Task Force on Climate-Related Financial Disclosures Report 2022

Citi Hong Kong

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1. Introduction

1.1. About This Report

This report presents information on Citi Hong Kong's efforts towards implementing the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) and provides a summary of the progress made in Hong Kong during 2022 on incorporating climate risk and opportunity identification and management into our overall business strategy and disclosure efforts. It represents an important step as we continue to expand our understanding of climate risks and opportunities.

The report also addresses the Hong Kong Monetary Authority (HKMA) disclosure expectation under Supervisory Policy Manual (SPM) module GS-1 on "Climate Risk Management". While Citi started publishing group-level TCFD reports in 2018, this is the first publication of a Hong Kong-specific report.

The Citi Hong Kong TCFD applies to all of Citi's Hong Kong legal entities, including Citibank N.A., Hong Kong Branch (CBNA HK), Citibank (Hong Kong) Limited (CHKL) and Citicorp International Limited (CIL). CBNA HK and CHKL are Licensed Banks, and CIL is a Restricted License Bank regulated and supervised in Hong Kong by the HKMA. CBNA HK, CHKL and CIL are also Registered Institutions regulated by the Hong Kong Securities and Futures Commission (SFC).

This document should be read in conjunction with the Citi TCFD Report 2022 (including the notes and disclosures), which provides additional information on climate-related risk management at the Group level.

1.2. CEO Message

We are pleased to share our first TCFD Report, highlighting our progress in implementing the TCFD recommendations at Citi Hong Kong. Citi has long recognized the challenge of climate change and continues to integrate climate risk awareness across our activities, building our capacity to manage and mitigate climate risks, and aligning our business with opportunities presented by the energy transition.

In 2020, Citi announced its new Sustainable Progress Strategy, which focuses on three pillars of activity: low-carbon transition, climate risk and sustainable operations. In this report, we will cover:

- Citi Hong Kong's climate risk strategy and governance structure.
- How we support our clients on their decarbonization journeys and sustainability goals.
- Our climate risk management framework.
- Progress in our own operations in Hong Kong where we maintained 100% powered by renewable energy.

At Citi, we recognize the importance of transparency and accountability in addressing climate change. This TCFD report underscores our commitment to accelerate our assessment and understanding of the climate-associated risks and opportunities faced by Citi Hong Kong and our clients. Citi Hong Kong has and will continue to be active in supporting the efforts of the financial services industry in driving positive change towards a more sustainable future, with the support of our peers, partners, and the community. Through this engagement we aim to build the awareness of how our actions can make a difference amongst our people at Citi as well as our clients, while at the same time listening and learning about the challenges and the solutions.

One critical challenge we face concerns the quality, accuracy, quantity, and availability of climate-related data, allowing banks to measure, manage and mitigate climate-related risks. On this point, we will work closely with partners across the industry and look to embrace new technologies to provide the right information to drive our climate risk efforts as well as more consistent, comparable, and reliable data to underpin climate disclosures. As a result, we anticipate that certain disclosures made in this report and our other voluntary ESG disclosures are likely to be amended, updated, or restated in the future as the quality and completeness of our data and methodologies continue to improve.

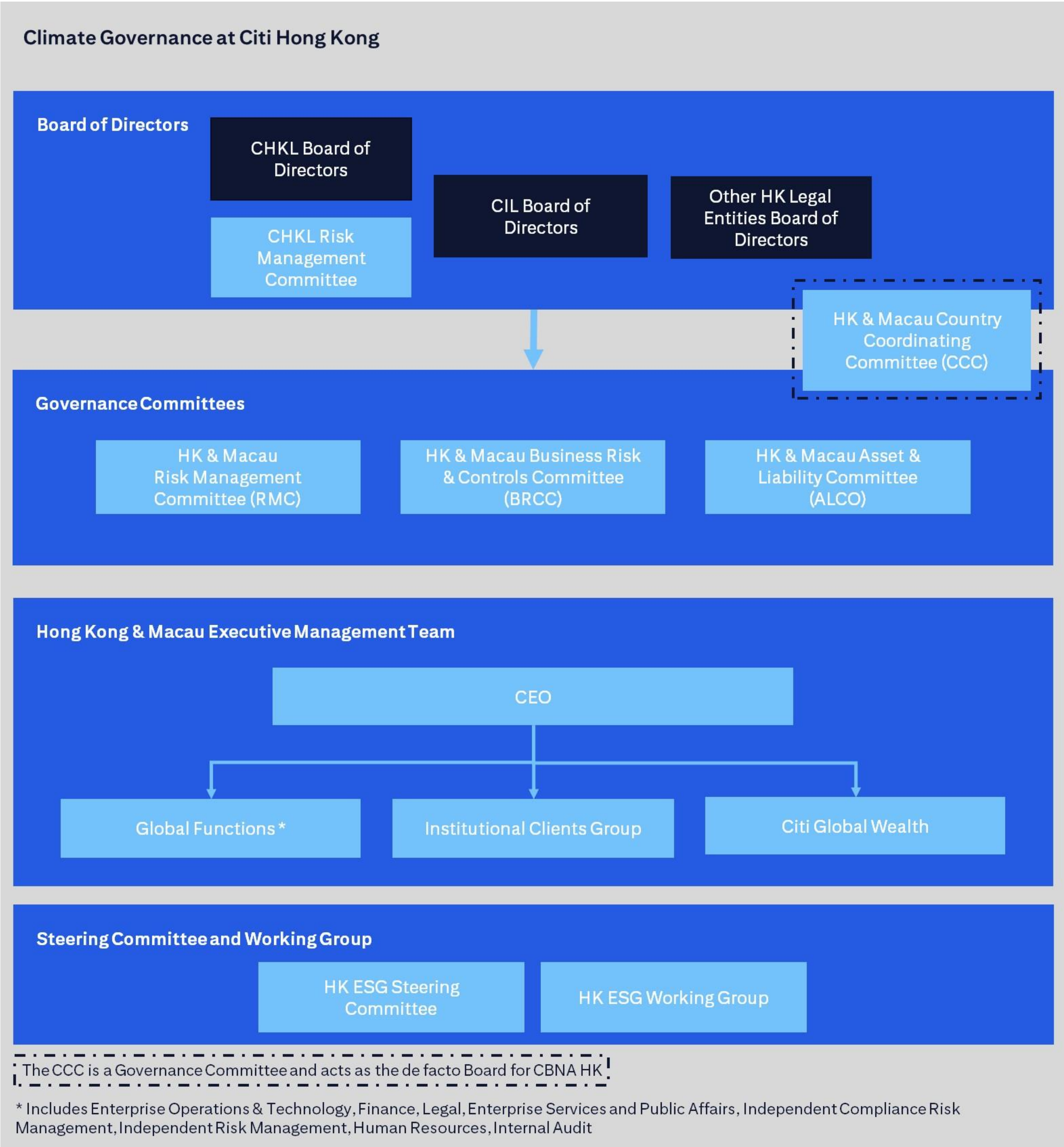
We know there is much more to be done as we continue our path to net zero and support the low-carbon transition. With Citi's global network spanning nearly 160 countries, we are uniquely positioned to support the clients and communities we serve and their transition to a more sustainable future.

Aveline San, Chief Executive Officer, Citi Hong Kong

2. Governance

2.1. Introduction

Our climate governance structure continues to evolve as we advance our understanding of Citi's climate risk and opportunities. The following diagram illustrates our governance structure within which climate risk is embedded.



Roles and responsibilities of these units are included in the following sections.

2.2. Board Oversight

In line with Citi's approach globally, the Boards of our Hong Kong legal entities together with the Hong Kong & Macau Country Coordinating Committee (CCC) have ultimate oversight of Citi Hong Kong's approach to considering, evaluating, and integrating climate-related risks and opportunities throughout the organization.

The Boards receive regular reports from key personnel and the Governance Committees regarding climate-related matters as relevant to the business, operations, size, and complexity of the respective legal entity.

CHKL Risk Management Committee (CHKL RMC) is a CHKL Board-level committee with oversight responsibility for climate-related activities delegated to it by the CHKL Board. During 2022, the CHKL Board and the CHKL RMC approved the CHKL Climate Risk Strategy that aligns with the Citi Hong Kong Climate Risk Strategy. Updates were also provided on environmental, social and governance (ESG) related activities and goals, regulatory requirements on climate risk management, Citi Climate Risk Management Framework, climate risk appetite and CHKL's current state and challenges with respect to alignment with requirements and Citi's global development.

2.3. Management Responsibility

Citi Hong Kong has four Governance Committees, which cover all primary risks to which the franchise is exposed across all businesses, functions, and legal entities. The CCC, chaired by the Citi Hong Kong Chief Executive Officer and attended by heads of various business teams and control functions of Citi Hong Kong, meets monthly, is the most senior Governance Committee for Citi Hong Kong and acts as the Board for CBNA HK. It is the principal Governance Committee for Citi Hong Kong and provides management oversight of strategic risk and reputation risk matters.

Management accountability for climate-related risks follows the global framework adopted by Citi. In addition to the CCC, the HK & Macau Business Risk and Controls Committee (BRCC) provides management oversight of operational and compliance risks. The HK & Macau Risk Management Committee (RMC) provides management oversight of credit risk and market risk (trading book) related matters. The HK & Macau Asset and Liability Committee (ALCO) provides management oversight of capital, liquidity, and market risk (non-trading) matters. The Governance Committees oversee the impact that climate risk drivers can have on each of the key risk categories under the Citi risk taxonomy.

Climate-related risks have been considered by management throughout 2022 and will remain a key area of risk going forward. The RMC received updates on climate risk including the Citi Climate Risk Management Framework, gap analysis results and implementation plan on GS-1 Climate Risk Management, climate risk appetite, client-level climate assessment methodology and results of climate scenario analysis.

The ESG Taskforce for Citi Hong Kong, formed in 2020, which consists of senior members of management, subject matter experts and representative across the franchise, drove initiatives to increase ESG adoption both internally and externally. Internally, the focus was on increasing employee awareness and education, premises and infrastructure, and governance, including:

- Knowledge building and sharing initiatives such as ESG Quiz and ESG Power Hour took place to increase staff awareness of ESG issues.
- Participation in an industry workgroup on climate risk data, with a focus on non-listed small and medium-sized enterprises.
- Completed an initial heat map of properties using available tools/guidance in Citi Hong Kong's mortgage portfolio and are making gradual progress on climate risk stress testing capabilities.
- Climate risk industry exposure heatmaps.
- Implemented a service to upcycle used office furniture, improved building sterilization efficiency, utilized data analytics and rule-based Artificial Intelligence and Machine Learning on power generation from renewal energy system.

Externally, efforts were put into product origination across all Institutional Clients Group (ICG) businesses and investment funds offering in Citi Global Wealth (CGW), including implementation of Sustainable Investing Standard outlining the sustainable investing products classification procedure for the investment business at CGW.

In 2023, the taskforce has been transitioned to an ESG Working Group and ESG Steering Committee to enhance capabilities and activities in line with new objectives. The ESG Working Group's mission is to define, oversee and drive implementation of actions to meet Citi Hong Kong's ESG strategic objectives and commitments aligned with regulatory expectations and standards. Focus areas include regulatory compliance, product origination, processes and controls, internal and external engagement, disclosure and reporting, education and premises and infrastructure. The ESG Steering Committee is co-headed by Citi Hong Kong Chief Administrative Officer and Citi Hong Kong Chief Risk Officer with representatives from the Executive Management Team and ESG Working Group. The Citi APAC ESG Lead also provides climate and other ESG risk training and updates to the ESG Working Group and ESG Steering Committee.

2.4. Skills and Expertise

We continue to educate our Board, as well as senior management, to build out climate-related expertise and capabilities. In 2022, the Boards and Governance Committees received updates regarding our climate risk strategy, climate risk stress tests and regulatory requirements. Members of the Boards, Governance Committees and the Executive Management Team also attended knowledge-sharing sessions and events relating to ESG, green and sustainable banking, and climate risk. We understand that realizing our climate goals requires a skilled workforce with climate expertise, and developing a workforce with greater climate literacy and problem-solving capabilities is embedded into the Citi Hong Kong climate risk strategy. Citi continues to evaluate and develop enterprise-wide training modules on climate risk. Refer to Section 3.3 Sustainable Operations – Education for details.

2.5. Remuneration

Senior executives are held accountable for business performance through specific individual goals. Sustainability and climate-related goals are incorporated into several global executive management scorecards to include progress on Citi's Net Zero Plan and target setting, the global US$1 Trillion Sustainable Finance Commitment, and climate risk management. Within the Hong Kong Executive Management Team, executives who lead teams that are responsible for, or contribute to developing and implementing Citi's approach to climate change also have climate risk-related goals integrated into their 2023 goals and performance review process.

3. Strategy

3.1. Country Climate Risk Strategy

Citi is committed to achieving net zero greenhouse gas emissions (GSG) by 2050. In 2022, Citi Hong Kong established the country climate risk strategy comprising three pillars, which aligns with Citi's Sustainable Progress Strategy and contributes to Citi's Net Zero Plan.

Citi's three key pillars of activity	Citi Hong Kong activity
Financing the Low-Carbon Transition Through our $1 trillion sustainable finance commitment, we are financing and facilitating a wide array of climate solutions that accelerate the transition to a sustainable, low-carbon economy. We're mobilizing capital to support activities in the following areas: circular economy; clean technology; energy efficiency; green buildings; renewable energy; sustainable agriculture and land use; sustainable transportation; and water conservation and quality.	▪ **Goals:** Identify opportunities to contribute to sustainable finance target ▪ **Client Engagement:** To support existing and new clients as they invest in their decarbonization plans as well as low-carbon technologies. Provide products and solutions to clients that align to sustainability principles ▪ **Business and Community Partners:** Develop relationships with partners focused on sustainability
Managing Climate Risk Measuring, managing and reducing the climate risk and impact of our client portfolio is key to the low-carbon transition. We continue to implement and publish our climate-related disclosures in alignment with the recommendations of the Task Force on Climate-related Financial Disclosures. As part of our efforts to reach net zero emissions by 2050, we'll continue to test the resilience of our lending portfolios as we transition, as well as the physical risks related to climate change.	▪ **Climate Risk Management Framework (CRMF):** The CRMF details the governance, principles and requirements to identify, measure, monitor, control and report on climate risks ▪ **Client Engagement:** Understand clients' climate exposure profile, transition plans and strategies to transition to a low-carbon world. ▪ **Stress Testing:** Conduct periodic assessment of resilience to climate risk scenarios ▪ **Governance:** Report information for Board and senior management on strategic goals and implementation progress ▪ **Risk identification:** Identify and determine actions to manage exposures at the franchise and business levels ▪ **Disclosures:** Report relevant information for stakeholders
Strengthening Sustainable Operations We're committed to reducing the environmental footprint of our facilities around the world and strengthening our culture of sustainability across the company. As we continue to report our progress against our 2025 operational footprint goals, we're also working towards our commitment to net zero emissions for our operations by 2030.	▪ **Education:** Develop workforce with greater climate literacy and problem-solving capabilities ▪ **Roles and Responsibilities:** Define roles and responsibilities relating to climate risk management ▪ **Physical footprint:** Set and monitor goals to reduce impact ▪ **Community Partners:** Participate in sustainability programs in the community

3.2. Low Carbon Transition

Citi Hong Kong forms part of the Citi global strategy framework on the commitment to net zero GHG emissions by 2050, including in our own operations by 2030. For more information, please refer to the "Strategy" section of the Citi TCFD Report 2022.

In meeting Citi's commitment and interim targets, Citi Hong Kong's climate risk focus across ICG and CGW businesses is to primarily:

- Understand clients' climate exposure profile, transition plans and strategies to transition to a low-carbon world.
- Support existing and new clients as they invest in their decarbonization plans as well as low-carbon technologies.
- Provide and distribute products and solutions that align with clients' sustainability principles.

ICG

To aid our engagement efforts within ICG, we will progressively utilize the Citi Net Zero Review Template to initiate discussions with corporate clients. A sample of the considerations within the Template are provided below.

Net Zero Review Template Summary: Inputs and Considerations

Business Metrics	❐ Revenues, returns and historical client relationship ❐ Future business opportunities
Company Decarbonization Plan	❐ Stated decarbonization plan or strategy ❐ Targets applicable to sector, target years and coverage (Scope 1, 2 and 3) ❐ Governance, including Board oversight and ties to remuneration ❐ Assessment of strengths and weaknesses of transition plan
Emissions Data	❐ Scope 1, 2 and 3 absolute emissions and emissions intensity ❐ PCAF data quality score (indicating the extent to which emissions are disclosed or need to be estimated) ❐ Emissions assurance status
Output from Climate Risk Assessment Scorecard	❐ Overall score and score breakdown
Capital Expenditures	❐ Insight regarding capex allocated towards transition and towards traditional businesses
Other Considerations	❐ Emerging markets presence ❐ State-owned enterprise ❐ Energy security factors ❐ External benchmarks
Citi Net Zero Metrics (Sector-Specific)	❐ Attributed absolute emissions, emissions intensity and climate alignment score for relevant sectors
Output	Assessment of strengths and weaknesses incorporating perspectives from client engagement

The Markets business has the capability to distribute products across all the major asset classes including, Rates, Currencies, Equities, Spread Products, Commodities and Mult-Assets structures. Any new ESG-related markets products distributed, e.g., ESG-related derivatives, follow Citi's global risk management policies and guidelines.

CGW

CGW Investments (CGWI) has developed an approach to sustainable investments product classification, which may include investment products that consider climate risk. The Global Wealth Management Sustainable Investment Standard dictates the minimum requirements for investments managed by CGWI to be classified as Investment with Purpose (IwP). The term "sustainable investing" is the broad term used to identify investments that involve incorporating various ESG related considerations or objectives into investment selection or portfolio management decisions. IwP-qualified assets must demonstrate an investment philosophy or procedure that complies with one of the four sustainable investment approaches as defined in the Sustainable Investing Standard. These four approaches are:

1) Socially Responsible Investing (SRI)
2) ESG Integration
3) Thematic Investing
4) Impact Investing

Also, an investment product or strategy that meets a regulatory standard defined by a National Competent Authority in a jurisdiction where CGWI operates (e.g., classification under Sustainable Finance Disclosure Regulation (SFDR) as an Article 9 Fund), can also be classified as a sustainable investment, and depending on the ESG characteristics and methodology utilized by the product, their underlying securities and economic sectors, risk management and disclosure level, they can also be sub-classified as per CGWI's Sustainable Investing Standard[1].

In addition to sustainable investment products, since 2022, Citi Hong Kong has offered a Green Mortgage by providing extra cash rebate to mortgage residential properties that have received BEAM Plus Platinum or Gold Rating issued by the Hong Kong Green Building Council (HKGBC).

3.3. Sustainable Operations

Physical Footprint

Our strategy includes operational footprint goals focused on reducing GHG emissions, energy, water and waste, while growing our sustainable building portfolio. Citi Hong Kong will continue to contribute to Citi's commitment towards net zero emissions for Citi's own operations and facilities by 2030.

Renewable Energy Certificate

Citi is one of the leading companies committed to "RE100", a global corporate renewable energy commitment towards 100% renewable electricity. This target was achieved by Citi globally in 2020, including Hong Kong.

Maintaining 100% renewable electricity is one of our 2025 operational footprint goals, and it is a key driver in helping us meet our net zero commitment for our operations. With our global footprint, it can be challenging to source renewable electricity consistently, especially with the current volatility in global energy markets.

In 2022, Citi Hong Kong entered a multi-year, large volume renewable energy agreement with CLP Power for all Citi's energy needs in Hong Kong until 2027. This partnership makes us one of the first companies in Hong Kong to be powering its entire operations using locally sourced renewable energy.

[1] It should be noted that classification as an IwP investment does not mean that the investment meets any applicable regulatory requirements which specify criteria to determine what constitutes a sustainable investment product. Where such regulatory requirements apply, an investment should not be marketed to clients under IwP unless that investment product meets those regulatory requirements, and the IwP categorization and any related IwP materials are consistent with those regulatory requirements.

Photo: Long-term renewable energy certificate presentation

From left: Vicky Kong, Consumer Business Manager, CHKL Chief Executive; Joy Cheng, Head of Hong Kong Corporate Banking, Citi Hong Kong; Aveline San, Chief Executive Officer, Citi Hong Kong and Macau; T.K. Chiang, Managing Director, CLP Power; Lena Low, Senior Director, Customer Success & Experience, CLP Power; Anthony Lo, Director, Customer Success & Sales, CLP Power

On-site renewable electricity

Citi Hong Kong accommodates approximately 3,000 employees in Citi Tower, located at One Bay East, Hong Kong. The 23-storey building integrates sustainability practices and promotes an optimal workplace environment by featuring natural light, good indoor air quality, high water quality and more. In 2021, Citi Tower completed installation of onsite solar hybrid electrical and thermal renewable energy systems. In addition, water being heated up by solar energy is used onsite at the cafeteria kitchen and gym shower rooms.

Citi Tower - solar hybrid electrical and thermal renewable energy system:

- **6,300 sqft.** of solar panels installed
- **106,225 KWh** renewable electricity generated
- **4%** energy saving per month
- **87.4 metric tons** of CO_2e reduced

Government Recognition

Citi Hong Kong participated in Hong Kong Awards for Environmental Excellence (HKAEE) and in February 2022, received the Silver Award in the Servicing and Trading Industry in recognition of our outstanding environmental achievements in Green Leadership, Programme and Performance, and Partner Synergy. This covers our entire portfolio including internal premises operations and external business activities. There were over 3,100 submittals to compete in 10 sectors.

Citi Tower also received “Excellent Level” Hong Kong Green Office Certificate (HKGOC) for all four categories:

- **Energywi$e** and **Wastewi$e:** Citi Tower successfully completed nine goals for energy and waste reduction within 12 months.

- **IAQwi$e:** Citi Tower maintained 12 mandatory parameters of indoor air quality in the building to and implemented Indoor Air Quality (IAQ) education & promotion programs.

- **Carbon Reduction:** Citi Tower reduced over 23.5% of the total GHG emissions, or 560,484 kg of carbon dioxide equivalent, between the baseline and reduction periods.

Sustainable Buildings

In 2017, Citi Tower received the WELL Platinum Certification, and in 2022, it was re-certified following a rigorous performance verification process. In addition, Citi Tower also received Fitwel®'s "Best in Building Health Award" in 2022.

WELL Platinum Certificate

The WELL Building Standard is a performance-based system that measures, certifies, and monitors features of the built environment that impact human health and well-being. Citi Tower at One Bay East in Hong Kong was assessed against WELL's key criteria earning its platinum status, the highest certification level.

In 2017, Citi Tower was the first in Hong Kong to be awarded the WELL certification and the world's largest WELL Certified project for New and Existing Interiors at the time. In 2022 the re-certification for Platinum Certification performance verification process focused on the following aspects: air quality, thermal comfort, initiatives toward the promotion of drinking water, enhanced hygiene strategies and organic farming and planting support – the ability to harvest and use organic herbs and vegetables grown on-site. Citi Tower generated approximately 580kg of compost with on-site composting machine that collects food scraps and leftovers. The compost is then used as fertilizer to landscape gardens, recondition soil from organic farm beds or donate to local organic farmers to reduce waste to landfill. To minimize food waste, unsold boxed meals are donated to underprivileged communities.

The WELL re-certification to platinum reaffirms Citi's continued commitment to promoting wellness in the workplace.

Fitwel

Citi Tower is Fitwel® 3-Star certified and achieved the highest score in the 2021 Commercial Interior Space v2.0 globally. Out of a maximum of 144 possible points that are achievable through 63 evidence-based strategies, Citi Tower achieved 130 points. Scope and deliverables include annual occupant survey, maintenance of emergency equipment and supplies, maintenance of automated electric defibrillator (AED) test schedule, collation and maintenance of certified first responders (CFR) schedule for onward distribution etc.

Fitwel®'s third-party healthy building certification system was created in partnership with the U.S. Centers for Disease Control and Prevention (CDC) and operated by the Center for Active Design, to promote health and wellness through the built environment.

Education

Citi's objective is to develop a workforce with strong climate-related literacy and problem-solving capabilities. Since 2021, Citi Hong Kong has published regular newsletters to raise staff awareness on sustainability matters. The newsletters covered ESG and climate risk regulatory developments, updates on Citi's efforts towards ESG, ESG concepts, case studies on our clients' sustainability efforts, as well as experience sharing from the management as well as sustainability and climate risk teams on our ESG journey.

ESG Power Hour was a learning series covering topics from climate risk disclosure and ESG ratings to decarbonization in the financial sector to help staff to gain a deeper understanding of climate and sustainability issues. A series of staff events were organized aimed at promoting environmental sustainability. Activities included urban farming classes, Guided Tours to Hong Kong's Waste Electrical and Electronic Equipment Park (WEEE Park) and Citi Tower's Renewable Energy System. We also organized several ESG speaker series for franchise-wide audiences.

For 2023 and beyond, while leveraging the extensive global training resources and materials such as the Citi Sustainability Learning Center – a new self-paced learning program focused on climate, sustainability and ESG – Citi Hong Kong will begin embedding a training syllabus for all staff to drive a baseline level of awareness and specialist training for employees where climate risk is an increasing part of their roles. Additionally, Citi Hong Kong will continue to engage at an industry-level on latest developments in order to share and learn about best practices relating to climate risk.

Environmental Initiatives

Throughout the year, Citi Hong Kong colleagues had the opportunities to participate in initiatives organized by local community partners, which support various environmental and sustainability causes. These include textile and clothing recycling, responsible disposal of electronic waste, and food waste reduction.

4. Risk Management

Our Risk Management function is responsible for identifying, measuring, managing, controlling and reporting risks to the bank. Citi continues to view climate risk as a crosscutting risk under our Enterprise Risk Management Framework, which can manifest in each of the risk categories in our risk taxonomy: Credit, Market, Liquidity, Strategic, Operational, Compliance and Reputation.

Citi Hong Kong adopts Citi's Climate Risk Management Framework (CRMF) which is designed to promote a globally consistent approach to managing climate risk. The CRMF details the governance, roles and responsibilities and principles to support the identification, measurement, monitoring, controlling, and reporting of climate risks. The CRMF is being embedded into business-as-usual risk management processes across the bank as well as relevant policies and standards over time. It is expected that the CRMF will evolve over time to reflect new tools and processes as well as industry standards and best practices in climate risk management. Key principles of the CRMF have been incorporated into local legal entity risk management framework together with local specific regulatory expectations for Citi Hong Kong.

Citi Hong Kong is in the process of integrating climate risk into our day-to-day risk management. Our achievements to date are summarized in the following subsections, and we will continue to enhance our approach and processes as new tools and data become available.

4.1. Climate Risk Identification and Categorization

Climate risk is considered a crosscutting risk which can manifest through or amplify existing risks in Citi's risk taxonomy. Citi will continue to review this risk designation as we develop our climate risk management approach. The table below indicates the impacts that climate risk drivers can have on our key risk categories.

Risk Category	Definition	Transmission Channels	Example
Credit	Risk of loss resulting from the decline in credit quality (or downgrade risk) or failure of a borrower, counterparty, third party or issuer to honor its financial or contractual obligations	*Microeconomic* – Impact to an individual obligor's ability to pay Citi	Climate drivers can have an impact on an obligor's source of income/revenue, spend/cost, and value of assets, resulting in a reduction in their ability to pay and in the value of the collateral, as well as an increase in the utilization of credit facilities
Market	Risk of loss arising from changes in the value of Citi's assets and liabilities or reduced net interest revenues resulting from changes in market variables, such as interest rates, exchange rates, equity and commodity prices or credit spreads	*Macroeconomic* – Impact to market variables	Climate drivers, or changes in the expectation of drivers, can result in a change in market value of the bank's investment assets, or an increase in the volatility of market variables, including interest rates, foreign exchange rates, equity and commodity prices, and credit spreads, which can result in losses
Liquidity	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 financial conditions of the firm	*Microeconomic* – Impact to Citi's liquidity position	Climate drivers can trigger unexpected demand for funds by counterparties/customers to fund their obligations, a reduction in the value of assets owned by the bank, or limitations on the bank's ability to roll its debt, affecting the bank's ability to meet both expected and unexpected current and future cash flow and collateral needs

Risk Category	Definition	Transmission Channels	Example
Operational	Risk of loss resulting from inadequate or failed internal processes, people and systems, or from external events	*Microeconomic* - Impact to Citi operations	Climate drivers can disrupt facilities and infrastructure impacting the bank's ability to operate. Damage to physical assets from natural disasters can affect the bank's locations (e.g., physical damage, inaccessibility), employees (e.g., productivity, ability to commute) or operations of third-party providers resulting in disruption of normal business operations.
Reputation	Risk to current or projected financial condition and resilience arising from negative public opinion	*Microeconomic* - External stakeholder perception with regards to Citi's climate-related commitments	Climate drivers can increase reputation risk if Citi is perceived not to be meeting, sufficiently progressing, or providing sufficient transparency on its climate-related commitments
Strategic	Risk to current or anticipated earnings, capital or franchise or enterprise value arising from poor, but authorized business decisions (in compliance with regulations, policies and procedures), an inability to adapt to changes in the operating environment (e.g., economic, regulatory or legislative, competitive) or other external factors that may impair the ability to carry out a business strategy	*Macroeconomic* - changes in economic variables and the policy environment may impact Citi's business decisions	Climate drivers can have an impact on the bank's ecosystem (i.e., supplier, customer, competition, regulation, investors, and society) through changing economic conditions, regulations, low-carbon products and preferences, and legal action, which can lead to the need to make strategic shifts
Compliance	Risk to current or projected financial condition and resilience arising from violations of laws, rules or regulations, or from non-conformance with prescribed practices, internal policies and procedures or ethical standards	*Microeconomic* – Increased regulatory complexity due to different approaches across jurisdictions	Rapidly evolving regulatory landscape creates regulatory and operational complexity and could result in non-compliance, creating risk of losses through penalties or incremental capital requirements

To help Citi understand the climate risk profiles of our individual corporate clients, we have created a tool called the Climate Risk Assessment & Scorecard (CRAS). Our goal is to progressively embed this tool into our risk management processes to help inform our decision-making moving forward. The CRAS was designed to identify the most material climate risks our clients face and the management plans in place for adaptation and mitigation of those risks, using both quantitative and qualitative inputs. The tool assesses clients' vulnerability to climate risk, the feasibility of their plans to transition to a low-carbon environment and the quality of their governance and disclosure. It relies on information disclosed by clients, either publicly or privately, as well as output from third-party tools, our own sector heat maps and certain climate risk metrics. Points are attributed based on vulnerability and mitigation considerations as well as alignment with best practices and are aggregated into a final climate score. This final score captures a company's degree of vulnerability from climate-related financial risks and the extent of a company's preparedness to mitigate these risks through its strategy, governance and disclosures.

Within Citi Hong Kong, we have rolled out the CRAS for the following sectors: Agricultural Products, Aluminums, Autos, Aviation, Capital Goods, Cement, Chemicals, Coal, Energy, Logistics, Power, Shipping and Steel.

Climate Risk Assessment & Scorecard (CRAS) Components

Emissions Data	Scope 1-3 absolute emissions and emissions intensity data, including industry averages as applicable
Scenario-Based Inputs	Climate scenario-based inputs and emissions performance comparisons relative to industry
Transition Risk Drivers	Client's vulnerability to applicable transition risk drivers, including legal and regulatory risks and financial capacity
Physical Risk Drivers	Vulnerability to physical risk drivers both acute and chronic
Transition Risk Mitigants	Decarbonization targets, net zero commitments and transition plans
Capital Expenditures	Capital expenditures allocated to transition
Government Support	Available grants, subsidies and regulatory mechanisms to support transition
Physical Risk Mitigants	Client's adaptation measures for physical risk impacts
Governance	Senior-level climate-related oversight and ties to remuneration
Transparency	Disclosures aligned with TCFD or other recognized frameworks
Output	**Overall climate score with individual scores for:** Vulnerability; Management Mitigation & Adaptation; and Governance & Transparency

4.2. Climate Risk Assessment

CGW

Initial risk assessment of physical risk to our residential mortgage portfolio was performed as part of the pilot climate risk regulatory stress test exercise initiated by the HKMA in 2021. For ongoing identification, the Citi Hong Kong Risk Management team leveraged the latest research paper published by the Civil Engineering and Development Department (CEDD) to identify coastal low-lying and windy residential areas that are more vulnerable to higher potential risks during extreme weather and have identified 1,116 relatively "High Risk" accounts, representing around 5.6% of the mortgage portfolio as of April 2022. Insurance is the key mitigant on physical risks to the Citi Hong Kong mortgage portfolio as we confirmed with the insurer under bank arranged insurance policy that insurance coverage include those coastal low-lying or windy residential areas as identified by the CEDD. We recently kick-started another mandatory regulatory climate risk stress test to be submitted in 2023 and 2024 covering all portfolios to understand the potential impact of climate risk to Citi Hong Kong's exposure.

Citi Hong Kong's discretionary asset management business integrates environmental risks (where data is relevant and/or available) in its investment management process on an ongoing basis by:

- Considering several factors such as ESG risk ratings, physical climate risks and transition risks at the research and portfolio construction/review stage.

- Conducting scenario analysis based on available third-party climate change models that considers factors such as Climate Value at Risk (CVaR) scores in portfolio risk management.

Climate-related risk is one of several risks that this business may consider and such risk forms part of its overall risk management process. However, climate-related risk is not an overriding risk indicator when the bank's discretionary asset management business researches, constructs and manages its portfolios. Currently, our discretionary asset management business does not apply any absolute risk thresholds to determine materiality or applicability of climate risks to an investment or managed portfolio.

ICG

We have successfully completed pilot programs using CRAS within ICG, focusing on clients in the corporate sectors deemed most vulnerable according to our heat maps. We plan to expand the scope to additional clients and sectors as we integrate results into underwriting processes. The CRAS tool has become an integral part of our credit risk assessment process since Q1 2023.

4.3. Climate Risk Measurement and Reporting

Citi Hong Kong adopts the sectoral heatmap to monitor our exposure to vulnerable sectors within the ICG business.

For the discretionary asset management business, Citi Hong Kong conducts scenario analysis based on available third-party climate change models that consider factors such as CVaR scores in portfolio risk management.

Regular updates on quantitative and qualitative aspects of ESG are provided to relevant Governance Committees, Board Committee and Boards to inform our senior management the exposures to climate risk vulnerable sectors, climate risk management implementation status, regulatory requirements and expectations on climate risk management and ESG initiatives.

4.4. Scenario Analysis

Citi uses climate risk scenario analysis, including stress testing, to assess the potential impact of climate-related risk drivers on Citi's risk profile across a range of plausible climate-related pathways. Climate change is expected to have far-reaching systemic impacts in breadth and magnitude, affecting governments, businesses and households across all geographies and sectors.

The associated effects are expected to feed through the economy via two principal channels – transition and physical risks – which are both characterized by deep uncertainty and non-linearity:

- **Transition Risks** arise from the process of adjusting toward a low-carbon economy and encompass policy and legal changes, technological changes, and shifting consumer/market sentiment and societal preferences.

- **Physical Risks** arise through "acute" weather-related events such as heatwaves, floods, wildfire and typhoons as well as "chronic" or long-term shifts in climate patterns, such as rising sea levels, precipitation change, increasing mean temperature and extreme weather variability.

These risks are generally foreseeable based on prevailing scientific studies, but exhibit a high degree of uncertainty driven by lack of clarity around the precise outcomes in terms of time horizon/future pathways and their associated impact on the valuation of financial assets and borrowers' creditworthiness. This uncertainty elevates scenario analysis as a critical tool to reflect the broad range of possible outcomes and model the complex linkages across climate drivers, economic and financial variables, and sector/counterparty-level responses needed to estimate quantitative impact.

Citi Hong Kong participated in the HKMA voluntary pilot stress test in 2021, primarily focusing on the physical risk impact on the residential mortgage portfolio. HKMA has announced plan and guidance for mandatory industry-wide climate risk stress test exercise to be performed in 2023 and 2024. This include a wider coverage to embrace the impacts of transition risk and physical risk arising from the short-term macroeconomic scenarios and the long-term Network for Greening the Financial System (NGFS) scenarios, and to quantify how climate risks are transmitted and manifested in the major risk categories including credit risk, market risk and operational risk across all portfolios in Citi Hong Kong banking entities. The delivery of these regulatory exercises has further established foundational data, scenario, and modelling capabilities, which leverage both external and internal analytical platforms.

4.5. Challenges

Climate-Related Data

One of the many challenges Citi and other companies face in developing and implementing net zero plans concerns the availability and quality of data, both of which result in limitations for climate risk and impact assessments. Citi remains committed to advancing our data quality in parallel with our decarbonization efforts and is engaged with the leading data vendors and industry groups to try to improve overall data quality. The delay in disclosure of climate data across relevant sectors also continues to be a challenge, as it can significantly lag typical financial reporting information and disclosures. Given the current data availability lag, it is possible that our progress against our targets will be similarly delayed, potentially delaying our confirmation of any progress against such targets. We will continue to be transparent about the impacts of the data lag while moving forward with our climate commitments, notwithstanding this constraint. We believe that increased attention to climate disclosure, including mandatory disclosure in many jurisdictions, will ultimately reduce the data lag, enabling our reported results to be more timely and reflect current progress.

5. Metrics and Targets

Citi Hong Kong's climate-related metrics and targets provide quantitative information on our climate strategy and performance. In this section, we summarize the operational and financial data that support our climate strategy and performance and guide our progress towards Citi's Net Zero Plan and our climate-related goals.

5.1. Risk Exposure

Our heatmap assessment helps us prioritize portfolios when further evaluating the risks within each business unit. We intend to initially focus on the higher-risk, higher-exposure sectors. However, additional due diligence will be required to differentiate the vulnerabilities of individual counterparties within each sector (taking into consideration differences in business models, geographic footprint, and climate adaptation and/or mitigation plans).

It is important to note that these risks are not expected to manifest in every sector immediately. For this reason, the following table should not be interpreted as imminent risks to existing exposures, but rather, exposures we are proactively identifying to focus on, where we will work methodically in the coming years to better understand, analyze and manage our climate risk exposures in these sectors.

A comprehensive table of our credit exposures is provided below, including a detailed breakdown of identified sectors into subsectors and, for each, categorized into Major, Moderate, Minor or No Impact industries.

Industry	Sub-Industry	2022		
			Total $ Exposure (MM)	% of Total Exposure
Major Impact Industries		$	955	3.9%
Energy & Commodities	Energy Process Industries		271	1.1%
	Integrated Oil & Gas		244	1.0%
	Oil & Gas Production		190	0.8%
Transp & Indust	Auto & Motorcycle Manufacturers		250	1.0%
Moderate Impact Industries		$	3,177	12.9%
Cons Retail & Health	Agricultural Products		35	0.1%
	Beverages		19	0.1%
	Food Products		179	0.7%
	Tobacco		4	0.0%
Energy & Commodities	Commodity Traders		3	0.0%
Insurance	Reinsurance		1	0.0%
Power Chemicals Metals & Mining	Chemicals		353	1.4%
	Gas & Water Utilities		113	0.5%
	Metals & Mining (excl. Coal)		354	1.4%
	Multi-Utilities, Electric Utilities, and Power Other		85	0.3%
Real Estate	Commercial Real Estate		471	1.9%
Transp & Indust	Aerospace & Defense		0	0.0%
	Air Freight & Logistics, and Logistic Other		313	1.3%
	Airlines and Tour Operators		80	0.3%
	Auto-Related Fincos		1	0.0%
	Aviation Operating Lessors		0	0.0%
	Building Products & Related		239	1.0%
	Capital Goods - Other		3	0.0%
	Construction & Engineering		41	0.2%
	Electrical Equipment		136	0.6%
	Industrial Conglomerates		258	1.1%
	Machinery		49	0.2%
	Paper Forest Products & Packaging		32	0.1%
	Shipping & Maritime Logistics - excl. Offshore		406	1.7%
	Transportation Equipment		2	0.0%
Minor Impact Industries		$	4,615	18.7%
Cons Retail & Health	Consumer Durables & Apparel		1355	5.50%
	Hotels Restaurants & Leisure		4	0.00%
	Household & Personal Products		131	0.50%
	Retail		771	3.10%
Power Chemicals Metals & Mining	Alternative Energy		30	0.10%
Tech Media Telecom	Tech - Hardware		699	2.80%
	Telecom		494	2.00%
Transp & Indust	Professional Services		1080	4.50%
	Rail		51	0.20%
No Impact Industries		$	2,702	10.9%
Financial Institutions		$	4,306	17.4%
Public Sector		$	8,941	36.2%
Grand Total		$	24,696	100.0%

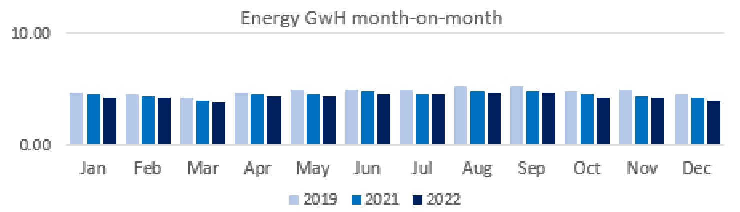
5.2. Operational Metrics and Targets

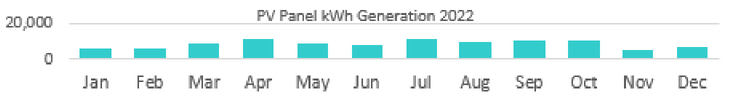
Hong Kong Energy & Sustainability KPI Dashboard– December 2022

While we have been tracking and reporting our GHG emissions, our goals are to reduce not just our GHG emissions but also energy, water, and waste consumption across our operation. Following the outbreak of the COVID-19 pandemic from January 2020, our staff work-from-home rate ebbed and flowed over 2020 to 2022 – which, together with our energy reduction efforts, resulted in a continual reduction in our energy consumption. From 2021 to 2022, we progressed towards our operational goals by reducing 3.26% of energy consumption, 2.78% of water consumption, and 9.12% of total waste, with waste diversion rate improving from 22.27% to 23.88%.

ENERGY

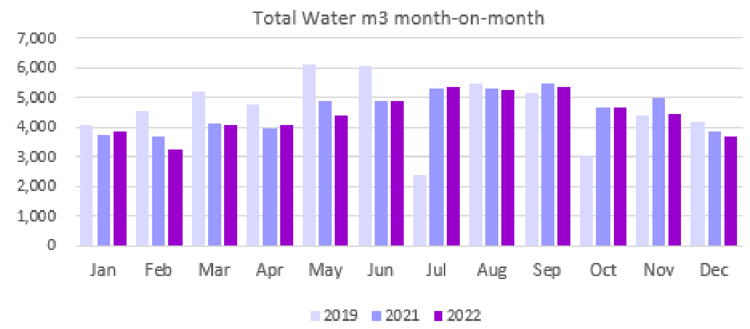
2019 YTD GwH	2021 YTD GwH	2022 YTD GwH	2021 vs 2022 Perf YTD
58.08	53.97	52.21	-3.26%





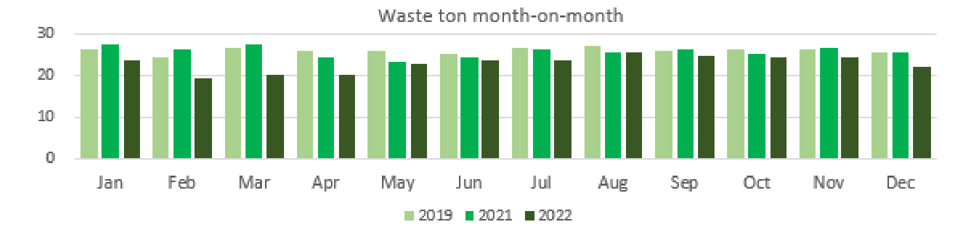
TOTAL WATER

2019 YTD m3	2021 YTD m3	2022 YTD m3	2021 vs 2022 Perf YTD
55,574	54,963	53,434	-2.78%



TOTAL WASTE

2019 YTD Metric Ton	2021 YTD Metric Ton	2022 YTD Metric Ton	2021 vs 2022 Perf YTD
489	396	360	-9.12%



Waste to landfill YTD Metric Ton 2019	2021	2022	2021 vs 2022 Perf YTD	Waste Recycling YTD Metric Ton 2019	2021	2022	2021 vs 2022 Perf YTD
311	307	274	-11.0%	178	88	86	-2.53%

6. Forward-Looking Statements Disclaimer

The disclosures included in this report are being provided in an effort to align with the TCFD recommendations, respond to investor and other stakeholder requests, and further enhance our collective understanding of how climate risk translates into Citi's key risk categories. Our approaches to the disclosures included in this report differ in certain significant ways from those included in Citi's required disclosures, including those mandated by SEC rules and regulations. Certain statements in this report are "forward-looking statements," including, but not limited to, those statements regarding our operational and financed net-zero targets, sustainable and transition finance goals, and related goals, commitments, strategies and plans. In addition, we may make forward-looking statements in other publicly available documents, and our management may make forward-looking statements orally to analysts, investors, representatives of the media and others. Generally, forward looking statements are not based on historical facts, but instead represent our and our management's current beliefs regarding future events. Such statements may be identified by words such as believe, expect, anticipate, intend, aim, estimate, continue, project, may increase, may fluctuate, target, illustrative, plans and similar expressions or future or conditional verbs such as will, should, would, may or could. However, any statement that is not a statement of historical fact, regardless of whether it uses any of the foregoing words, is a forward-looking statement. Forward-looking statements are based on management's current expectations and are subject to risks, uncertainties, changes in circumstances and assumptions that are difficult to predict and are often beyond our control and inherently uncertain. These statements are not guarantees of future results, occurrences, performance or condition, and actual results may differ materially from those included in this report. Moreover, many of the forward-looking statements included in this report are based on assumptions, standards, metrics, measurements, methodologies, data and internal frameworks believed to be reasonable at the time of preparation, but should not be considered guarantees. In particular, assumptions, standards, metrics, methodologies and frameworks for measurement, reporting and analysis of climate change continue to evolve, vary across jurisdictions and regulatory bodies and are the subject of proposed regulatory changes in multiple jurisdictions, which may have a material impact on our future measurement and reporting, as well as the results of the efforts set forth in this report. Furthermore, our ability to measure many of these goals is dependent on data expected to be measured, tracked and provided by our clients and other stakeholders; as a result, our ability to measure progress and meet our targets is subject to the quality and availability of such data, as discussed in this report. Given the inherent uncertainty of the estimates, assumptions and timelines contained in this report, we may not be able to anticipate whether or the degree to which we will be able to meet our plans, targets, goals or commitments in advance. Further, Citi has not, and does not intend to, independently verify third-party data. Actual results, performance or outcomes may differ materially from those expressed in or implied by any of these forward-looking statements due to a variety of factors, including, among others, global socio-demographic and economic trends, geopolitical challenges and uncertainties, financial results, energy prices, consumer and client behavior, technological innovations, climate-related conditions and weather events, pandemics, legislative and regulatory changes, the outcome of current and future legal proceedings and regulatory investigations, public policies, engagement with clients, suppliers, investors, government officials and other stakeholders, our ability to gather and verify data regarding environmental impacts, our ability to successfully implement various initiatives throughout the company under expected time frames, the compliance of various third parties with our policies and procedures and legal requirements and other unforeseen events or conditions. You should not place undue reliance on any forward-looking statement. Other factors that could cause actual results, performance or outcomes to differ materially from those described in forward-looking statements can be found in this report, in Citi's filings with the SEC and other disclosures available on our corporate website at www.citigroup.com. This report contains statements based on hypothetical scenarios and assumptions, which may not occur or differ significantly from actual events, and these statements should not necessarily be viewed as being representative of current or actual risk or forecasts of expected risk. This report may consider disclosures recommendations and broader definitions of materiality used by certain voluntary external frameworks and reporting guidelines that differ from mandatory reporting, including under U.S. federal securities laws and regulations. Information within this report may therefore be presented from a different perspective and in more detail than our mandatory reporting. Thus, while certain matters discussed in this report may be significant, say significance should not be read as necessarily rising to the level of materiality used for the purpose of complying with the U.S. federal securities laws and statements in this report is not an indication that the subject or information is material to Citi for U.S. federal securities laws and regulations reporting purposes. Any forward-looking statement speaks only as of the date originally made and is based on management's then-current expectations, and we do not undertake to update any forward-looking statement to reflect the impact of circumstances or events that arise after any forward-looking statement was made.