up to maturity. The amounts disclosed in the table are the contractual undiscounted cash flows, whereas the Company manages liquidity risk based on a combination of contractual and behavioural maturity profiles. Derivatives are excluded from the table as these are held for trading purposes. As such, the intention is not to hold these positions to settlement over the period of contractual maturity. Cash collateral held, securities sold not yet purchased, trade creditors, and other creditors and accruals are excluded because they are deemed to be three months or less and are thus very short term.

| 31 December 2022 | Contractual value $ Million | On demand $ Million | 3 months & less $ Million | 3 - 12 months $ Million | 1 – 5 years $ Million | More than 5 years $ Million |
|---|---|---|---|---|---|---|
| Bank loans and overdrafts | 12,235 | 1,145 | 1,127 | 5,285 | 2,230 | 2,448 |
| Collateralised financing transactions at amortised cost | 62,356 | 37,964 | 6,371 | 17,604 | 417 | — |
| Collateralised financing transactions at fair value | 52,488 | 15,863 | 30,107 | 5,442 | 1,076 | — |
| Hybrid financial liabilities | 31,115 | — | 1,745 | 3,898 | 11,385 | 14,087 |
| Subordinated loans | 17,181 | — | 180 | 540 | 3,869 | 12,592 |
| **Total financial liabilities** | 175,375 | 54,972 | 39,530 | 32,769 | 18,977 | 29,127 |

| 31 December 2021 | Contractual value $ Million | On demand $ Million | 3 months & less $ Million | 3 - 12 months $ Million | 1 – 5 years $ Million | More than 5 years $ Million |
|---|---|---|---|---|---|---|
| Bank loans and overdrafts | 7,427 | 1,671 | 1,037 | 1,530 | 616 | 2,573 |
| Collateralised financing transactions at amortised cost | 63,074 | 28,489 | 6,619 | 25,364 | 2,602 | — |
| Collateralised financing transactions at fair value | 43,255 | 16,635 | 20,454 | 5,017 | 1,149 | — |
| Hybrid financial liabilities | 31,398 | — | 4,343 | 4,791 | 9,023 | 13,241 |
| Subordinated loans | 9,853 | — | 46 | 138 | 2,156 | 7,513 |
| **Total financial liabilities** | 155,007 | 46,795 | 32,499 | 36,840 | 15,546 | 23,327 |

*Credit risk*

Credit risk is the potential for financial loss resulting from the failure of a borrower or counterparty to honour its financial or contractual obligations.

Credit risk arises in many of the Company's business activities, including:

- sales and trading in securities and derivatives;
- settlement;
- when Citi acts as an intermediary on behalf of its clients and other third parties; and
- when acting as underwriter or within a capital raising capacity.

Credit risk arises from the Company's activities in OTC derivatives and repurchase and reverse repurchase agreements, as well as securities lending and margin lending transactions. The Company's credit exposure is primarily to professional counterparties in the global financial sector, including banks, investment banks, hedge funds, insurance companies and asset management companies, and the public sector and corporates.

**29. Financial instruments and risk management** (continued)

*Credit risk (continued)*

The Company enters into derivative transactions principally to enable customers to transfer, modify or reduce their credit, equity, interest rate and other market risks. In addition, the Company uses derivatives, and other instruments, as an end user to manage the risks to which the Company is exposed. Credit risk also arises from settlement and clearing activities when the Company 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 on a specific client, industry, region, or other category.

Credit risk is one of the most significant risks the Company faces as an institution. As a result, Citi has a well-established framework in place for managing credit risk across all businesses. This includes a defined risk appetite, credit limits and credit policies, both at the business level as well as at the firm-wide level. Citi's credit risk management also includes processes and policies with respect to problem recognition, including "watch lists," portfolio review, updated risk ratings and classification triggers. The framework is supplemented by regular stress testing and monitoring of exposures, with monthly and quarterly reporting to senior management and the Board of Directors respectively.

The Company has in place a concentration risk management framework which includes risk limits by relationship, country, and industry.

The credit process is based on a series of fundamental policies, including:

- joint business and independent risk management responsibility for managing credit risks;
- a single centre of control for each credit relationship to coordinate credit activities with that client;
- a requirement for a minimum of two authorised credit officer signatures on extensions of credit, one of which must be from a sponsoring credit officer in the business and the other from a credit officer in independent credit risk management;
- consistent risk rating standards, applicable to every Citi obligor and facility;
- consistent standards for credit origination documentation and remedial management; and
- portfolio limits to ensure diversification and maintain risk/capital alignment.

Large exposure limit reports are circulated daily that show the Company's exposure to various counterparty groupings as a proportion of its own funds. Regulations also require that the Company does not exceed specified limits for its non-trading book exposures. Independent credit risk management works with the Regulatory Reporting Group within Finance to identify, monitor, and escalate any growing concentrations of credit exposure to groups of connected counterparties.

Wrong-way risk occurs when the exposure to a particular counterparty is positively correlated with the probability of default of the counterparty itself. Specific wrong-way risk arises when the exposure to a particular counterparty is positively correlated with the probability of default of the counterparty itself because of the nature of the transaction(s) with the counterparty. General wrong-way risk arises when the probability of default of counterparties is positively correlated with general market risk factors. This is monitored at a Company level, and includes circulation of a monthly report that identifies CDS based, OTC or securities financing transactions (SFTs) that generate specific wrong-way risk. Wrong-way risk is mitigated through the use of enforceable netting agreements and margining.

The Company seeks to restrict its exposure to credit losses by entering into master netting arrangements with most counterparties with which it undertakes a significant volume of transactions. Master netting arrangements do not generally result in an offset of balance sheet assets and liabilities, as transactions are usually settled on a gross basis. However, the credit risk associated with favourable contracts is reduced by a master netting arrangement to the extent that if an event of default occurs, all amounts with the counterparty are terminated and settled on a net basis. Many of these arrangements also provide for the calling and posting of variation margin or collateral, further reducing the Company's exposures. The internal measurement of exposure on each credit facility considers legally enforceable netting and margining arrangements – both in terms of current exposure and in terms of the simulated calculation of potential future exposure.

**29. Financial instruments and risk management** (continued)

*Credit risk (continued)*

The following table presents the maximum exposure to credit risk, before taking account of any collateral held or other credit enhancements. It also illustrates the impact on the balance sheet of offsetting, master netting agreements and cash and non-cash collateral.

| | 2022 $ Million | | | | | | |
|---|---|---|---|---|---|---|---|
| **Assets** | **Gross exposure** | **Amounts set off on the balance sheet** | **Net exposure** | **Impact of master netting agreements** | **Cash collateral** | **Securities collateral** | **Net exposure** |
| Derivatives | 197,965 | — | 197,965 | (130,979) | (62,682) | (10,013) | (5,709) |
| Collateralised financing transactions | 226,666 | (54,477) | 172,189 | — | — | (172,189) | — |
| | 424,631 | (54,477) | 370,154 | (130,979) | (62,682) | (182,202) | (5,709) |
| **Liabilities** | | | | | | | |
| Derivatives | 198,725 | — | 198,725 | (130,979) | (65,000) | (5,712) | (2,966) |
| Collateralised financing transactions | 168,840 | (54,477) | 114,363 | — | — | (114,363) | — |
| | 367,565 | (54,477) | 313,088 | (130,979) | (65,000) | (120,075) | (2,966) |

| | 2021 $ Million | | | | | | |
|---|---|---|---|---|---|---|---|
| **Assets** | **Gross exposure** | **Amounts set off on the balance sheet** | **Net exposure** | **Impact of master netting agreements** | **Cash collateral** | **Securities collateral** | **Net exposure** |
| Derivatives | 157,281 | — | 157,281 | (125,536) | (27,948) | (3,797) | — |
| Collateralised financing transactions | 233,583 | (75,020) | 158,563 | — | — | (158,563) | — |
| | 390,864 | (75,020) | 315,844 | (125,536) | (27,948) | (162,360) | — |
| **Liabilities** | | | | | | | |
| Derivatives | 161,797 | — | 161,797 | (125,536) | (35,263) | (6,793) | (5,795) |
| Collateralised financing transactions | 181,332 | (75,020) | 106,312 | — | — | (106,312) | — |
| | 343,129 | (75,020) | 268,109 | (125,536) | (35,263) | (113,105) | (5,795) |

The offset amounts for the impact of master netting agreements for derivatives in the above tables relate to exposures where the counterparty has an offsetting derivative exposure with the Company and a master netting agreement is in place. These amounts do not qualify for net presentation for accounting purposes as settlement may not actually be made on a net basis.

**29. Financial instruments and risk management** (continued)

*Credit risk (continued)*

The collateralised financing transactions offset adjustment relates to balances arising from repurchase and reverse repurchase transactions. The offsets relate to balances where there is a legally enforceable right of offset in the event of counterparty default and consequently a net exposure for credit risk management purposes. Credit risk exposure is monitored on an asset basis except for positions which are specifically collateralised, normally in the form of cash.

As at 31 December the Company's third-party credit exposure (mark to market plus potential future exposure as determined by the Company's internal measure) in relation to collateralised financing transactions and derivatives was distributed as shown in the table below (these exposures do not include derivative and collateralised financing transactions with other group undertakings). The following table shows CGML's exposures categorised by industry.

| **Industry** | **2022** | **2021** |
|---|---|---|
| | **%** | **%** |
| Commercial and universal banks | 20.2 | 24.1 |
| Insurance and fund management (pension funds and mutual funds) | 32.9 | 28.0 |
| Brokers and investment banks | 3.4 | 3.3 |
| Corporates | 24.2 | 19.2 |
| Public Sector | 15.8 | 22.5 |
| Other (including SPVs and Hedge Funds) | 3.4 | 2.9 |
| | 100 | 100 |

The credit quality of the Company's financial assets is maintained by adherence to relevant Citi policies. The Company monitors the credit ratings of its counterparties with the table below presenting an analysis of the Company's trading inventory and derivative transactions by rating agency designation based on Standard & Poor's, Moody's and Fitch ratings as at 31 December:

| | **Government bonds** | | **Non-government bonds** | | **Derivatives** | |
|---|---|---|---|---|---|---|
| | **2022** | **2021** | **2022** | **2021** | **2022** | **2021** |
| | % | % | % | % | % | % |
| AAA / AA / A | 79.0 | 71.9 | 72.5 | 81.4 | 39.4 | 37.2 |
| BBB | 14.4 | 20.4 | 13.3 | 9.1 | 3.2 | 2.8 |
| BB / B | 2.2 | 2.3 | 4.5 | 4.5 | 0.7 | 0.8 |
| CCC or below | 0.5 | 1.2 | 1.3 | 1.4 | — | — |
| Central counterparty (unrated) | — | — | — | — | 31.6 | 33.3 |
| Unrated | 3.9 | 4.2 | 8.4 | 3.6 | 25.1 | 25.9 |
| | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

As discussed above the credit risk is mitigated through the use of collateral, netting arrangements and the application of credit limits.

**29. Financial instruments and risk management** (continued)

*Operational risk (unaudited)*

Operational risk is defined as the risk of loss resulting from inadequate or failed internal processes, people, and systems or from external events. This definition of operational risk 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 the Citi business but excludes strategic and reputation risks. Citi also recognises the impact of Operational Risk on the reputation risk associated with Citi's business activities.

The objective is to keep operational risk at appropriate levels relative to the characteristics of Citi's businesses, the markets in which it operates, its capital and liquidity, and the competitive, economic and regulatory environment.

Citi maintains an Operational Risk Management (ORM) framework with a Governance Structure to ensure effective management of Operational Risk across Citi.

To anticipate, mitigate and control operational risk, Citi maintains a system of policies and has established a consistent framework for monitoring, assessing, and communicating operational risks and the overall effectiveness of the internal control environment across Citi. As part of this framework, Citi has defined its operational risk appetite and has established a Manager's Control Assessment (MCA) programme which helps managers to self-assess key operational risks and controls and to identify and address weaknesses in the design and effectiveness of internal controls that mitigate significant operational risks.

The ORM Framework establishes a foundation on which the activities of businesses, regions and functions, the resulting operational risks and the associated controls are identified, periodically assessed, subject to corrective action, appropriately documented and communicated. Specifically, the ORM Framework establishes minimum standards for consistent identification, measurement, monitoring, reporting, and management of operational risk across Citi.

The process established by the ORM Framework is expected to lead to effective anticipation and mitigation of operational risk and improved operational risk loss experience and includes the following steps:

- establish and monitor Operational Risk Appetite;
- identify and assess Key Operational Risks (KORs);
- design controls to mitigate identified risks;
- establish Key Risk Indicators (KRIs);
- implement a process for early problem recognition and timely escalation;
- produce comprehensive operational risk reporting; and
- ensure that sufficient resources are available to actively improve the operational risk environment and mitigate emerging risks.

As new products and business activities are developed, processes are designed, modified or sourced through alternative means and operational risks are considered.

In addition, ORM proactively assists the businesses, operations and technology and the other independent control groups in enhancing the effectiveness of controls and managing operational risks across products, business lines and regions, and facilitates the management of operational risk at a Citi and Company level.

**29. Financial instruments and risk management** (continued)

*Operational risk (unaudited) (continued)*

*Measurement*

To support advanced capital modelling and management, each business is required to capture relevant operational risk event information. A localised version of the Citi risk capital model for operational risk has been developed and applied against CGML. The PRA has approved this model, for use within the Company as an "Advanced Measurement Approach". It uses a combination of internal and external loss data to support statistical modelling of capital requirement estimates, which are then adjusted to incorporate qualitative aspects of the operational risk and control environment.

To enhance its operational risk management, CGML has implemented a forward-looking scenario analysis programme to identify and quantify emerging operational risks, through a systematic process of obtaining opinions from business managers and risk management experts to derive reasoned assessments of the likelihood and loss impact of plausible, high severity operational risk losses. Scenario results are used to create a management overlay to CGML's operational risk capital model estimates. An AMA model change request is currently pending with the PRA, if approved this will allow scenario analysis impact to be included in the capital model outputs removing the overlay mentioned above.

In addition, there are various governance forums for escalation and reporting of internal control, compliance, regulatory and risk issues, including operational risk loss events.

Key Operational Risks (KOR) are derived from an evaluation of operational risk exposure on a residual risk basis considering its current business strategy, substantial emerging risks and other relevant factors which include assessment of the four Basel operational risk data elements (i.e. internal losses, external losses, scenario analysis, output from Internal Audit Assessments) and from self-assessment results from the Manager's Control Assessment (MCA). The identified KORs for CGML include those set out below. These Risks are aligned to the updated Citi-wide global risk taxonomy that has been developed for operational and compliance risks.

ORM liaises with Subject Matter Experts (SMEs) aligned to each KOR in order to define CGML's risk and to identify appropriate metrics i.e., Key Indicators (KIs) to monitor the profile of each KOR. Given that CGML's business is almost entirely wholesale in nature (falling within the ICG), segment metrics are leveraged as far as possible.

CGML KORs as of 31 December 2022:

- Processing Risk
- Cyber Risk
- Internal Fraud Risk
- Model Risk
- Reporting Risk
- eTrading Risk (Conduct Risk, Processing Risk and Technology Risk)
- Data Management Risk
- Conduct Risk (Market Practices Risk)
- Financial Crime Risk (Anti-Money Laundering ("AML") & Sanctions Risk)
- Third Party Management including Affiliates Risk
- Geopolitical Risk (Processing Risk, Prudential & Regulatory Risk, and Damage to Physical Assets Risk)
- Human Capital Risk

CGML's KORs have been incorporated with the Citi-level global operational risk appetite framework in order to derive CGML's Risk Appetite against risk types in the standardised GRC operational risk taxonomy. These risk types are supported by related metrics and appropriately set thresholds. The Risk Appetite is regularly monitored and reported to CGML's senior governance forums.

**29. Financial instruments and risk management** (continued)

*Reputation and Franchise Risk and New Products or Services*

A Citi-wide (including an EMEA-based) Reputational Risk Committee reviews practices involving reputational or franchise issues. These committees review whether Citi's business practices have been designed and implemented in a way that meets the highest standards of professionalism, integrity, and ethical behaviour.

Additional committees ensure that product risks are identified, evaluated, and determined to be appropriate for Citi and its customers, and safeguard the existence of necessary approvals, controls, and accountabilities.

The New Activity Committee (NAC) is designed to ensure that significant risks, including reputational and franchise risks, for all new ICG products, services, or complex transactions, are identified and evaluated, determined to be appropriate, properly recorded for risk aggregation purposes, effectively controlled, and have accountabilities in place.

*Country Risk*

Country risk is the risk that an event in a country (precipitated by developments within or external to that country) will impair the value of Citi's franchise or will adversely affect the ability of obligors within that country to honour their obligations to Citi. Country risk events may include sovereign defaults, banking defaults or crises, currency crises and/or political events.

The country designation in Citi's risk management systems is based on the country to which the client relationship, taken as a whole, is most directly exposed with regard to economic, financial, socio-political or legal risks. This includes exposure to subsidiaries within the client relationship that are domiciled outside of the country.

Citi assesses the risk of loss associated with certain of the country exposures on a regular basis, with the country concentration limits reviewed as and when economic performance is viewed as deteriorating. These analyses take into consideration alternative scenarios that may unfold, as well as specific characteristics of the Company's portfolio, such as transaction structure and collateral and the Company's exposure in these countries may vary over time, based upon its franchise, client needs and transaction structures.

*Pension Risk*

The Company's defined benefit schemes are measured on an actuarial basis, with the key assumptions being inflation, discount rate, mortality, and investment returns. Return on assets is an average of expected returns weighted by asset class.

Mortality assumptions are based upon the relevant standard industry and national mortality tables. Discount rates are based on specific corporate bond indices which reflect the underlying yield curve of each scheme. Management judgement is required in estimating the rate of future salary growth. All assumptions are unbiased, mutually compatible and based upon market expectations at the reporting date.

Further information about the Company's Pension schemes is contained in Note 8 'Pension'.

*Managing interest rate benchmark reform and associated risks*

LIBOR and other rates or indices deemed to be benchmarks have been subject of ongoing regulatory scrutiny and reform. The LIBOR administrator ceased publication of non-USD LIBOR and one week and two-month USD LIBOR on a representative basis on 31 December 2021, with plans to cease publication of all other USD LIBOR tenors on 30 June 2023. As a result, Citi ceased entering into new contracts referencing USD LIBOR as of 1 January 2022, other than for limited circumstances where regulators recognized that it may be appropriate for banks to enter into new USD LIBOR contracts, including with respect to market-making, hedging or novations of USD transactions executed before 1 January 2022.

## 29. Financial instruments and risk management (continued)

*Managing interest rate benchmark reform and associated risks (continued)*

LIBOR and other benchmarks have been used in a substantial number of the company's outstanding securities and products, including, among others, derivatives, loans, collateralised financing transactions, securities sold not yet purchased and bonds. Citi recognizes that a transition away from and discontinuance of LIBOR, also the replacement of some interbank offered rates (IBORs) presents various risks and challenges that could significantly impact financial markets and market participants, including Citi. Accordingly, Citi has continued its efforts to identify and manage its interest rate benchmark reform risks. 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. 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 2022, the Company continued its efforts to manage its interest rate benchmark reform risks. The Company has been focused on further reducing its LIBOR exposure and remediating its remaining outstanding LIBOR-linked contracts. In addition, the Company has continued to monitor and engage on legislative, regulatory and other initiatives and developments related to interest rate benchmark reform matters.

The Company has also continued to use alternative reference rates in certain newly issued financial instruments. The Company has issued floating rate benchmark and customer-related debt linked to SOFR and originated and arranged loans linked to SOFR. The Company's derivatives contracts are generally linked to SOFR and other global alternative reference rates. The Company also provides term SOFR-linked products to clients in accordance with industry best practices and recommendations.

| | USD Libor | ICESWAP USD | Others***** | Total |
|---|---|---|---|---|
| | **$ Million** | **$ Million** | **$ Million** | **$ Million** |
| **IBOR Exposures by Benchmarks*** | | | | |
| **Financial Assets**** | 362 | 20 | 64 | 446 |
| **Financial Liabilities***** | 5,603 | 8 | 11 | 5,622 |
| **Derivates Notional****** | 684,883 | 37,437 | 17,912 | 740,232 |

*by 31 December 2022, the Company has exposure indexed to a benchmark that is still subject to IBOR reform.
**Financial assets include bonds, collateralised financing transactions etc.
***Financial liabilities include loans, securities sold not yet purchased, collateralised financing transactions etc.
****Derivatives presented are notional values.
***** Others include GBP Libor, CDOR CAD, ICESWAP GBP, SOR and THBFIX.

## 30. Capital management (unaudited)

As a UK regulated entity, CGML is required to hold sufficient regulatory capital to meet its Individual Capital Guidance, CRDIV buffers and any applicable buffers mandated by the PRA. The Company monitors its CET1, Tier 1, total capital ratios and overall capital adequacy daily. The externally mandated regulatory requirements also form part of the Company's internal capital management toolkit, with capital management constituting a key focus for a number of internal committees, in particular the UK ALCO. CGML's capital management framework encompasses a set of internal limits and escalations, defined using a red-amber-green structure. In accordance with these escalations, specified actions are taken and the responsible people are notified at each stage. In addition, the UK ALCO is kept informed of any trigger breaches. CGML also has in place a risk appetite framework to manage the risks to which it is exposed through its business activities: these are both quantitative and qualitative.

### 30. Capital management (unaudited) (continued)

During 2022, CGML remained in compliance with all externally imposed capital requirements. Quantitative details of CGML's regulatory capital position are included in Section 4 of the Strategic Report.

The capital management of CGML is further explained in its Basel Pillar III disclosures document, which can be found at http://www.citigroup.com/citi/investor/reg.htm. Further details of CGML's Regulatory Capital are also included in section 4.3 on page 14 of this report.

### 31. Registered charges

The Company has granted to various banks and other entities a number of fixed and floating charges over certain holdings in securities, properties, collateral and monies held by or on behalf of such banks or other entities.

### 32. Other commitments

*a) Financial guarantees*

As at 31 December 2022, the Company had $34 million (2021: $28 million) of unsecured letters of credit and financial guarantees outstanding from banks to satisfy various collateral requirements.

*b) Capital commitments*

As at 31 December 2022, the Company had no capital commitments (2021: $nil).

### 33. Related party transactions

The Company is a wholly owned subsidiary undertaking of CGMHBL, which is incorporated in the Bahamas. The largest group in which the results of the Company are consolidated is that headed by Citigroup Inc., which is incorporated in the United States of America. The Company defines related parties as the Board of Directors, senior management, their close family members, parent and fellow subsidiaries and associated companies.

A number of arm's length transactions are entered into with related parties. Various services are provided between related parties and these are also provided at arm's length.

Key management personnel compensation comprised of the following:

| | 2022<br>$ Million | 2021<br>$ Million |
|---|---|---|
| **Remuneration** | | |
| Short-term employee benefits | 19 | 18 |
| Post-employment benefits | — | — |
| Other long-term benefits | — | 5 |
| Share-based payment | 11 | 7 |
| | 30 | 30 |

At 31 December 2022, the number of the key personnel was 42 (2021: 50). The remuneration of the key personnel included in the above figures are for CGML Directors, Leadership team and Senior Managers.

Short-term employee benefits comprise salary, role based allowance, incentive compensation in the form of cash payable within twelve months, and other non-monetary benefits such as medical care, housing and cars.

Post-employment benefits include employer paid to pension funds and life insurance. Other long-term benefits include deferred cash incentive compensation which would be payable after twelve months. Share-based payments comprise of share based incentive compensation which would be payable at any period.

**33. Related party transactions** (continued)

The table below summarises balances and transactions with related parties:

| 2022 | Immediate parent company | Subsidiaries | Other related parties |
|---|---|---|---|
| | $ Million | $ Million | $ Million |
| **Assets** | | | |
| Financial assets at amortised cost | | | |
| – cash at bank | — | — | 1,896 |
| – collateralised financing transactions | — | 4,921 | 64,146 |
| Financial assets mandatorily at fair value through profit or loss | | | |
| – derivatives | — | 4,034 | 85,742 |
| – inventory | — | — | — |
| – equity securities held for investment | — | — | — |
| Financial assets designated at fair value through profit or loss | — | — | 1,590 |
| Investments in subsidiary and related undertakings | — | 4,330 | — |
| Pension asset | — | — | — |
| Other assets | — | 1,215 | 10,582 |
| **Liabilities** | | | |
| Financial liabilities at amortised cost | | | |
| – bank loans and overdrafts | — | — | 10,028 |
| – collateralised financing transactions | — | 5,502 | 36,569 |
| Financial liabilities mandatorily at fair value through profit or loss | | | |
| – derivatives | — | 3,588 | 88,452 |
| – securities sold but not yet purchased | — | 289 | — |
| Financial liabilities designated at fair value through profit or loss | — | 26,311 | 409 |
| Other liabilities | — | 935 | 8,353 |
| Subordinated loans | — | — | 11,100 |
| **Guarantees and commitments** | — | — | — |
| **Income statement** | | | |
| Fee and commission income | — | 12 | 135 |
| Net dealing income /(expense) | — | 10,050 | (549) |
| Interest receivable | — | (83) | 1,002 |
| Interest payable | — | (51) | (1,253) |
| Operating expenses | — | (89) | (556) |
| Net finance income on pension | — | — | — |
| Other income | — | — | — |

**33. Related party transactions** (continued)

| **2021** | **Immediate parent company $ Million** | **Subsidiaries $ Million** | **Other related parties $ Million** |
|---|---|---|---|
| **Assets** | | | |
| Financial assets at amortised cost | | | |
| – cash at bank | — | — | 2,372 |
| – collateralised financing transactions | — | 4,927 | 52,957 |
| Financial assets mandatorily at fair value through profit or loss | | | |
| – derivatives | — | 3,645 | 78,335 |
| – inventory | — | — | — |
| – equity securities held for investment | — | — | — |
| Financial assets designated at fair value through profit or loss | — | — | — |
| Investments in subsidiary and related undertakings | — | 3,831 | — |
| Pension asset | — | — | — |
| Other assets | — | 1,198 | 8,655 |
| **Liabilities** | | | |
| Financial liabilities at amortised cost | | | |
| – bank loans and overdrafts | — | — | 5,678 |
| – collateralised financing transactions | — | 6,399 | 35,255 |
| Financial liabilities mandatorily at fair value through profit or loss | | | |
| – derivatives | — | 3,684 | 80,263 |
| – securities sold but not yet purchased | — | 2,925 | — |
| Financial liabilities designated at fair value through profit or loss | — | 23,677 | — |
| Other liabilities | — | 252 | 7,029 |
| Subordinated loans | — | — | 8,600 |
| **Guarantees and commitments** | — | — | — |
| **Income statement** | | | |
| Fee and commission (expense)/ income | | 19 | 271 |
| Net dealing expense | — | 4,653 | (2,527) |
| Interest receivable | — | (86) | 129 |
| Interest payable | — | — | (352) |
| Operating expenses | — | (16) | (506) |
| Net finance income on pension | — | — | — |
| Other income | — | — | — |

No provisions have been recognised (2021: $nil) in respect of doubtful debts related to the amount of outstanding balances and no expense has been recognised during the year (2021: $nil) in respect of bad or doubtful debts due from related parties.

During 2022, the Company made a total of $500 million (2021: $1,703 million) capital contribution to its subsidiary CGME. As at 31 December 2022, the other equity instruments of CGML consist of a) $2,000 million of Additional Tier 1 Notes to Citicorp LLC b) $2,300 million of Additional Tier 1 Notes to Pipestone LLC, another Citi entity.

## 34. Events after the reporting period

The failures of US regionals Silicon Valley Bank and Signature Bank, together with the government-sponsored acquisition of Credit Suisse by UBS, have resulted in increased financial market volatility and a revision of market expectations around future monetary policy. However, some parts of the market have recovered relatively quickly and in the near-term the situation has broadly stabilised. Nevertheless, if further stresses emerge in the banking sector or elsewhere in financial markets as a result of the tightening of monetary policy, market volatility would be expected to increase again.

At the date on which these financial statements were approved, there were no other significant events affecting the Company since the year end.

## 35. Group structure

The Company's immediate parent undertaking is Citigroup Global Markets Holdings Bahamas Limited (CGMHBL), a company registered at Ocean Centre, Montagu Foreshore, East Bay Street, and P.O. Box N3247, Nassau, Bahamas. The Company's ultimate parent company and ultimate controlling party is Citigroup Inc., registered at 1209 Orange Street, Wilmington, DE 19801 United States of America.

The audited consolidated financial statements of Citigroup Inc. are made available to the public annually in accordance with Securities and Exchange Commission regulations and may be obtained from https://www.citigroup.com/citi/investor/sec.htm

## 36. Revenue analysis

As outlined in the Strategic Report, the Company is Citi's international broker dealer and management reviews its performance by geography in the same way as Citigroup Inc. reports its performance.

Citi is organised into four regions, Asia Pacific, EMEA, Latin America and North America.

| | Asia Pacific | EMEA | Latin America | North America | Total Regional | Other / Corp | Total |
|---|---|---|---|---|---|---|---|
| **Revenue by Region** | **$ Million** | **$ Million** | **$ Million** | **$ Million** | **$ Million** | **$ Million** | **$ Million** |
| 2022 Revenues | 599 | 2,762 | 71 | (211) | 3,221 | 403 | 3,624 |
| 2021 Revenues | 579 | 2,636 | 27 | (276) | 2,966 | 531 | 3,497 |
| Increase/(decrease) compared to prior year | 20 | 126 | 44 | 65 | 255 | (128) | 127 |

## 37. Country by country reporting

**Nature of activities**

CGML is headquartered in London and operates globally, generating the majority of its business from the EMEA region, with the remainder coming from business executed with clients in Asia and the Americas.

As at 31 December 2022, the Company had four branch offices and four subsidiaries. The Company's branches in the European Union (EU) were established under the 1993 Investment Services Directive, which has been superseded by the 2005 Markets in Financial Instruments Directive (MiFID). The passported branch is located in the Italy. During 2022, the Czech Republic branch of CGML was liquidated. The Company has made notifications to the PRA to conduct cross-border MiFID services into all European Economic Area (EEA) states. Additionally, the Company has non-EU branches in Dubai, Israel and Switzerland as well as subsidiaries in Luxembourg, Monaco and Germany.

| EU Branches | Non-EU Branches | Subsidiaries |
|---|---|---|
| • Italy (in liquidation) | • Switzerland | • Citigroup Global Markets Luxembourg S.a.R.L (Luxembourg) (liquidated on 7 December 2021) |
| • Czech Republic (liquidated) | • Dubai | • Citigroup Global Markets Funding Luxembourg SCA (Luxembourg) |
| | • Israel | • Citigroup Global Markets Funding Luxembourg GP S.a.R.L (Luxembourg) |
| | | • Citi Global Wealth Management S.A.M (Monaco) |
| | | • Citigroup Global Markets Europe AG (Germany) |

The Company is a dealer, market maker and underwriter in equities, fixed income securities and commodities, and provides investment banking and advisory services to a wide range of corporate, institutional and government clients. The Company's trading activities, which are part of Citi's ICG business, encompass cash, exchange-traded and OTC derivative markets. The Company's major counterparties are banks, other investment firms, investment managers, insurers, and hedge funds. The Company does not originate securitisations or engage in leveraged finance transactions as principal. The Company employs a number of specific individuals who hold key roles or have overall responsibility for whole areas of business on UK entities and branches.

As Citi's primary investment firm in EMEA, the Company is the main employer of front office staff in Western Europe. The Company also provides some operational and technology services to other Citi entities, in line with the global technology model used by these businesses. The Company also relies on shared services provided centrally, or by local Citi entities, for which there are various intercompany service agreements.

The Company has in place a dedicated management team and governance structure to establish a cohesive strategy for all relevant businesses and functions. Critical risk and control functions such as finance, risk management, legal and compliance are all managed centrally to ensure compliance with established policies and standards across the Company, irrespective of business location.

**37. Country by country reporting** (continued)

For the purposes of CBCR, the appropriate disclosures required are summarised below:

| Country | Turnover | Profit before Tax | Corporation Tax Paid (on cash basis) | Public Subsidies Received | Average Number of Employees |
|---|---|---|---|---|---|
| | 2022 ($ Million) | | | | 2022 |
| Dubai | 4 | 1 | — | — | 6 |
| Israel | 71 | 6 | 2 | — | 274 |
| Italy | — | (1) | — | — | — |
| Switzerland | 11 | 1 | — | — | 18 |
| United Kingdom | 3,538 | 336 | — | — | 3,913 |
| **Sub - Total** | **3,624** | **343** | **2** | **—** | **4,211** |
| Withholding Tax | — | — | 66 | — | — |
| **Total** | **3,624** | **343** | **68** | **—** | **4,211** |

| Country | Turnover | Profit before Tax | Corporation Tax Paid (on cash basis) | Public Subsidies Received | Average Number of Employees |
|---|---|---|---|---|---|
| | 2021 ($ Million) | | | | 2021 |
| Dubai | 7 | — | — | — | 6 |
| Israel | 57 | 5 | 1 | — | 209 |
| Italy | — | 1 | — | — | — |
| Switzerland | 9 | (1) | — | — | 16 |
| United Kingdom | 3,431 | 429 | 28 | — | 3,355 |
| **Sub - Total** | **3,497** | **434** | **29** | **—** | **3,586** |
| Withholding Tax | — | — | 96 | — | — |
| **Total** | **3,497** | **434** | **125** | **—** | **3,586** |

**37. Country by country reporting** (continued)

**Basis of preparation**

The basis of specific items of disclosure are as follows:

*Turnover*

Turnover comprises the following lines of the Profit & Loss Account of the Company's audited Financial Statements:

- Commission income and fees;
- Net dealing income;
- Interest receivable; and
- Interest payable.

*Profit or (loss) before income tax*

Profit and loss before tax is reported in line with the profit and loss before tax as presented in the Income statement on page 27.

*Corporation tax paid / (received) (on cash basis)*

Represents the total amount of income tax actually paid during the relevant fiscal year by CGML, including its branches in the relevant tax jurisdiction, as well as withholding tax which is an income tax paid by the payer of the income and treated as a payment on account of the recipient's tax liability. The withholding tax has been disclosed separately and where creditable has been offset against the UK corporation tax liability to prevent the same income being taxed twice.

This is distinct from the tax liability on the profit before income tax for the fiscal year, which in some cases is paid in instalments across the current and following year, such that in any year, cash tax paid is made up of part of the current and part of the prior year tax liabilities. These liabilities will depend on a number of factors including the existence of prior year losses which may be available for offset as well as items which may be booked outside of the income statement.

*Public subsidies received*

The CBCR Regulations do not include a definition of public subsidies received. The Company has determined that this will only include direct support by the Government and that it does not consider central bank interventions or tax incentives such as Research & Development tax credits as public subsidies.

*Number of employees*

Represents the average number of employees on a full-time equivalent (FTE) basis determined by taking an annual average of monthly total FTE, excluding any agency and contracting staff, under employment contracts in each country.

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