Nasdaq

# 2020 TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES REPORT

# CONTENTS

## LETTER FROM THE CFO

### Foreword

For 50 years, Nasdaq has been driven by our mission to create better markets through innovative technology. Our position at the intersection of the financial, corporate, and regulatory communities also gives us a unique perspective on corporate sustainability. This vantage point allows us to support our clients as they navigate the complex and fast-evolving ESG landscape.

At the same time, as a public company ourselves, we engage with all our stakeholders – including our employees, our shareholders, our suppliers, and our communities – to improve our own practices, performance, and transparency as we continue our ESG journey. As we move to a post-pandemic world, it's clear how important it is for Nasdaq to contribute to a more sustainable, global marketplace.

This past year, Nasdaq renewed our environmental commitment by achieving carbon neutrality for a third consecutive year. As a governance leader, we increased our investments in diversity and inclusion, data privacy, and cybersecurity. And for the fifth consecutive year, we were named to the Dow Jones North America Sustainability Index in recognition of our efforts to integrate sustainable practices into our business.

To underscore our commitment to inclusive growth and prosperity, we launched our new Purpose Initiative in 2020, which aligns the new Nasdaq Foundation, our corporate sustainability and community outreach programs under one strategy. Amidst the pandemic, our global teams generously donated their time and resources, including more than 2,600 virtual community service hours and a total financial impact of approximately $20 million last year.

Nasdaq is pleased to publish this inaugural report, which has been informed by the recommendations of the Task Force on Climate-related Financial Disclosures. We remain deeply committed to sustainability as we engage with stakeholders at all levels to advance our mission of building a more inclusive and prosperous world.

— Ann Dennison, Chief Financial Officer, Nasdaq

## RATIONALE FOR TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES

Our responses to the Task Force on Climate-related Financial Disclosures recommendations are organized into sections that align with the TCFD framework: (1) Governance, (2) Risk Management, (3) Strategy, and (4) Metrics and Targets. Subject matter experts across Nasdaq were engaged across the entire process from input to review and validation. Interviews were conducted across several areas of our business to enhance our implementation of the TCFD recommendations and inform our disclosure.

Our first report features the results of climate scenario analyses. Physical risks were evaluated by mapping the exposure of Nasdaq's physical locations to chronic and acute climate-related hazards under a high global emissions scenario – IPCC RCP 8.5. Transition risks were evaluated by quantitatively assessing the possible impacts of mandatory carbon pricing policies on our direct operations, and by qualitatively assessing our business strategy against other policy and legal, market, technology, and reputational risks which could materialize under two different global emissions scenarios that meet Paris Agreement targets - an Orderly, and Disorderly, scenario developed by the Network for Greening the Financial System (NGFS).

Nasdaq is committed to the continued development of company-wide implementation and integration of climate-related risk and opportunity consideration. Through our efforts, we aim to enhance our understanding of the possible impacts of climate-related risks and opportunities to which we are exposed, and enable our company to remain resilient to risks and position it to actualize opportunities in the transition to a low carbon economy.

**HIGHLIGHTS:**

### METRICS AND TARGETS

- Ongoing commitment to the calculation and disclosure of our emissions inventory across Scopes 1, 2 and 3
- Signatory commitment to the Science-Based Targets Initiative (SBTI)

### SCENARIO ANALYSIS

- 3 emissions scenarios evaluated
- Physical risk analysis of our direct operations against an unmitigated emissions scenario (IPCC RCP 8.5)
- Transition risks against two below 2°C scenarios (NGFS Orderly and Disorderly)

### CLIMATE GOVERNANCE

- Our Nominating & ESG Committee of the Board of Directors has direct oversight of Nasdaq's sustainability and ESG strategy approach and progress

### FUTURE PLANS

- Enhance scenario analysis coverage
- Set ambitious emissions reduction targets
- Drive ESG progress and disclosure across markets
- Our partnership with Puro.earth will scale the marketplace to address a growing demand for carbon removal by corporations, as well as enable new carbon removal methodologies as technology evolves.

## TCFD GOVERNANCE

### Our Governance

Nasdaq believes in robust, transparent governance and management structures organized to facilitate dynamic action on rapidly evolving ESG and climate-related issues. We view this as critical to our long-term success. Our operational climate guidance is overseen by the Corporate ESG Steering Committee, which is responsible for the day-to-day management of ESG and climate-related risks and opportunities, while the Nominating & ESG Committee of the Board of Directors ("the Board") oversees longer-term strategy and the execution of these responsibilities. Sixty percent of our Board members have experience with environmental and social matters, strengthening our Board's ability to oversee our sustainability initiatives.

**SUSTAINABILITY GOVERNANCE:**

NOMINATING AND ESG BOARD COMMITTEE (COMPRISED OF INDEPENDENT DIRECTORS)

CORPORATE ESG STEERING COMMITTEE (COMPRISED OF SENIOR LEADERS)

HEAD OF CORPORATE ESG AND REPORTING

| Business and Expert functions representing the various corporate functions | |
|---|---|
| Finance and Real Estate | Corporate Governance and Compliance |
| Marketing and Communications | Group Risk |
| Diversity, Inclusion & Belonging | Investor Relations |
| Procurement & Sourcing | Cyber Security & Information Systems |
| People Management | Corporate Social Responsibility & Sustainability |

## Board oversight of risks and opportunities

The Nominating & ESG Committee of Nasdaq's Board of Directors ("the Board"), comprised of independent directors oversees sustainability and ESG issues and is responsible for overseeing our long-term climate strategy. The Nominating & ESG Committee held nine meetings in 2020. The Nominating & ESG Committee also guides and reviews our ESG strategy and risk management policies and ESG performance objectives. Executive Management of Nasdaq is responsible for and periodically reports to the Board of Directors regarding the execution of our ESG and climate related risks and opportunities that may impact Nasdaq's business operations, performance and public reputation.

## Role of management in assessing and managing risks and opportunities

Nasdaq's operational climate-related management is led by the Corporate ESG Steering Committee, which is co-chaired by the Chief Financial Officer and Chief Marketing Officer. The Committee is comprised of subject matter experts from various business units. The Corporate ESG Steering Committee meets on a monthly basis. Meetings cover all ESG matters, including assessing and managing ESG risks and their potential impacts on the company strategy; setting and tracking short-, medium- and long-term ESG targets; evaluating climate-related M&A opportunities; monitor progress against climate related goals and targets, including those related to emissions reductions and renewable energy procurement and reviewing of Nasdaq's sustainability reporting.

The annual compensation incentive plan for certain of the members of the Corporate ESG Steering Committee include payouts upon the achievement of specific ESG goals, including climate-related targets.

The Head of Corporate ESG, who is a member of the Corporate ESG Steering Committee, is responsible for executing Nasdaq's sustainability strategy; communicating on performance, metrics and ambitions through Nasdaq's annual Corporate Sustainability Report and other related disclosures; and engaging with stakeholders across the company on sustainability related matters.

## OUR STRATEGY

### Overview of risks and opportunities

Nasdaq's climate strategy is informed by our Global Reporting Initiative (GRI) aligned materiality[1] assessment and continual stakeholder engagement. Our strategy is driven by consideration of climate-related risks and opportunities that could materially impact our business operations, products and services, supply chain, and investments. We conducted climate scenario analyses to evaluate the exposure of our physical locations to climate hazards, and the possible impacts of transition risks within our operations and markets. We considered climate-related risks and opportunities across three time horizons: short-term, to 2021; medium-term, to 2023; and long-term, to 2040.

Climate-related risks and opportunities relevant to Nasdaq were identified and delineated as per the TCFD framework categorizations. Each risk or opportunity was assigned a time horizon based upon when it was deemed likely to materialize if the risk was to remain unmitigated or the opportunity was actioned.

Transition risks refer to risks associated with achieving a lower-carbon economy, encompassing disruption from policy and legal, technology, market, and reputational aspects. Physical risks refer to those due to the impacts of climate change, including event-driven (acute) and risks resulting from longer-term shifts in climate patterns (chronic).

| Transition Risk Type | Relevant Risk | Time Horizon |
|---|---|---|
| Policy & Legal | **Increased pricing of GHG emissions**<br>The introduction of mandatory carbon pricing or increases in costs of mandatory carbon pricing in regions where Nasdaq operates, may result in increased operating or compliance costs. | Long-Term |
| | **Enhanced climate reporting obligations**<br>Enhanced public company reporting obligations may result in a decrease in new listings or increase in de-listings, which may adversely affect Nasdaq's business, financial condition and operating results. | Medium-Term |
| Technology | **Costs to transition to lower emissions technology**<br>Costs borne by emissions intensive listed companies and business customers, research & development, capital investments, and adoption and deployment of new technologies, may result in reduced demand for Nasdaq's products and services. | Long-Term |
| Market | **Changing customer behaviors**<br>Shifts in customer behavior may reduce demand for any services that are not aligned with global climate goals, or alter revenue mix and sources, which may result in decreased revenues. | Medium-Term |
| | **Increased costs of raw materials**<br>This may result in the re-pricing of assets for Nasdaq's listed companies operating in certain sectors (e.g. fossil fuel reserves, land valuations, securities valuations), or potentially an increase in bankruptcy of listed companies. | Long-Term |

1 References to materiality and similar terms refer to ESG topics that we have found to be relevant to our business based on our 2021 materiality assessment. Such references to materiality are different and separate from how materiality is used and understood in the context of securities and other laws of the United States or as used in the context of financial statements and financial reporting. ESG topics and issues described as material in this report may not be be considered material for other reporting purposes.

| Transition Risk Type | Relevant Risk | Time Horizon |
|---|---|---|
| | | |
| Reputation | **Increased stakeholder concern or negative stakeholder feedback, shifts in consumer preferences, sectoral stigmatization, and uncertainty in market signals**<br><br>These factors may result in reduced investor appetite and reduction in capital availability, as well as reduced revenue from goods and services, from decreased production capacity (e.g. delayed planning approvals and supply chain interruptions), and from negative impacts on workforce management and planning (e.g. employee attraction and retention) | Long-Term |

| Physical Risk Category | Relevant Risk | Time Horizon |
|---|---|---|
| Acute | **Increased severity of extreme weather events**<br><br>Extreme weather events, such as hurricanes, and floods could directly result in increased costs for adaptation measures or repairs, or decreased revenues due to disruptions to Nasdaq's business operations. Nasdaq might also be indirectly affected by acute risks due to event-driven impacts across the value chain, such as disruptions to suppliers, listed companies, or business customers. | Long-Term |
| Chronic | **Changes in long-term climate conditions**<br><br>Changes to average temperatures, precipitation patterns and rising sea levels could directly result in increased costs for adaptation or relocation measures, as well as increased procurement costs for utilities. Nasdaq may also be indirectly affected by chronic risks due to longer term impacts across the value chain, such as disruptions to suppliers, listed companies, or business customers. | Long-Term |

## Climate-related opportunities

Across Nasdaq, we strive to operate responsibly through managing risks and using our resources wisely. We have made strong progress on our internal ESG initiatives, including sourcing renewable electricity and purchasing Renewable Energy Certificates (RECs) across our operations, ongoing investment in energy efficiency programs, offsetting our residual emissions, expanding our sustainability-related disclosures, and implementing programs to develop our diverse global workforce to drive forward our ESG ambition.

Our global Green Team, one of our eleven employee networks, has enhanced awareness and ambition across our global operations and provided opportunities for employees to be involved in sustainability initiatives.

In 2021, we signed a commitment with the Science-Based Targets Initiative to set emission reduction targets aligned with their framework to reflect our position of support for the transition to a low carbon economy. We are in the process of installing infrastructure that will help us accurately analyze and benchmark our footprint data. This will further assist our efforts to set accurate and ambitious reduction targets within 24 months of signing the commitment letter based on the Science-Based Targets Initiative. In addition to expanding our own ESG efforts, we also intend to monitor our key suppliers on their environmental performance and climate resilience, and encourage them to adopt strategies in line with our Environmental Practices Statement.

Nasdaq is fully committed to continuing our ESG efforts, and leading the shift towards more sustainable and inclusive capital markets. We play a key role by engaging and educating our clients on climate risks and provide ESG-focused marketplace solutions that help clients achieve their own ESG objectives through our various offerings including an ESG reporting guide.

- **Nasdaq Sustainable Debt Market** was launched in 2015, and provides dedicated segments for listed green, social and sustainable bonds, structured products and commercial papers. Our sustainable debt markets support corporates in capital raising for earmarked investment in sustainable projects and highlight sustainable investment opportunities to investors with a green, social or sustainable investment agenda.
- Our **OneReport** tool provides ESG data management and reporting services, allowing companies to communicate their climate exposure effectively (including SASB and TCFD reports).
- Through the **Nasdaq Sustainable Bond Network,** we offer an efficient reporting solution that increases transparency in the global sustainable bond market. By incorporating ESG data directly into our indices, we believe that we can enhance opportunities to invest in companies that take responsibility for a more sustainable future.
- We also provide **ESG advisory services** and board engagement and offer an ESG disclosure guide for companies. The continued development of these products and services represents an opportunity to align our business with globally agreed climate goals.
- Nasdaq recently acquired a majority stake in **Puro.earth**. Puro.earth is the world´s first marketplace to offer industrial carbon removal instruments that are verifiable and tradable through an open, online platform. Our partnership with Puro.earth will scale the marketplace to address a growing demand for carbon removal by corporations, as well as enable new carbon removal methodologies as technology evolves. The addition of Puro.earth's marketplace capabilities to Nasdaq's environmental, social, and governance (ESG)-focused technologies and workflow solutions gives Nasdaq's corporate clients further resources to successfully achieve their ESG objectives.Carbon removal is a process in which CO2 is physically captured from the atmosphere and stabilized into a durable storage. Carbon removal is expected to play a critical role in keeping global warming below 1.5C degrees. Puro.earth maintains a rigorous process to approve and verify its removal methodologies. Leveraging its robust experience maintaining quality and compliance standards on both the issuer and supplier side, Nasdaq will work with Puro.earth to further strengthen the governance around new methodologies by establishing an external advisory committee with representation from the industry, academia, buyside and suppliers.

**The table below represents our key climate related opportunities and estimated time horizon to realization.**

| Classification | Key Opportunities | Time Horizon |
|---|---|---|
| Products & Services | **Shift in consumer preferences**<br>Increased demand for ESG related products and services could result in increased revenue from these growing business opportunities, and increased trust from clients and investors. | Short-Term |
| Resource Efficiency | **Reduced operating and procurement costs from resource efficiency gains**<br>By continuing to operate more efficiently, Nasdaq could reduce operating costs across its offices and data centers. | Medium-Term |
| | **Adapt our resource needs for our workforce**<br>As we pursue greater resource efficiency across our real estate portfolio and incorporate the lessons of the COVID-19 pandemic, our climate risk analysis also provides opportunities to continue to right-size our physical footprint—focusing on the optimization of space to meet business needs and facilitate home working solutions. This optimization may reduce fixed asset costs and increase our resilience in the event of direct disruptions to our business. | Long-Term |
| Energy Source | **Use of lower emissions sources of energy**<br>By pursuing the procurement of 100% renewable electricity across our offices and data centers, we may reduce exposure to future fossil fuel price increases and fuel costs as the price of renewable energy decreases over time. | Medium-Term |
| Reputation | **Climate leadership commitments and memberships**<br>Committing to and achieving our climate ambitions, including Science-Based Targets and transparency through reporting and disclosure, may bolster Nasdaq's reputation as a climate-focused organization. | Short-Term |
| Resilience | **Engagement of market on climate risks and disclosure**<br>Encouraging listed companies and customers to better evaluate, benchmark and minimize their climate exposure may increase market stability and valuations due to more widespread resilience planning. | Long-Term |

## Impact on business, strategy, and financial planning

Nasdaq evaluates climate risks and opportunities that may affect our products and services, value chain, operations, and investments. We focus primarily on risks that are likely to increase direct costs or interrupt our primary business functions. While we have exposure to both physical and transition drivers, transition drivers present both the most significant risks and opportunities for Nasdaq's business, strategy and financial planning across all time horizons considered.

We seek to mitigate our business risks associated with climate change through our low-carbon transition plan, which has included: benchmarking Nasdaq's global real estate portfolio to identify opportunities for energy efficiency and pursuing green building certifications; minimizing emissions resulting from business travel; purchasing renewable electricity, and committing to setting Science-Based Targets. We also intend to engage suppliers and clients on climate risk, seeking to build resilience and hedge against future price or market instability.

Nasdaq has also increasingly integrated ESG into our service offerings and invested in new ESG-related products and services, including through the acquisition of OneReport in January 2020. We believe that a continued focus on ESG will help to grant us access to new markets and capture more of the existing market.

Looking forward, we intend to use the TCFD reporting process as a further opportunity to seek to ensure our climate risk exposure is managed and mitigated, and that we are harnessing opportunities to their full potential. We also intend to draw on the resilience lessons of the COVID-19 pandemic, particularly as it concerns the optimization of office space and resources and enabling remote work.

# NASDAQ'S ESG PRODUCTS & SERVICES FOR CORPORATE CLIENTS

**Nasdaq offers technology, expertise and insights to help companies navigate the complexities of ESG as a measurement of performance and brand building opportunity.**

### ESG ADVISORY

Pairs companies with ESG expertise to help analyze, assess and action best-practices ESG programs, with the goals of attracting long-term capital and enhancing value

### NASDAQ ONEREPORT

Offers an easier way to manage ESG-related measurement and disclosures through a data management and reporting tool

### NASDAQ BOARD PORTALS

Provides a paperless collaboration solution for boards, committees and leadership teams designed to drive governance excellence while keeping security in mind and optimizing workflows

### NASDAQ BOARD ENGAGEMENT

Delivers consultative services and technology that drive board excellence through board and CEO evaluations and digital director and officer questionnaires

### NORDIC SUSTAINABLE BOND MARKET

Highlights sustainable investment opportunities that attract investors with a green, social or sustainable investment agenda

### NASDAQ SUSTAINABLE BOND NETWORK

Improves transparency for U.S. and EU-based green, social and sustainability bonds

### NASDAQ NORDIC ESG DATA PORTAL

Enables companies and investors to access ESG metrics through a central database, compilation and repository

### PURO.EARTH

Provides our global network of corporate clients access to a unique marketplace for carbon removal

## Scenario analysis and strategy resilience

Nasdaq recognizes that there remains uncertainty regarding how to quantify the impact of different climate scenarios and reasonable persons may differ in their assessments and conclusions. As our knowledge and understanding of different climate models continue to evolve, it is possible that our assessments of different climate scenarios may also change. In addition, like all scenario analysis, our assessment is hypothetical and subject to uncertainties and limitations, including current market and regulatory conditions. We expect to continue to evolve our scenario analyses to incorporate changes in future market and regulatory conditions.

Our experience suggests that the trend towards ESG is here to stay – and will have an escalating impact on our sector in the coming years. Nasdaq's low-carbon transition strategy and ESG product offerings are aligned with a transition to a low-carbon economy; however, we appreciate the importance of thoroughly exploring all aspects of climate-related risks including those that may materialize under high global emissions scenarios.

In accordance with the TCFD recommendations, we examined the resilience of Nasdaq's current strategy by conducting climate scenario analyses. Using this process, we assessed and explored the impact of Nasdaq's exposure to physical and transition climate-related risks and opportunities that may have the potential to affect our profitability, reputation, and access to capital.

Our scenario analysis exercise indicated that our most material climate risks and opportunities stem from transition risks – and particularly from the pricing of carbon emissions in order to limit global warming to the globally agreed target of below 2˚C. Nasdaq's commitment to set science-based emissions reduction targets will not only help efforts to improve resource efficiencies and bolster resilience but also help hedge against increasing carbon prices.

In future iterations of our TCFD report, we aim to further explore the vulnerability of our direct operations to the climate hazards identified, with a view to project possible financial impacts related to business disruption, and the costs of mitigation. Additionally, we aim to expand the scope of analysis to broader aspects of our value chain, to achieve a more comprehensive understanding of the possible indirect impacts that physical climate risks could pose to Nasdaq.

**Table 2 Scenarios applied**

| | **Intergovernmental Panel on Climate Change** | **Network for Greening the Financial System** | |
|---|---|---|---|
| | **High emissions scenario RCP 8.5** | **Orderly** | **Disorderly** |
| Description | An unmitigated global emissions scenario with little to no policy changes, characterized by high atmospheric GHG concentrations. | A global scenario, which represents early, ambitious, consistent, action to achieve a net zero carbon emissions economy. | A global scenario, which represents late, disruptive, sudden and/or unanticipated action sufficient enough to achieve a net zero carbon emissions economy. |
| Outcome | Global mean surface temperature change (2100): 2.6 – 4.8˚C Likely range<br>Global mean sea-level rise (2100): 0.45 – 0.82m<br>Increasingly disruptive extreme weather events and precipitation patterns | Consistent increases in carbon prices from 2025 – 2050<br>67% chance of limiting global warming to below 2°C by end of century | Minimal increases in carbon prices through 2030, followed by rapid increases in prices through 2050<br>67% chance of limiting global warming to below 2°C by end of century |

## Physical risks

Physical risks were evaluated under a high global emissions scenario, RCP 8.5, characterized by extreme and disruptive changes to climatic conditions. We chose to apply this high global emissions scenario to stress-test the company against a potential worst-case climate scenario. In this first iteration of our climate scenario analyses, we mapped five physical risk drivers across a sample of our physical global locations, including offices and data centers, to attain a preliminary understanding of our direct exposure to physical climate hazards. The scope covered locations accounting for over 80% of full-time employees and 94% of 2020 electricity consumption. We aggregated site-level results by expressing the percentage of our full-time employees exposed in each respective region. Nasdaq classified 'significant' exposure using a quantitative threshold applied to each of the hazard-specific metrics used. We also disclosed the existing and planned resilience measures expected to reduce Nasdaq's exposure or vulnerability to the identified hazards.

**Coverage of sample Nasdaq locations with significant long-term exposure to selected climate hazards under RCP 8.5, and existing or planned resilience measures:**

| **Physical risks under RCP 8.5** | | **% FTEs by region with significant long-term exposure to respective hazard** | | | **Resilience Measures & Approach** |
|---|---|---|---|---|---|
| | | **Americas** | **EMEA** | **APAC** | |
| **Acute**<br>Sudden and severe event-driven climate impacts | Riverine floods | 0% | 0% | 0% | Existing and planned riverine flood defense adaptation measures in major cities where Nasdaq has a physical presence. |
| | Hurricanes and tropical storms | 0% | 0% | 2% | Storm-centric building design and retrofits, remote working capabilities, procurement of backup energy sources. |
| **Chronic**<br>Impacts due to long-term shifts in average weather patterns | Heat stress | 0% | 0% | 64% | Focus on energy efficiency and minimum performance standards for HVAC in heat-stressed areas. |
| | Water stress | 24% | 0% | 36% | Efficient water systems to reduce demand and commodity price exposure. Energy-efficient cooling systems and data center design. |
| | Sea level rise | 0% | 0% | 0% | Existing and planned coastal flood defense adaptation measures and proactive real estate planning and lease due diligence. |

## Transition risks

Transition risks were evaluated under two scenarios published by the Network for Greening the Financial System (NGFS), which both meet the targets, set by the Paris Agreement: an "Orderly" scenario characterized by early, consistent action, and a "Disorderly" scenario characterized by delayed, disruptive action. We selected these scenarios as we deemed them particularly relevant to the financial sector in which we operate. The risk of mandatory carbon pricing was also quantitatively assessed by applying the global carbon prices delineated in these transition scenarios, with respect to our Scope 1 and 2 emissions. We investigated the carbon price impact against our Scope 1 and 2 emissions evolution under a trajectory in line with the ambitions of our Science-Based Target commitment. It was assumed that Nasdaq would bear the full cost of emissions, as opposed to, for example, energy suppliers absorbing some of the costs of carbon pricing associated with Scope 2 emissions.

| Transition Category | Exposure Type | | Resilience Measures & Approach |
|---|---|---|---|
| | Direct | Indirect | |
| Policy & Legal | Long term annual cost of emissions <1% of 2020 net income attributable to Nasdaq[1] | Costs of purchased goods & services, listed companies and business customers | Nasdaq's commitment to set Science-Based Targets for reducing our emissions will help minimize the direct impact of policy changes that increase the costs of greenhouse gas emissions. Our customer and supplier focused sustainability efforts aim to minimize our indirect exposure to carbon pricing risks in the value chain. |
| Technology | Operating and capital costs of data centers and offices | Emissions intensive listed companies and business customers | Nasdaq's sustainable leasing strategy helps reduce office space requirements, seeks to ensure energy-efficient office spaces, and procurement of renewable electricity to seek to minimize our direct exposure to technology risks. We also select data center operators with ISO Certifications, renewable energy offerings, and sound sustainability policies. |
| Market | Revenue from Nasdaq products and services | Emissions intensive listed companies and business customers | Nasdaq's ESG-focused marketplace solutions such as Nasdaq Sustainable Debt Markets, OneReport, and Nasdaq Sustainable Bond Network, aim to capture the increased financial sector market appetite for ESG related products and services. Similarly, by supporting the ESG progress of our customers we aim to minimize our indirect exposure to market risks. |
| Reputation | Revenue from Nasdaq's business customers | All listed companies and business companies that are vulnerable to climate risks. | Nasdaq's commitment to leading the shift towards more sustainable and inclusive capital markets via ESG product and service offerings aims to mitigate possible reputational concerns our stakeholders may have, which could lead to reduced interest in Nasdaq's offerings. |

[1] Based upon carbon pricing scenario analysis using NGFS Orderly and Disorderly global carbon prices, and Nasdaq's projected emissions under Science-Based Targets. Discount rate of 2% applied to calculate present value annual cost of emissions. 2020 net income attributable to Nasdaq as shown on 2020 10-K form.

## OUR RISK MANAGEMENT

### Process for risk identification and assessment

Nasdaq's approach to identifying, assessing, and managing climate-related risks and opportunities forms part of a company-wide, multidisciplinary risk management process, overseen by our Board through our Nominating & ESG Committee and Audit & Risk Committee. We consider the impact of climate-related issues on our direct operations on an ongoing basis across the TCFD aligned risk categories: current and emerging regulation, technology, legal, market, reputation, and acute and chronic physical risks.

We draw on a wide range of resources to identify and incorporate information on climate risk into our risk management process. Nasdaq is a frequent convener and host of large multi-stakeholder meetings and smaller workshop discussions to share knowledge on sustainability and corporate issues such as climate change. Our active communication with investors, clients, and other stakeholders has informed our ESG materiality assessment and revealed an increased focus on corporate citizenship, sustainability, and demand for ESG products.

Internally, members of Nasdaq's Corporate Sustainability Reporting Team are responsible for engaging with Business Units (BUs) and Expert Functions (EFs), to identify relevant climate risks and opportunities. As part of our Business Continuity Management & Disaster Recovery Policy (BCM/DR), we periodically survey facility site managers on business continuity plans (BCPs), which assess environmental changes and the likelihood and potential effects of an interruption to critical business operations as a result of a disaster. Finally, as set forth in our BCM/DR policy, we believe that all employees have a responsibility for reporting risks and incidents that might impact the organization.

Once we have identified a material risk—including those relating to climate—we score it under our internal Risk Rating Matrix. This matrix assesses both the likelihood (under various time horizons) and potential impacts (e.g. to our operations, reputation, finances, clients, etc.), and assigns it a Low-, Moderate-, Elevated- or High-risk categorization. Once assessed, the risk results inform our facility site managers' Business Continuity Plans (BCP) and our ESG strategy.

### Management processes

Risks determined as material are integrated within the relevant Business Unit's and Expert Function's Business Continuity Plan (BCP), which is reviewed at least on an annual basis. Heads of Business Units and Expert Functions as well as appointed BCP coordinators (jointly considered the "First Line of Defense" of Nasdaq's BCM Framework) are responsible for establishing plans and procedures to secure the continuity of business, including plans to manage the identified risks. In all of Nasdaq's BCPs, there are scenarios delineating climate-related risks and management processes – including those addressing extreme weather events – and criteria for the BCP to be invoked and communicated to employees. Where BCPs are invoked, the management actions and financial impacts are then tracked in Nasdaq's risk and compliance tool, which allows us to learn from the incidents and informs future BCP iterations.

In addition, climate risks and opportunities identified across various organizations by Nasdaq's Corporate Sustainability Reporting Team inform our ESG strategy, as overseen at the Board level, by the Nominating & ESG Committee of our Board of Directors and at the management level by the Corporate ESG Steering Committee. We actively seek to manage and mitigate risks through components of our ESG strategy, including reducing our greenhouse gas emissions and prioritizing retrofit and resilience efforts within our sites with extended leases.

### Risk management integration

Nasdaq's Board, as a whole and through its Nominating & ESG Committee and its Audit & Risk Committee, is responsible for the oversight of company-wide risk management, while our executive leadership is responsible for day-to-day risk management. Climate risk is also included within the risk factors included in our Annual Reports on Form 10-K, which are filed with the U.S. Securities and Exchange Commission.

In addition, climate risk is integrated within Nasdaq's BCM Framework, which features multidisciplinary risk identification, assessment and management. Our BCM Framework incorporates the Three Lines of Defense model:

- First Line of Defense: BUs and EFs
  - The First Line of Defense has primary responsibility for maintaining a robust risk management environment, including risk identification, assessment, treatment and monitoring.
- Second Line of Defense: Enterprise Risk Management and other Oversight Functions
  - The Second Line of Defense serves as an independent advisor to the First Line of Defense and defines a framework to direct and coordinate our BCM efforts.
- Third Line of Defense: Internal Audit
  - The Third Line of Defense comprises the independent assurance provided by the Internal Audit Department to leadership and our Board. This department undertakes a program of risk-based audits covering aspects of the First and Second Lines of Defense including the performance of risk management activities.

Looking forward, we anticipate that the risk identification and management approach utilized during the COVID-19 pandemic will inform our approach to managing climate risks. We have increased our focus on business continuity in the event of significant external disruptions, increased our operational resilience by enabling remote work, and learned new flexible models of management. We expect these lessons to be invaluable as we seek to adapt our climate strategy.

# OUR METRICS AND TARGETS

## Metrics to evaluate risks and opportunities

Nasdaq has committed to setting Science-Based Targets for ambitious emissions reductions across our emissions inventory. Once our targets are verified, company-wide progress will serve as an indicator of our exposure to transition risks. We expect to achieve these targets through a variety of approaches, including increasing energy efficiency measures in our offices and data centers, continued sourcing of renewable energy, reducing employee commuting and business travel by enabling remote work, and working with our suppliers and customers to adopt sustainability and environmental practices in line with our expectations.

We have already made significant strides in our efforts to reduce GHG emissions. We are continuing to invest in resource efficiency and expect to reduce our energy consumption and intensity while continuing to source renewable electricity. The following tables are indicative of our performance trends on energy and emissions. Additional metrics are included in our annual sustainability report.

### GHG inventory and emissions reduction progress

This table includes global data for Nasdaq's office space, data centers, onsite combustion, business travel, employee commuting, waste generation and recycling/compost diversion for the reporting period January 1, 2020 through December 31, 2020.

| | Gross Emissions (MT CO2e)* | | REC and Offset purchases (MT CO2e) | | Net Emissions ** | |
|---|---|---|---|---|---|---|
| | **2020** | **2019** | **2020** | **2019** | **2020** | **2019** |
| Scope 1 | 514 | 306 | (514) | (306) | 0 | 0 |
| Scope 2 (market-based) | 3,997 | 5,171 | (3,997) | (5,171) | 0 | 0 |
| Scope 3 | 55,423[2] | 28,310 | (55,423) | (28,310) | 0 | 0 |
| **TOTAL** | **59,934** | **33,787** | **(59,934)** | **(33,787)** | **0** | **0** |

*Net emissions after Landlord & Data center operator renewable energy supply factors are applied

** Total Emissions after Nasdaq REC&CO purchases are applied.

### Energy Intensity

The table, "Energy Intensity" shows the energy consumption per full time employee.

| | 2020 | 2019 | 2018 |
|---|---|---|---|
| Absolute Energy Consumption (MWh) (Scope 1 &2) | 62,366** | 57,051** | 56,039* |
| Number of full-time employees*** | 4,830 | 4,361 | 4,134 |
| Energy Intensity | 12.9 | 13.1 | 13.6 |

*only includes electricity

** Includes fuel, electricity, heating & Cooling

***employee headcount as of 31 December 2020, 2019 and 2018

2 In 2020, we improved the ability to report emissions and this added transparency nearly doubled the amount of reported Scope 3 emissions. We introduced the following categories for the 2020 analysis, and this primarily caused the increase in GHG emissions year over year:

- Scope 1: Onsite diesel/fuel consumption
- Scope 3, Category 2: Capital goods and services

**Gross Emissions Intensity (Emissions per Employee and Emissions per Revenue)**

The table, "Emission Intensity" shows the emissions per full time employee and $'million of revenue.

| 2020 | | | GROSS | | | NET | | |
|---|---|---|---|---|---|---|---|---|
| **Scope** | | **Employee Head-count*** | **Emissions (MT CO2e)** | **Emissions per employee (MT CO2e)** | **Emissions per $ million Revenue (MT CO2e)**** | **Emissions (MT CO2e)** | **Emissions per employee (MT CO2e)** | **Emissions per $ million Revenue (MT CO2e)**** |
| 1 | On-site Combus-tion | 4,830 | 514 | 0.11 | 0.18 | 514 | 0.11 | 0.18 |
| 2 | Purchased electricity | 4,830 | 20,486 | 4.24 | 7.06 | 3,997 | 0.83 | 1.38 |
| 3 | Business Travel | 4,830 | 3,493 | 0.72 | 1.20 | 3,493 | 0.72 | 1.20 |
| 3 | Employee Commuting | 4,830 | 2,841 | 0.59 | 0.98 | 2,841 | 0.59 | 0.98 |
| 3 | Purchased goods and services | 4,830 | 49,014 | 10.15 | 16.90 | 49,014 | 10.15 | 16.90 |
| 3 | Water | 4,830 | 30 | 0.01 | 0.01 | 30 | 0.01 | 0.01 |
| 3 | Waste | 4,830 | 45 | 0.01 | 0.01 | 40 | 0.01 | 0.01 |
| | **Total** | **4,830** | **76,423** | **15.83** | **26.34** | **59,929** | **12.42** | **20.66** |

*Employee headcount as at 31 December 2020

** Net Revenues 2020 - $2.9Billion

| 2019 | | | GROSS | | | NET | | |
|---|---|---|---|---|---|---|---|---|
| **Scope** | | **Employee Head-count*** | **Emissions (MT CO2e)** | **Emissions per employee (MT CO2e)** | **Emissions per $ million Revenue (MT CO2e)**** | **Emissions (MT CO2e)** | **Emissions per employee (MT CO2e)** | **Emissions per $ million Revenue (MT CO2e)**** |
| 1 | On-site Combus-tion | 4,361 | 306 | 0.07 | 0.12 | 306 | 0.07 | 0.12 |
| 2 | Purchased electricity | 4,361 | 20,584 | 4.72 | 8.23 | 5,171 | 1.19 | 2.07 |
| 3 | Business Travel | 4,361 | 13,695 | 3.14 | 5.48 | 13,695 | 3.14 | 5.48 |
| 3 | Employee Commuting | 4,361 | 6,919 | 1.59 | 2.77 | 6,919 | 1.59 | 2.77 |
| 3 | Purchased goods and services | 4,361 | 7,696 | 1.76 | 3.08 | 7,696 | 1.76 | 3.08 |
| 3 | Water | 4,361 | 69 | 0.02 | 0.03 | 69 | 0.02 | 0.03 |
| 3 | Waste | 4,361 | 96 | 0.02 | 0.04 | 96 | 0.02 | 0.04 |
| | **Total** | **4,361** | **49,365** | **11.32** | **19.75** | **33,952** | **7.79** | **13.59** |

### Growth of ESG products and seized market opportunities

We believe the trend towards ESG and sustainable investments is here to stay, and we expect that it will have an escalating impact on our industry in the coming years. With that in mind, we believe that Nasdaq's ESG products will become increasingly important in our product offerings. We are tracking climate opportunities by monitoring the growth of ESG products and services as a percentage of our sales revenue growth.

### Climate-related targets

Our commitment to set Science-Based Targets reflects our dedication to a low-carbon economy. Our efforts under our Science-Based Targets are expected to reduce our exposure to transition risks across policy and legal, market, technology, and reputation.

We are committed to seeking to source 100% of our electricity directly from renewable sources, procuring Renewable Energy Certificates when this is not possible, and continuing to offset our residual emissions using removal credits where possible. To develop and track progress toward supplier-related environmental targets, we intend to enhance our Environmental Management System & Sourcing Policy.

To improve the resource efficiency and resilience of our offices and data centers, we are pursuing Gold-level (or equivalent) building sustainability certifications for our major locations. In 2020, Nasdaq already achieved a LEED Platinum rating for our New York office, and a BREEAM Excellent rating for our London office.

We are committed to ongoing enhancement and disclosure in accordance with the TCFD recommendations and engaging with our market participants to lead the shift towards more sustainable and inclusive capital markets.

## NASDAQ'S PLANS

Nasdaq aims to build further capacity for enhancing disclosures against the TCFD recommendations in terms of detail, and complexity of analysis. Our future plans towards TCFD fall under three key objectives:

**1. Enhance scenario analysis coverage**

In future iterations of our TCFD report, we expect to further explore the vulnerability of our direct operations to physical climate hazards, with a view to project possible financial impacts related to business disruption and the costs of mitigation. Additionally, we aim to expand the scope of analysis to broader aspects of our value chain beyond our direct operations, to achieve a more comprehensive understanding of the possible indirect impacts of physical climate risks. We will also strive to quantitatively delineate the possible financial impacts across the spectrum of transition risks.

**2. Set ambitious emissions reduction targets**

As part of Nasdaq's commitment to the SBTi, following the verification of our own science-based emissions targets, we plan to develop supplier engagement targets to encourage our own suppliers to implement science-based targets of their own. We are also exploring other metrics that we can use to track our exposure to climate risks and opportunities, and our progress toward meeting them.

**3. Drive ESG progress and disclosure across markets**

Nasdaq is fully committed to continuing our ESG efforts and to leading the shift towards more sustainable and inclusive capital markets. As such, we are dedicated to continued development of our ESG-related products and services to facilitate this movement.

The information and data in this report cover Nasdaq's owned and operated businesses and does not address the performance or operations of our suppliers or contractors unless otherwise noted. The report includes information on topics that we have identified as material topics relating to ESG matters based on our 2021 materiality assessment. For more information on our materiality process, please see page 10-11 of our 2020 Corporate Sustainability Report. Additional resources on these topics are available on www.nasdaq.com/esg. All financial information is presented in U.S. dollars unless otherwise noted.

This report covers our owned and operated businesses and does not address the performance or operations of our suppliers or contractors unless otherwise noted. All financial information is presented in U.S. dollars unless otherwise noted.

This report contains forward-looking statements relating to Nasdaq's operations that are based on management's current expectations, estimates and projections. See the "Cautionary Note Regarding Forward-Looking Statements" below.

Therefore, the actual conduct of our activities, including the development, implementation or continuation of any program, policy or initiative discussed or forecasted in this report, may differ materially in the future. As with any projections or estimates, actual results or numbers may vary. Many of the standards and metrics used in preparing this report continue to evolve and are based on management assumptions believed to be reasonable at the time of preparation but should not be considered guarantees.

**Disclaimers**

*Cautionary Note Regarding Forward-Looking Statements*

Information set forth in this communication contains forward-looking statements that involve a number of risks and uncertainties. This report contains forward-looking statements relating to Nasdaq's operations that are based on management's current expectations, estimates and projections regarding the ESG matters described in this report. Words or phrases such as "expect," "intends," "plans," "targets," "believes," "seeks," "may," "could," "should," "will," "goals," "objectives," "strategies," "opportunities," and similar expressions are intended to identify such forward-looking statements. Nasdaq cautions readers that any forward-looking information is not a guarantee of future performance and that actual results could differ materially from those contained in the forward-looking information. Such forward-looking statements include, but are not limited to (i) statements about our ESG or sustainability policies, programs, products or initiatives, (ii) projections relating to our future financial results, total shareholder returns, growth, trading volumes, products and services, order backlog, taxes and achievement of synergy targets, (iii) statements about the closing or implementation dates and benefits of certain acquisitions or divestitures and other strategic, restructuring, technology, de-leveraging and capital return initiatives, (iv) statements about our integrations of our recent acquisitions, (v) statements relating to any litigation or regulatory or government investigation or action to which we are or could become a party, and (vi) other statements that are not historical facts. Forward-looking statements involve a number of risks, uncertainties or other factors beyond Nasdaq's control. These factors include, but are not limited to, Nasdaq's ability to implement its strategic initiatives, economic, political and market conditions and fluctuations, government and industry regulation, interest rate risk, U.S. and global competition, and other factors detailed in Nasdaq's filings with the U.S. Securities and Exchange Commission, including its most recent Form 10-K and quarterly reports on Form 10-Q, which are available on Nasdaq's investor relations website at http://ir.nasdaq.com and the SEC's website at www.sec.gov. Nasdaq undertakes no obligation to publicly update any forwardlooking statement, whether as a result of new information, future events or otherwise.

**Website Disclosure**

Nasdaq intends to use its website, ir.nasdaq.com, as a means for disclosing material non-public information and for complying with SEC Regulation FD and other disclosure obligations