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About this Report

BlackRock’s 2022 Task Force on Climate-Related Financial Disclosures (“TCFD”) report (this “Report”) is for BlackRock, Inc. (together, with its subsidiaries, unless the context otherwise indicates, “BlackRock” or the “Company” or the “firm”). This Report is aligned to recommendations provided by the TCFD, an organization that has developed a framework to help public companies and other organizations disclose climate-related risks and opportunities. All data in this Report is as of December 31, 2022, and dollar figures are shown in USD unless otherwise noted. The policies and practices referred to in this Report, unless otherwise noted, are adopted by BlackRock on a group-wide basis and applied in relevant jurisdictions in which BlackRock operates.

TCFD Recommendations

The TCFD recommendations, first launched in 2017, are designed to encourage consistent and comparable reporting on climate-related risks and opportunities by companies to their stakeholders. The TCFD recommendations are structured around four content pillars: (i) Governance; (ii) Strategy; (iii) Risk Management; and (iv) Metrics & Targets; and eleven recommendations to support effective disclosure under each pillar which is supported by supplemental guidance for sectors, including asset managers. Throughout this Report, BlackRock has sought to provide information on all four pillars and eleven recommendations.

Perspectives included in this Report

BlackRock is a leading publicly traded investment management firm with $8.59 trillion of assets under management (“AUM”). With over 19,500 employees in more than 30 countries who serve clients in over 100 countries across the globe, BlackRock provides a broad range of investment management and technology services to institutional and retail clients worldwide. As an asset manager, BlackRock invests assets that belong to its clients, on its clients’ behalf. BlackRock also offers the Aladdin investment and risk management platform, which combines comprehensive portfolio management, trading, and risk reporting tools with sophisticated risk analytics.

BlackRock, therefore, approaches climate-related risks and opportunities from two main perspectives, which are captured across this Report:

1. As an asset manager striving to help BlackRock’s clients benefit from investment opportunities arising from the global energy transition, and with a responsibility to manage material risks to the firm’s clients’ portfolios, including climate-related risks, within the bounds of BlackRock’s clients’ guidelines and objectives; and

2. As a corporate entity whose business is affected by climate-related risks and opportunities and whose operations have both direct and indirect impacts on the climate.

Reporting on Other Sustainability-Related Topics

While this Report is focused on climate-related risks and opportunities, BlackRock has also published corporate sustainability disclosure on other environmental, social, and governance (“ESG”) topics in its 2021 Sustainability Disclosure.

Constant Evolution

As the sustainability landscape evolves with new information, data and risk methodologies, and greater comparability, BlackRock will continue to refine its disclosures to provide information for stakeholders. BlackRock looks forward to feedback from its stakeholders on this Report which can be provided by e-mailing Investor Relations at invrel@blackrock.com.
Executive summary

BlackRock is a publicly traded investment management firm that provides investment management and technology services to institutional and retail clients worldwide. The assets BlackRock manages belong to its clients who rely on BlackRock to act in their best interests. BlackRock clients include public and private pension plans, insurers, official institutions, endowments, universities, charities, family offices, wealth managers, and, ultimately, the individual investors that they serve, many of whom are saving for retirement.

As a fiduciary, BlackRock invests on its clients’ behalf to help them meet their investment objectives. The firm’s clients have a range of goals and are looking to invest across asset classes and investment themes to capture opportunities and mitigate risk. BlackRock’s market insights, proprietary technology, scale, and client-first approach makes the firm uniquely positioned to create the best outcomes for its clients.

BlackRock’s clients invest their money in companies of all types and sizes, in every region of the world, helping those companies grow and operate to deliver long-term value for its stakeholders. One of the factors that could impact capital allocation decisions, and the long-term value of a company, is how effectively companies are navigating the global energy transition in the years ahead.

As long-term investors, clients expect BlackRock to monitor and manage long-term risks and opportunities that affect their investments. Clients of all types are asking how to prepare their portfolios for the physical effects of climate change and the transition to a low-carbon economy. BlackRock is continuing to evolve its business strategy, governance, and risk-management processes to account for climate-related impacts to its business and clients.

The transition to a low-carbon economy

As an asset manager, BlackRock’s focus on understanding the transition is driven, as always, by the firm’s role as a fiduciary. BlackRock’s investment approach is informed by three principles: client choice, performance, and research. BlackRock starts by understanding the client’s investment objectives and provides choice to meet their needs, seeks the best risk-adjusted financial returns within the mandate clients provide, and underpins its work with research, data, and analytics. The money BlackRock manages is not its own — it belongs to the firm’s clients, many of whom make their own asset allocation and portfolio construction decisions.

As a fiduciary, BlackRock considers relevant, material investment risks and opportunities for its clients, including ones created by the transition to a low-carbon economy. When seeking the best financial returns for its clients, including ones created by the transition to a low-carbon economy. When seeking the best financial returns for its clients, the firm relies on a research-based view of economic developments, including how the low-carbon transition is likely to unfold in practice over time and the extent to which such changes are priced into financial markets.

$586 bn
AUM in dedicated sustainable strategies

$67 bn
of net inflows into sustainable strategies

$42 bn
invested in green bonds on behalf of clients

400+
wind, solar, & electric vehicle infrastructure projects funded by infrastructure investments managed by BlackRock’s investments teams

Figures above are global metrics and as of December 31, 2022, unless otherwise specified.
In 2022, BlackRock published its 2030 net zero statement which includes an estimate of the proportion of the firm’s AUM that BlackRock anticipates by 2030 will have set science-based targets or the equivalent aligned with reaching net zero by 2050, based on BlackRock’s anticipation of adoption of such targets by corporate and sovereign issuers. Going forward, BlackRock will continue to monitor the proportion of assets that have such targets. Consistent with the firm’s fiduciary duty to clients, BlackRock will advocate for enhanced reporting and disclosure that supports investors’ ability to evaluate the risks to and opportunities for returns in alignment with their investment objectives. BlackRock is also committed to building and delivering sophisticated transition and climate tools, analytics, and portfolio insights powered by Aladdin® to help the firm’s Aladdin clients make informed choices.

In 2022, BlackRock evolved its sustainability organization by establishing new business teams, including:

• Sustainable & Transition Solutions (“STS”), to lead BlackRock’s firmwide sustainability and transition strategy, drive cross-functional change, support client engagements, improve product ideation, and embed expertise across the firm.

• Sustainable Investment Research and Analytics (“SIRA”), within the BlackRock Investment Institute (“BII”), to produce thought leadership and research on the implications of the transition on portfolio construction.

• Sustainable Product Innovation and Development, within the Global Product Group (“GPG”), partnering with SIRA and portfolio management teams around the firm to drive product ideation, creation, and development.

Together, these teams, along with existing capabilities across the firm, are focused on building the future of sustainable and transition investing at BlackRock.

Investment opportunities for clients

The transition to a low-carbon economy is driving material investment risks and opportunities, just like central bank policy and geopolitics. Government policies, technological innovation, and consumer and investor preferences are driving a material economic transformation. Physical climate change also continues to create financial risk (e.g., through extreme weather), which is affecting asset prices. These trends are dynamic and will create or impair value across companies and industries, and generate investment risks and opportunities for BlackRock’s clients.

BlackRock’s research suggests that companies positioning themselves to benefit from changes in government policy, technology, and consumer and investor preferences can improve their earnings outlook relative to others. Importantly, financial markets can underappreciate structural shifts such as the transition to a low-carbon economy, meaning that these shifts are not always reflected in asset prices – this can create opportunities for investors.

As the world moves toward a lower carbon economy, BlackRock believes it can best serve its clients by providing them with choice, such as investment solutions across active, index, and alternatives that may help them navigate the impact of the transition on their portfolios consistent with their goals and objectives.
In 2022, BlackRock had over 400 sustainable funds globally covering a spectrum of sustainable solutions, as well as customized solutions to meet clients’ objectives. The firm continued to offer clients choice with the launch of over 50 iShares® sustainable ETFs and index mutual funds (“IMFs”) across the US, Europe, Asia-Pacific, and Canada. BlackRock also launched several investment offerings in diversified infrastructure globally, with a central focus on the energy transition and energy security, helping give clients the opportunity to invest in solutions that help support the transition to a low-carbon economy.

**Investment Stewardship and Engagement**

BlackRock is a long-term investor on behalf of clients. The firm believes that climate risk and the energy transition can be long-term factors impacting businesses and economies globally, and while companies in different sectors and geographies may be affected differently, this transition is an investment factor that can be material for many companies.

To that end, the BlackRock Investment Stewardship (“BIS”) team engages with companies to understand, where appropriate, how they identify and manage the material risks and opportunities of climate change and the transition towards a decarbonized economy. In their engagements, the BIS team encourages companies to provide disclosures that help investors understand their long-term strategy and the governance and operational processes that underpin their business models and long-term financial performance. In addition to robust financial disclosures, BIS finds it helpful when companies provide the data and narrative that help investors understand how they approach material, business relevant sustainability risks and opportunities, where appropriate. BIS believes that better quality information leads to better capital allocation and decision-making by investors.

In 2022, BIS continued to engage with the companies included in the BIS Climate Focus Universe. BIS has identified a list of approximately 1,000 carbon-intensive public companies that represent nearly 90% of the global scope 1 and 2 greenhouse gas (“GHG”) emissions of BlackRock’s clients’ public equity holdings. BIS noted companies made significant progress in disclosing how they identify and manage climate-related risks and opportunities. As a result, BIS was more supportive of management in its voting at shareholder meetings in the 2021-2022 proxy year than the 2020-2021 proxy year.

As BIS explained in the commentary published in May 2022 titled “2022 climate-related proposals were more prescriptive than 2021”, the nature of the shareholder proposals that came to a vote in the 2021-2022 proxy year changed compared to the prior year. This change was enabled, in part, by an update to US Securities and Exchange Commission (“SEC”) guidance. Many shareholder proposals were overly prescriptive or unduly constraining on management’s decision-making. Where BIS did not consider them to be consistent with BlackRock’s clients’ long-term financial interests, the team did not support them.

While many asset owners are pleased to have BlackRock’s stewardship team serve as a bridge between them and the companies they are invested in, others want the choice to actively participate in proxy voting. In January 2022, BlackRock launched BlackRock Voting Choice, a capability that gives eligible clients – who are the true owners of the assets the firm manages – the option to engage more directly in proxy voting.
BlackRock Voting Choice was first made available to institutional clients invested in index strategies, within institutional separate accounts globally and certain pooled funds managed by BlackRock in the US and UK. In response to growing client demand, in June 2022, BlackRock announced the expansion of the program for eligible clients. This second phase of the BlackRock Voting Choice program expanded the institutional pooled fund ranges eligible for BlackRock Voting Choice in the UK and also expanded BlackRock Voting Choice to Canadian and Irish institutional pooled funds.

In November 2022, the BlackRock Voting Choice program expanded further by extending the pool of eligible client assets that can participate, expanding the range of voting guidelines from which clients can choose, and working on a pilot to bring this capability to individual investors in select mutual funds in the UK. The ongoing expansion of the BlackRock Voting Choice program reflects the firm’s commitment to democratize participation in the financial markets by providing clients with one of the industry’s broadest range of choices across their investment portfolios. For the many clients who choose to continue to use BlackRock’s voting policies, BIS will apply their globally consistent, yet locally nuanced approach to their engagement and voting, focusing on how companies are delivering long-term profitability for their shareholders. Continuing to rely on BlackRock to exercise voting authority is itself a choice and a deliberate decision by the client to trust BlackRock as a fiduciary asset manager to look after their long-term economic interests.

Technology to measure climate risk & opportunities

Aladdin™ is BlackRock’s technology platform that unifies the investment management process by providing a common data language within an organization to enable scale, provide insights, and support business transformation. In 2020, BlackRock launched Aladdin Climate™ to meet the demand from financial institutions and investors to understand climate risks and opportunities in their portfolios. Aladdin Climate illustrates (i) financial impact of transition and physical risk on the portfolio under a variety of forward-looking emission scenarios, and (ii) portfolio’s alignment to net zero emissions pathways. Aladdin Climate scenarios and models have inherent risks and limitations, including that they may not capture compounding effects of climate change or the scale of monetary and fiscal policy response. Currently, BlackRock’s Aladdin Climate solution, as well as analytical consulting services powered by Aladdin Climate, are available to BlackRock and Financial Markets Advisory (“FMA”) clients and underpin BlackRock’s TCFD reporting solution for asset management clients. It is also available for internal use within BlackRock to support certain risk management use-cases. BlackRock investment teams are actively engaged in Aladdin Climate model evolution and seek to incorporate this in their investment process as appropriate for their investment strategy.

Managing BlackRock’s operations sustainably

As a corporate entity, BlackRock pursues an environmental sustainability strategy that is focused on reducing GHG emissions and increasing the efficiency of BlackRock’s operations, where possible. During 2022, BlackRock made enhancements to the measurement of GHG emissions from its operations by onboarding Watershed, an enterprise climate platform, to improve carbon footprint accuracy, understand emissions drivers, and track the impact of emission reductions against BlackRock’s operational science-aligned emission reduction goals. To achieve these goals, BlackRock’s focus will continue to be on finding ways to leverage lower carbon energies like renewable electricity and sustainable aviation fuel (“SAF”) and to increase energy efficiency in facilities and data centers.

Philanthropy

Separately from the firm’s fiduciary role as an asset manager on behalf of clients, BlackRock’s Social Impact team, which is BlackRock’s philanthropic arm, helps to drive impact in communities not only through direct engagement but also through the BlackRock Foundation (the “Foundation”). The Foundation funds and partners with organizations globally that help people, beyond the reach of the firm’s core business, build financial security and participate in the transition to a low-carbon future. In that vein, the Foundation has made an ongoing 5-year, $100 million grant to Breakthrough Energy Catalyst (“Catalyst”) to accelerate the development of climate solutions needed to achieve net zero emissions by 2050. This philanthropic capital aims to cut the “Green Premium” on clean energy technology, including SAF, green hydrogen, direct air capture, and long-duration energy storage. In 2022, Catalyst made its first grant to a SAF project, which is based in the state of Georgia and is focused on Alcohol-to-Jet fuel technology development. Catalyst has also sourced a pipeline of additional projects for further diligence and consideration. The Foundation’s participation in Catalyst seeks to create conditions to “crowd in” other institutional capital to transform carbon intensive sectors, and BlackRock plays an active role in sharing learnings with the Catalyst team to help advance the clean tech transition.
BlackRock’s commitment to transparency

BlackRock encourages companies in which it invests on behalf of clients to provide comprehensive disclosures and recognizes the importance of leading by example in its own disclosure. That’s why a critical component of the transition is focused on enhancing transparency at the fund and firm level.

In continuation of BlackRock’s commitment to providing transparency, BlackRock is reporting preliminary estimates of the GHG emissions associated with BlackRock’s AUM. These figures represent the emissions associated with the corporate securities and real estate BlackRock invests in on behalf of its clients. In addition to this, BlackRock is publishing, for the first time, emissions intensity metrics for sovereign debt assets. Several advancements have allowed BlackRock to compile and report these statistics: (i) corporate issuers are increasingly reporting their GHG emissions through voluntary and regulatory initiatives; (ii) enhancements to Aladdin® have led to greater incorporation of climate-related metrics and data into its analytics; and (iii) a series of industry efforts that are facilitating the development of methodologies for calculating climate-related and portfolio alignment metrics and setting net zero-aligned targets.

At the fund level, BlackRock publishes certain climate and other ESG metrics, including weighted-average carbon intensity (“WACI”) and implied temperature rise (“ITR”), on product pages of BlackRock’s website where sufficient data on the underlying fund holdings and satisfactory methodologies are available. One or more climate-related metrics are publicly available on product pages for $3.4 trillion in AUM managed by BlackRock.17

Importantly, BlackRock’s role as an asset manager is as a fiduciary to its clients. As a fiduciary: BlackRock starts by understanding the client’s investment objectives and provides choice to meet their needs; the firm seeks the best risk-adjusted returns within the mandate given by clients; and BlackRock underpins its work with research, data, and analytics. BlackRock considers relevant and material investment risks and opportunities for its clients, including ones created by the transition to a low-carbon economy. When seeking the best risk-adjusted returns for its clients, the firm relies on a research-based view of economic developments, including how the low-carbon transition is likely to unfold in practice over time.

The pace and scale of the transition are unclear, and will depend largely on government policy, additional technological breakthroughs, and adaptation of corporate business models. The firm’s role is to help clients navigate the investment risks and opportunities associated with this transition, however it may unfold. Consequently, BlackRock anticipates that its clients’ portfolios will reflect the regulatory and legislative choices governments make to balance the need for reliable and affordable energy, and orderly decarbonization.

BlackRock considers relevant and material investment risks and opportunities for its clients, including ones created by the transition to a low-carbon economy.

When seeking the best risk-adjusted returns for its clients, the firm relies on a research-based view of economic developments, including how the low-carbon transition is likely to unfold in practice over time.

The pace and scale of the transition are unclear, and will depend largely on government policy, additional technological breakthroughs, and adaptation of corporate business models. The firm’s role is to help clients navigate the investment risks and opportunities associated with this transition, however it may unfold. Consequently, BlackRock anticipates that its clients’ portfolios will reflect the regulatory and legislative choices governments make to balance the need for reliable and affordable energy, and orderly decarbonization.
## Key Points in Response to TCFD Recommendations

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<thead>
<tr>
<th>Pillar / Recommendation</th>
<th>Key Points</th>
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<tbody>
<tr>
<td><strong>Governance:</strong> Disclose the organization’s governance around climate-related risks and opportunities</td>
<td>Oversight of near- and long-term business strategy (including sustainability) by BlackRock’s Board of Directors (the “Board”).</td>
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<td></td>
<td>Nominating, Governance &amp; Sustainability Committee of the Board oversees investment stewardship, public policy, corporate sustainability, and social impact activities.</td>
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<td></td>
<td>Risk Committee of the Board assists the Board in overseeing BlackRock’s risk management program for managing financial, operating and investment risks, including those related to climate and other sustainability risks, that could have a material impact on the firm’s performance.</td>
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<tr>
<td>Describe the board’s oversight of climate-related risks and opportunities.</td>
<td>Global Executive Committee (“GEC”) sets the strategic vision and priorities of the firm and drives accountability at all levels.</td>
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<td>GEC Investment Sub-Committee oversees the firm’s investment processes.</td>
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<td><strong>Strategy:</strong> Disclose the actual and potential impacts of climate-related risks and opportunities on the organization’s businesses, strategy, and financial planning where such information is material</td>
<td>Opportunities: increased demand for sustainable investment products and Aladdin, operating efficiencies</td>
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<td>Risks: market, product, regulatory, reputational risks, and physical risks</td>
</tr>
<tr>
<td>Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term.</td>
<td>Management of material climate-related risks and opportunities is embedded across investment processes, business strategy, and operations.</td>
</tr>
<tr>
<td>Describe the impact of climate-related risks and opportunities on the organization’s businesses, strategy, and financial planning.</td>
<td>BlackRock conducted a climate-related scenario analysis exercise, leveraging Aladdin Climate analytics, to understand the potential implications of climate-related transition and physical risk under a variety of emission scenarios to BlackRock’s business strategy over the short-, medium-, and long-term.</td>
</tr>
<tr>
<td>Describe the resilience of the organization’s strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.</td>
<td>BlackRock incorporates climate-related risks and opportunities into firmwide processes through ESG integration, where material. Please refer to BlackRock’s Firmwide ESG Integration Statement for additional information. Please see BlackRock’s 2021 Sustainability Disclosure (Item FN-AC-410a.3) and the BIS Primer, the BIS 2022 Voting Spotlight, and the BIS 2021 Investment Stewardship Annual Report for an overview of investment stewardship at BlackRock.</td>
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<tr>
<td>Describe how risks and opportunities are factored into relevant products or investment strategies and describe related transition impact.*</td>
<td>*Reflects recommendations that are included in the Supplemental Guidance for Asset Managers, which incorporates updates to the guidance for the financial sector released by the TCFD in 2021 (<a href="https://assets.bbhub.io/company/sites/60/2021/07/2021-TCFD-Implementing_Guidance.pdf">https://assets.bbhub.io/company/sites/60/2021/07/2021-TCFD-Implementing_Guidance.pdf</a>)</td>
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## Risk Management: Disclose how the organization identifies, assesses, and manages climate-related risks

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<th>Pillar / Recommendation</th>
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<tr>
<td>Describe the organization’s processes for identifying and assessing climate-related risks.</td>
<td>For risks in client portfolios, investment teams are the primary risk owners, or first line of defense. BlackRock’s risk management function, Risk &amp; Quantitative Analysis (“RQA”), serves as the second line of defense in BlackRock’s risk management framework. RQA is responsible for BlackRock’s Investment and Enterprise risk management framework which includes oversight of sustainability-related investment risks. RQA conducts regular reviews with portfolio managers to ensure that investment decisions are taken in light of relevant investment risks, including sustainability-related risks, complementing the first-line monitoring of material climate-related considerations across BlackRock’s investment platform. This helps to ensure that such risks are understood, deliberate, and consistent with client objectives. Climate-related risks are also evaluated in operational processes, including considering climate-related risks in risk and control self-assessments, product development, and incident management. Risks associated with climate-related investment and operational processes are presented in risk profiles shared with risk oversight committees. The third line of defense is BlackRock’s Internal Audit function, which independently assesses the adequacy and effectiveness of BlackRock’s internal control environment to improve risk management, control, and governance processes.</td>
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<tr>
<td>Describe the organization’s processes for managing climate-related risks.</td>
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<tr>
<td>Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization’s overall risk management.</td>
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<tr>
<td>Describe how material climate-related risks are identified, assessed and managed for each product or investment strategy.*</td>
<td>BIS has engaged with companies for several years on TCFD-aligned reporting, where appropriate. In 2022, BIS continued to engage with companies included in the BIS Climate Focus Universe. The BIS Climate Focus Universe includes over 1,000 carbon-intensive public companies that represent nearly 90% of the global scope 1 and 2 GHG emissions of BlackRock’s clients’ public equity holdings. Based on the team’s assessment, 291 of the companies in the BIS Climate Focus Universe have demonstrated progress in climate disclosures since 2020. BIS engaged on and/or voted to signal concern about climate-related and energy transition investment risks at 81% of these improving companies during that period.</td>
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<td>Describe engagement activity with investee companies to encourage better disclosure and practices related to climate-related risks in order to improve data availability and asset managers' ability to assess climate-related risks.*</td>
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## Metrics & Targets: Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material

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<th>Pillar / Recommendation</th>
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<tr>
<td>Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process.</td>
<td>Categories of metrics: Business Indicators, Corporate GHG Emissions, Firm-Level Climate Metrics for BlackRock’s AUM, Product-Level Sustainability Characteristics</td>
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<tr>
<td>Describe metrics used to assess climate-related risks and opportunities in each product or investment strategy.*</td>
<td>Varies by investment strategy. Investment teams develop views on materiality of specific sustainability-related topics by considering BlackRock’s proprietary climate-related research, as well as research from a variety of external sources. BlackRock has developed proprietary measurement tools to deepen portfolio manager understanding of material climate-related risks. Furthermore, Aladdin makes available climate and ESG data and physical and transition risk analytics into investors’ workflows.</td>
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<tr>
<td>Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.</td>
<td>See Exhibit M.2. BlackRock reports Scope 1, 2, and all relevant categories of Scope 3 emissions.</td>
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<tr>
<td>Asset managers should disclose GHG emissions for their AUM and WACI for each product or investment strategy, where data and methodologies allow. Asset managers should consider providing other carbon footprinting metrics they believe are useful for decision-making.*</td>
<td>See Exhibits M.5 and M.8. BlackRock reports preliminary estimates reflecting the absolute emissions associated with BlackRock’s AUM in corporate securities and real estate. BlackRock is also reporting preliminary estimates on the unadjusted and adjusted carbon footprint for corporate securities and emissions intensity metrics associated with BlackRock’s AUM in sovereign debt assets.</td>
</tr>
<tr>
<td>Asset managers should describe the extent to which their assets under management and products and investment strategies, where relevant, are aligned with a well below 2°C scenario, using whichever approach or metrics best suit their organizational context or capabilities.*</td>
<td>BlackRock publishes weighted-average carbon intensity (“WACI”) and implied temperature rise (“ITR”), on product pages of its website where sufficient data on the underlying fund holdings and satisfactory methodologies are available. As of December 31, 2022, one or more climate-related metrics are publicly available on product pages for $3.4 trillion in AUM managed by BlackRock (not holdings values as of September 30, 2022):</td>
</tr>
<tr>
<td>Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.</td>
<td>In 2022, BlackRock continued to support clients in the global transition by providing them with choice, including investments across active, passive and alternatives that may help them navigate the impact of the transition on their portfolios, consistent with their goals and objectives. Additionally, establishing a new capability to bring together BlackRock’s efforts focused on transition investing on behalf of the firm’s clients, and building and delivering the industry’s most sophisticated net zero transition tools, analytics and portfolio advice powered by Aladdin*.</td>
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</tbody>
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*Reflects recommendations that are included in the TCFD Supplemental Guidance for Asset Managers, which incorporates updates to the guidance for the financial sector released by the TCFD in 2021 (https://assets.bbhub.io/company/sites/60/2021/07/2021-TCFD-Implementing_Guidance.pdf)
Effective corporate governance is critical to executing on BlackRock’s strategy, fulfilling its responsibilities to clients, and creating long-term value for stakeholders. BlackRock’s commitment to good corporate governance with respect to climate and sustainability-related matters reflects the firm’s commitment to strong leadership and effective oversight by BlackRock’s Board and senior management. BlackRock’s Governance Overview and Corporate Governance Guidelines provide more information on BlackRock’s Corporate Governance framework, including the role and responsibilities of the Board.

Board Oversight

BlackRock’s Board engages with senior management on near- and long-term business strategy and reviews management’s performance in delivering on BlackRock’s framework for long-term value creation on behalf of clients. Sustainability, including climate-related issues is a critical component of the firm’s overall business strategy and the objectives of senior management over which the Board has oversight.

The Board holds six regularly scheduled meetings per year during which the Board’s committees also meet. In 2022, the full Board or its committees reviewed and discussed aspects of BlackRock’s climate and sustainability-related strategy during five out of the six meetings.

The Nominating, Governance & Sustainability Committee of the Board (“NGSC”) oversees investment stewardship, public policy, corporate sustainability, and social impact activities. The NGSC periodically reviews corporate and investment stewardship-related policies and programs, as well as significant publications relating to environmental (including climate), social, and other sustainability matters. As appropriate, the NGSC makes recommendations on these matters to be reviewed by the full Board. The NGSC also periodically reviews the firm’s approach to public policy and advocacy activities, including public policy priorities, and memberships in trade associations, as well as the philanthropic programs of the firm and related strategies.

BlackRock’s Board is responsible for overseeing risk management activities. The Risk Committee of the Board (“Risk Committee”) assists the Board in overseeing, identifying, and reviewing enterprise, fiduciary, and other risks, including those related to climate and other sustainability risks, that could have a material impact on the firm’s performance. In 2022, the Risk Committee reviewed and discussed enhancements to BlackRock’s risk management processes related to sustainability considerations on investments and analytics, risks associated with the growth of active strategies, and regulatory risk relating to sustainability.

Management Oversight

BlackRock’s senior management oversees progress towards BlackRock’s strategic objectives, including climate- and sustainability-related objectives. Exhibit G.1 provides an overview of the management committees that share responsibility for management of various climate and other sustainability-related risks and opportunities.

Exhibit G.1: Sustainability-Related Management Committees

<table>
<thead>
<tr>
<th>Management Committee</th>
<th>Sustainability-Related Responsibilities</th>
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<tr>
<td>Global Executive Committee (“GEC”)</td>
<td>• Led by the CEO and consisting of BlackRock’s senior leadership team, the GEC sets the strategic vision and priorities of the firm and drives accountability at all levels. • Actively involved in the development of, and receives updates on, BlackRock’s sustainability strategy.</td>
</tr>
<tr>
<td>Investment Sub-Committee of the GEC</td>
<td>• Oversees investment process consistency across the firm’s investment groups. • Members include the Chief Risk Officer and the global heads or sponsors of all major investment divisions. • Oversees ESG integration in BlackRock’s firmwide processes.</td>
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</tbody>
</table>
**Functional Groups**

In practice, sustainability is integrated into different business units across the firm. Several teams focus on sustainability, while others integrate sustainability into their broader functional responsibilities.

**Exhibit G.2: Functional Groups Involved in Climate & Sustainability-Related Matters**

<table>
<thead>
<tr>
<th>Team</th>
<th>Sustainability-Related Responsibilities</th>
<th>Management Reporting Line</th>
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<tbody>
<tr>
<td><strong>BlackRock Investment Stewardship (&quot;BIS&quot;)</strong></td>
<td>• Serves as an important link between clients and the companies they invest in, engaging with investee company leadership and proxy voting at shareholder meetings when authorized by clients to do so. Where appropriate, BIS engages with companies on climate-related issues.</td>
<td>Global Head of BIS is a GEC member</td>
</tr>
<tr>
<td><strong>Sustainable and Transition Solutions (&quot;STS&quot;)</strong></td>
<td>• Leads BlackRock’s sustainability and transition strategy, drives cross-functional change, supports client and external engagement, powers product ideation, and embeds sustainable expertise across the firm in partnership with other teams.</td>
<td>Global Head of STS reports to a Vice Chairman (GEC member)</td>
</tr>
<tr>
<td><strong>BlackRock Investment Institute (&quot;BII&quot;)</strong></td>
<td>• Produces macro and portfolio research, including BlackRock’s Capital Market Assumptions (“CMAs”).&lt;br&gt;• The Sustainable Investment Research and Analytics (“SIRA”) team produces thought leadership and research on the implications of the transition on portfolio construction.</td>
<td>Global Head of BII reports to a Vice Chairman (GEC member)</td>
</tr>
<tr>
<td><strong>Corporate Sustainability</strong></td>
<td>• Drives efforts to incorporate sustainable practices into business operations including tracking progress on environmental sustainability emissions reductions goals for operations.&lt;br&gt;• Develops corporate climate-related and sustainability-related disclosures.</td>
<td>Chief Sustainability and Social Impact Officer reports to Global Head of External Affairs (GEC member)</td>
</tr>
</tbody>
</table>

**Sustainability Integrated into Broader Functional Responsibilities**

<table>
<thead>
<tr>
<th>Team</th>
<th>Sustainability-Related Responsibilities</th>
<th>Management Reporting Line</th>
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<tbody>
<tr>
<td><strong>Global Public Policy Group (&quot;GPPG&quot;)</strong></td>
<td>• Strives to engage constructively in financial services public policy dialogue, including in relation to climate risk and sustainability disclosures, through participation in industry initiatives, engagement with regulators and standard setters around the world, and through whitepapers, comment letters and consultation responses regularly published on BlackRock’s website.</td>
<td>Global Head of Public Policy reports to Global Head of External Affairs (GEC member)</td>
</tr>
<tr>
<td><strong>Investment Divisions</strong></td>
<td>• BlackRock investment divisions include: ETFs and Index Investments, Portfolio Management Group, Global Trading &amp; Transition Management, and BlackRock Alternatives.&lt;br&gt;• Active portfolio teams manage exposure to financially material ESG risks, and consider ESG information in their investment processes, as applicable and consistent with client goals.&lt;br&gt;• Investment teams can often have sustainability-focused units (e.g., BlackRock Alternatives Sustainable Investing team, Fixed Income ESG Investment team).</td>
<td>Heads of major investment verticals are members of GEC and GEC Investment Sub-Committee</td>
</tr>
<tr>
<td><strong>Global Product Group</strong></td>
<td>• Leads sustainable product innovation and development, governance, and strategy across the global product platform.</td>
<td>Chief Product Officer reports to President (GEC member)</td>
</tr>
<tr>
<td><strong>Risk &amp; Quantitative Analysis Group (&quot;RQA&quot;)</strong></td>
<td>• BlackRock’s risk management function.&lt;br&gt;• Responsible for BlackRock’s Investment and Enterprise risk management framework which includes oversight of sustainability-related investment risks.&lt;br&gt;• Conducts regular reviews with portfolio managers to ensure that investment decisions are taken in light of relevant investment risks, including sustainability-related risks, complementing the first-line monitoring of material climate-related considerations across BlackRock’s investment platform.&lt;br&gt;• Maintains a dedicated Sustainability Risk Team that partner with risk managers and businesses to reinforce this constructive engagement.&lt;br&gt;• Collaborates with working groups throughout the Investments Platform and with Aladdin Sustainability Lab to advance the firm’s sustainability toolkit through consultation on firmwide data, modelling, methodologies, and analytics.</td>
<td>Chief Risk Officer is a member of GEC and GEC Investment Sub-Committee</td>
</tr>
<tr>
<td><strong>Aladdin</strong></td>
<td>• Makes available climate and ESG data and physical and transition risk analytics into investors’ workflows, regulatory reporting, and decarbonization/temperature alignment analysis delivered through Aladdin.</td>
<td>Global Head of Aladdin is a member of GEC</td>
</tr>
<tr>
<td><strong>Enterprise Services (&quot;ES&quot;)</strong></td>
<td>• Health &amp; Safety team monitors adherence to local environmental regulations.&lt;br&gt;• Corporate Real Estate, Space Planning, Critical Infrastructure and Workplace Experience teams work alongside key stakeholders such as the employee-run Green Team Network (“GTN”) to plan and implement sustainability efforts in offices.&lt;br&gt;• Business Continuity Management manages disaster recovery planning, strategy, and crisis management activities.</td>
<td>Global Head of ES reports to Global Head of Technology</td>
</tr>
</tbody>
</table>
Strategy

Disclose the actual and potential impacts of climate-related risks and opportunities on the organization’s businesses, strategy, and financial planning, where such information is material.

BlackRock was founded on the premise of understanding and managing investment risk, anticipating the needs of its clients, and supporting them in achieving their long-term investment goals. This is core to the firm’s strategy.

Climate risk and the economic opportunities arising from the low-carbon transition are among the top priorities for many of BlackRock’s clients. Clients are increasingly asking BlackRock how to mitigate risk and capture opportunities associated with climate and the transition to a low-carbon economy. As a fiduciary, BlackRock considers relevant and material risks and opportunities that could impact portfolios. When financially material, BlackRock incorporates environmental information alongside other information into its firmwide processes to enhance risk-adjusted returns. For clients interested in the transition, BlackRock offers a wide range of investment products, analytics, and research to help them achieve their chosen investment objectives.

BlackRock recognizes that different clients have different investment preferences and objectives. BlackRock continues to believe in the power of providing choice to clients, including by offering a wide range of investment products to help them meet their investment goals, and delivering on the instructions and guidelines that clients ultimately select. This section discusses how climate-related risks and opportunities are managed by BlackRock with an emphasis on new developments in 2022.

Investment Approach

As a fiduciary, BlackRock’s approach to investing is grounded in three principles: 1) BlackRock starts by understanding the client’s investment objectives and provides choice to meet their needs; 2) the firm seeks the best risk-adjusted returns within the scope of the mandate given by clients; and 3) BlackRock underpins its work with research, data, and analytics.

Increasingly, clients are asking BlackRock how to mitigate risk and capture opportunities associated with climate and the transition to a low-carbon economy. Climate risk is an investment risk and is one of many investment risks BlackRock considers. Physical climate change continues to create financial risk (e.g., through extreme weather), which is affecting asset prices. Government policies, technological innovation, and consumer and investor preferences are driving a material economic transformation to a lower-carbon world. These trends are dynamic and will create or impair value across companies and industries, and generate investment risks and opportunities.

BlackRock incorporates financially material environmental, social, and/or governance data or information, including material data and information related to climate, alongside other information into firmwide processes with the objective of enhancing risk-adjusted returns. This applies regardless of whether a fund or strategy has a sustainable, climate, or transition-related objective. BlackRock has a framework for ESG integration that permits a diversity of approaches across different investment teams, strategies and particular client mandates. As with other investment risks and opportunities, the materiality of ESG considerations may vary by issuer, sector, product, mandate, and time horizon. As such, BlackRock’s ESG integration framework needs to allow for flexibility across investment teams. Please refer to BlackRock’s firm-level ESG Integration Statement for additional information.

Research is at the center of BlackRock’s investment approach and processes. It informs the firm’s pursuit of the best risk-adjusted returns, and it underpins product...
creation and innovation. BlackRock researches major structural trends shaping the economy, markets, and asset prices. BlackRock researches the transition to a low-carbon economy because the firm sees it having implications for macroeconomic trends, such as inflation, company financial prospects and business models, and portfolios.

BlackRock’s CMAs are an example of this research-centered approach. BlackRock’s CMAs are estimates of risk and return across asset classes that can be used as a building block for portfolio construction. Underpinning BlackRock’s CMAs is the view that avoiding climate change damages will help drive economic growth and offer investors better returns. Climate change and the global energy transition are expected to be drivers of asset returns, and consequently fundamental to making strategic investment decisions. BII produces macro and portfolio research, including its CMAs, which are available on BlackRock’s website.¹

**Sustainable Investment Solutions.** To enable choice and meet client demand, over the past few years, BlackRock has significantly expanded the number of sustainable investment strategies available to clients. As of December 31, 2022, BlackRock had over 400 sustainable funds globally covering a spectrum of sustainable solutions, as well as customized solutions to meet clients’ objectives. As of December 31, 2022, BlackRock managed $586 billion in its Sustainable Investing Platform² on behalf of its clients. In 2022, BlackRock saw $67 billion of net inflows into sustainable investment strategies, representing 22% of total long-term net inflows over the same time period.

BlackRock’s sustainable platform provides clients with choice to invest in line with their specific investment goals and objectives. Across the platform, products use environmental, social and / or governance data as a portfolio construction input and a subset of those products also seek to achieve long-term sustainability outcomes, in line with each product’s specific investment objective. These solutions include a variety of products and strategies that support the transition to a low-carbon economy.

### Exhibit S.1: BlackRock Sustainable Investing Platform

<table>
<thead>
<tr>
<th><strong>Investment approach</strong></th>
<th><strong>Screened³</strong></th>
<th><strong>Uplift</strong></th>
<th><strong>Thematic</strong></th>
<th><strong>Impact</strong></th>
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<tbody>
<tr>
<td>Constrain investments by avoiding issuers or business activities with certain environmental, social and / or governance characteristics.</td>
<td>Commitment to investments with improved environmental, social and / or governance characteristics versus a stated universe or benchmark.</td>
<td>Targeted investments in issuers whose business models may not only benefit from but also may drive long-term sustainability outcomes.</td>
<td>Commitment to generate positive, measurable, and additional sustainability outcomes.</td>
<td></td>
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<tr>
<td>Includes use of screens and may be enhanced with active engagement with specific issuers.</td>
<td>Environmental, social and / or governance data drives portfolio construction and security selection with some strategies leveraging to target a specific objective.</td>
<td>Strategy construction determined by focused exposure to the specific environmental or social theme.</td>
<td>Investment process must showcase “additionality” and “intentionality” in line with Operating Principles for Impact Management.</td>
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</table>

¹ Sustainable Investment Solutions. To enable choice and meet client demand, over the past few years, BlackRock has significantly expanded the number of sustainable investment strategies available to clients. As of December 31, 2022, BlackRock had over 400 sustainable funds globally covering a spectrum of sustainable solutions, as well as customized solutions to meet clients’ objectives. As of December 31, 2022, BlackRock managed $586 billion in its Sustainable Investing Platform on behalf of its clients. In 2022, BlackRock saw $67 billion of net inflows into sustainable investment strategies, representing 22% of total long-term net inflows over the same time period.

² BlackRock’s sustainable platform provides clients with choice to invest in line with their specific investment goals and objectives. Across the platform, products use environmental, social and / or governance data as a portfolio construction input and a subset of those products also seek to achieve long-term sustainability outcomes, in line with each product’s specific investment objective. These solutions include a variety of products and strategies that support the transition to a low-carbon economy.

³ Additional details. Includes use of screens and may be enhanced with active engagement with specific issuers.
ETFs & Index Investments

Sustainable ETFs remain one of the fastest growing segments within the ETF market. In 2022, iShares® launched over 50 sustainable ETFs and IMFs across the US, Europe, Asia-Pacific, and Canada. As of December 30, 2022, iShares® had over 200 sustainable index offerings globally. Some examples of advancements made to the firm’s sustainable ETF landscape in 2022 include:

1. iShares expanded its Paris-Aligned Benchmark products, with the launch of BlackRock’s first US Paris-Aligned Benchmark ETF in February, and a euro corporate bond ESG Paris-Aligned ETF in June.

2. iShares launched a suite of ESG IMFs under the Authorized Contractual Scheme in the UK in response to client demand for sustainable options. iShares also launched a global corporate bond ESG ETF in EMEA, providing critical building blocks for retirement clients.

iShares also expanded and enhanced its thematic suite with the launch of a water management multisector ETF and the enhancement of the green bond and global timber and forestry ETFs. Further, BlackRock’s ETFs & Index Investments team (“EI”) works to promote greater consistency and transparency of sustainability benchmark methodologies. The team engaged with index providers to advocate for clear metrics and methodologies to comply with the new MiFID II ESG amendments. BlackRock aims to provide choice to clients with different needs for sustainable products, and offer a range of sustainable ETFs, including screened, optimized/tilted and thematic products.

Active Investment Strategies

To enable choice, BlackRock offers a wide range of index, active, and whole portfolio solutions across broad markets, themes, regions, and investment styles. BlackRock manages active investment strategies across a range of asset classes including (i) equities; (ii) fixed income; and (iii) multi-asset strategies. As the world transitions to a low-carbon economy, sustainability-related data and climate-related insights are increasingly important to help uncover the catalysts that could drive asset values over the long-term. In 2022, in line with growing client demand, BlackRock continued to expand the active investment lineup available to clients to incorporate a greater range of sustainable investment strategies. Below are some examples of the active investment strategies that incorporate climate-related considerations.

Fundamental Equity. In fundamental active equities (“FE”), BlackRock’s approach to sustainable investing recognizes that a diverse range of investment strategies are necessary to tackle the significant sustainability goals of the firm’s broad client base. FE uses fundamental expert insights and employs an interdisciplinary toolkit to construct portfolios addressing clients’ needs and helping them achieve their sustainable goals. The FE platform manages three main types of sustainable investment strategies:

- **Core.** Core Fundamental Sustainable Equity invests across the market in companies that FE believes can lead in a more sustainable world. The range has explicit climate objectives, such as having lower carbon intensity metrics than the benchmark.

- **Thematic.** The FE Thematics & Sector team invests around specific sustainability themes including measuring the alignment of investments to the United Nations Sustainable Development Goals (“UN SDGs”).

- **Impact.** BlackRock’s FE Impact team seeks to invest in companies whose core products and services address social and environmental challenges as identified by the UN SDGs.

Active Fixed Income. BlackRock aims to give clients choice in how they invest, which includes providing sustainable fixed income products. Many large investors, such as insurers and pension funds, hold the bulk of their assets in bonds. Fixed income encompasses many different asset classes, with varying degrees of sustainability information available for each asset class. BlackRock’s Fixed Income ESG Team works with sector teams within BlackRock’s Fixed Income team (“FI”) to identify relevant ESG characteristics and develops tools to aid this process. The FI platform has developed a proprietary sustainability categorization that focuses on positive and negative externalities across fixed income asset classes. This framework drives several dedicated active ESG strategies.

Further, the FI team has developed approaches within certain pools of assets to identify fixed income impact opportunities. This currently includes strategies in US municipal bonds and mortgages, as well as green and social bonds across developed markets and emerging markets. The Fixed Income ESG team has developed a proprietary shading taxonomy for green and social bonds, which is utilized by active teams to understand the degree of impact inherent in a bond’s stated intended use of proceeds structure. FI has been producing quantifiable Green Bond impact reports on green bond funds since 2018. The green and social bond market is steadily growing, helping raise funds for projects that have positive environmental or social impact. Detailed and transparent reporting on the results of the funded projects is encouraged to help track whether green bond funds are delivering on their stated goals. BlackRock is involved in and supportive of the green bond market on behalf of its clients. As of December 30, 2022, BlackRock managed over $42 billion, on behalf of clients, in green bonds across dedicated portfolios and as a component of broader fixed income mandates. These bonds support numerous renewable and low-carbon projects.
Systematic Strategies. The scientifically-driven and innovation-focused investment process of systematic investing is suited to incorporating sustainable considerations, where clients choose to do so. The BlackRock Systematic team (“BSYS”) can integrate sustainable investment considerations in three distinct ways. As a foundation, BSYS aligns portfolios to match the preferences of BlackRock’s clients. This is done through a simple screening process to remove specific securities and/or industries from the investment universe based on client preferences. Next, BSYS can seek to uplift portfolios by targeting securities with improved ESG metrics without materially altering the risk and return characteristics of the portfolio. Finally, BSYS can seek incremental returns or mitigate potential downside risks using ESG-based insights, using the same scientific testing process developed, over decades, to uncover previously overlooked information that may be a driver of security performance.

BSYS also produces research on a variety of topics including climate-related insights. An example of a topic covered in these insights includes BSYS’ finding that company patent applications for forward-leaning technology may be a measure of a firm’s commitment to environmental issues. In its research, BSYS found that companies operating buildings with Leadership in Energy and Environmental Design (“LEED”) certifications often demonstrate greater operational efficiency and can subsequently exhibit better financial outcomes. The LEED buildings themselves result in better environmental outcomes for the communities in which they operate. These types of sustainable alpha signals—which aim to deliver returns while also improving environmental and social outcomes—are a key focus of BSYS sustainable research.

Sustainable Research Framework. BlackRock implements a sustainable research framework to measure the sustainability (including climate) characteristics of companies through an investment materiality lens. This framework aims to deliver exposure to sustainability attributes that are material to enterprise value creation by aggregating a collection of sustainability-related key performance indicators (“KPIs”), selected for their financial materiality, into a normalized metric to compare companies based on such attributes. The framework is rooted in BlackRock’s investment conviction that sustainable business practices can lead to higher risk-adjusted performance over the long term. The analytics powered by this framework have been deployed in Aladdin, which, alongside other internal analytics and third-party datasets, equip BlackRock’s investment teams with sustainable research inputs and investment decision-useful tools. This sustainable research framework can also help position portfolios to seek outperformance through sustainable insights by targeting relevant datasets and providing a framework to prioritize material environmental, including climate, and social issues in different sectors.

Private Market Alternatives

Private market investments, such as infrastructure, real estate, private credit, and private equity, benefit not only BlackRock’s clients, but can also drive positive impacts on the local communities where such investments are situated, as well as the individuals who work on the development, operation, and management of such investments.

BlackRock’s Infrastructure platform has established investment strategies that address the global market opportunities presented by the energy transition and, as an early mover in renewable power investing, BlackRock manages one of the largest climate infrastructure and renewable power platforms in the world. BlackRock’s Infrastructure investment team manages, on behalf of its clients, over $15 billion of invested and committed capital supporting over 400 wind, solar, battery storage, transmission, and electric vehicles infrastructure projects globally, including approximately $10 billion through BlackRock’s dedicated Climate Infrastructure platform.

Private markets Infrastructure. The strategies managed by BlackRock’s Global Infrastructure investment teams are well positioned to take advantage of the opportunities of the global energy transition, as the world moves from a power generation sector historically dominated by fossil fuels, to one that is driven by clean power such as wind, solar and other renewables. BlackRock views this opportunity as one of the largest, structural shifts taking place in infrastructure globally, and one that has the potential to create multi-trillion of investment opportunities over the coming years.

BlackRock’s diversified infrastructure investment strategies continue to recognize the investment opportunities generated by decarbonizing infrastructure beyond wind and solar, such as carbon capture and storage, battery storage, energy efficiency, hydrogen, and electrified transportation. BlackRock’s diversified infrastructure strategies invest in the long-term structural trends of decarbonization, digitalization and decentralization, directly investing in essential infrastructure assets and businesses that are driving the transition to a net zero carbon economy. This includes investment strategies that invest in a diversified set of opportunities across infrastructure globally, with a central focus on the energy transition and energy security.
Climate Finance Partnership (“CFP”). In 2021, BlackRock raised $673 million for the CFP bringing together governments, philanthropies, and institutional investors to accelerate the flow of capital into climate infrastructure in emerging markets. BlackRock and the founding catalytic partners designed a fund structure that seeks to bring their collective skills and capabilities together to help mobilize private investment into emerging markets through a de-risking of the investment set for institutional investors. The structure seeks to provide a narrower standard deviation of outcomes for institutional investors alongside access to the fastest growing infrastructure segment, and markets, over the next 30 years. CFP investments will be targeted in Asia, Latin America, and Africa with a focus on the climate infrastructure sector including: (i) grid connected and/or distributed renewable power generation; (ii) energy efficiency in residential, commercial, and/or industrial sectors; (iii) transmission or energy storage solutions; and (iv) ultra-low emission or electrified transportation and mobility services.

Decarbonization Partners, a BlackRock and Temasek Joint Venture. In 2021, BlackRock announced a partnership with Temasek to establish Decarbonization Partners, which plans to focus on investments that advance decarbonization solutions through late-stage venture capital and early growth private equity investment funds. The partnership will seek to make investments in early-stage growth companies targeting areas such as carbon capture, utilization & storage, bio- & low-carbon materials, next generation energy, advanced mobility, carbon management services and the digital transformation in support of achieving net zero by 2050 or sooner. Together, BlackRock and Temasek have committed $600 million to invest in companies and proven technologies that could reduce and potentially eliminate carbon emissions.

Cash Management

In 2019, BlackRock introduced a suite of funds, known as the BlackRock Liquid Environmentally Aware funds (the “LEAF funds”), that seek to offer the stability, liquidity, and yield potential of a money market fund while considering environmental criteria. The heightened market volatility of 2022 led many investors, including those focused on climate risk and opportunities, to hold elevated levels of cash, helping drive global assets in this environmental cash management series to over $23 billion in AUM. Available in USD, GBP, EUR, and CAD currencies, the LEAF funds consider select environmental criteria in addition to BlackRock’s standard credit risk assessment process for liquidity management portfolios. BlackRock’s Cash Management team also uses a portion of its net management fees from the LEAF funds to purchase carbon credits.

Annually, and per eligible LEAF fund, BlackRock’s Cash Management group purchases and retires Certified Emission Reduction (“CER”) units via the World Bank, as trustee for the Adaptation Fund, an international fund that finances projects and programs aimed at helping developing countries adapt to the adverse effects of climate change. Each year, the CER units purchased are applied to signature projects selected by a BlackRock committee and deemed to be in support of a better environmental future. From BlackRock’s first purchase of CERs from the net management fees from the LEAF funds in 2019 through December 31, 2022, BlackRock has purchased and retired 554,620 CER credits via the Adaptation Fund, at a total cost of $1,300,800. This funding has been applied to projects including wind power, investment in degraded lands and forestry development, and transportation improvements.
BIS serves as an important link between BlackRock’s clients and the companies the firm invests in on their behalf. The business and governance decisions that companies make will have a direct impact on BlackRock’s clients’ long-term investment outcomes and financial well-being. For this reason, BIS aims to build constructive relationships with companies to further the team’s understanding of a company’s approach to corporate governance and having a durable business model. BIS does this by engaging with investee companies and proxy voting on behalf of BlackRock’s clients who have given us such authority. BIS’ approach to engagement and proxy voting is outlined in its Global Principles, market-level voting guidelines and engagement priorities. In 2022, BIS continued to focus its engagement on a consistent set of five priorities that the team believes support the long-term financial performance of BlackRock’s clients’ investments: board quality and effectiveness; strategy, purpose, and financial resilience; incentives aligned with value creation; climate and natural capital; and company impacts on people.

As described in the BIS Global Principles and commentary the team published in early 2022 on Climate Risk and the Global Energy Transition, it’s the team’s view that climate change has increasingly become a critical factor in many companies’ long-term profitability. As the world works toward a transition to a low-carbon economy, BIS is interested in hearing from companies, where appropriate, about their strategies and plans for responding to the challenges and capturing the opportunities that this transition creates. BIS also encourages companies to consider their impact and dependence on natural capital where material to their business model. BIS’ approach on these issues is described in the 2023 engagement priorities and is summarized in Exhibit S.2.

Climate Focus Universe. In 2022, BIS continued its engagement with the companies included in the BIS Climate Focus Universe, which includes over 1,000 carbon-intensive public companies that represent nearly 90% of the global scope 1 and 2 GHG emissions of the firm’s clients’ public equity holdings. The list is derived from public information and is intended to focus BIS’ climate engagement efforts. Many of these companies are leaders in their sectors—they have detailed climate adaptation strategies, rigorous GHG emissions reduction targets, and are creating the technology and solutions that are vital for a low-carbon transition. Others are at a much earlier stage in this journey. BIS looks to company leadership to disclose to investors how climate risks and opportunities might impact their business, and how these factors are addressed in the context of a company’s business model and sector.

Exhibit S.2: BIS’ approach to Climate Risk and Natural Capital

<table>
<thead>
<tr>
<th>Climate Risk</th>
<th>Natural Capital</th>
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<td>Investors have greater clarity—and ability to assess risk—when companies detail how their business model aligns to a range of climate-related scenarios, including a scenario in which global warming is limited to well below 2°C, and considering global ambitions to achieve a limit of 1.5°C. BIS is better able to assess preparedness when companies disclose short-, medium-, and long-term targets, ideally science-based where these are available for their sector, for scope 1 and 2 greenhouse gas emissions reductions and to demonstrate how their targets are consistent with the long-term financial interests of their shareholders. It is up to each company to define their own strategy.</td>
<td>The management of nature-related risks and opportunities is a core component of the ability to generate long-term financial returns for companies whose strategies or supply chains are materially reliant on natural capital. For these companies, BIS seeks disclosures to assess risk oversight and to understand how nature-related impacts and dependencies are considered within the company’s strategy. BIS finds it helpful when these disclosures include a discussion of material natural capital risks and opportunities in the context of a company’s governance, strategy, risk management, and metrics and targets.</td>
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</table>
Climate-related voting on behalf of clients. BIS is interested in understanding how companies may be impacted by material climate-related risks and opportunities - just as the team seeks to understand other business-relevant risks and opportunities - and how these factors are considered within strategy in a manner consistent with the company’s business model and sector. BIS supports management whose approach, in the team’s assessment, is consistent with protecting the economic interests of BlackRock’s clients as long-term shareholders. BIS may signal concerns by not supporting the election of directors or other management proposals, or by voting in support of a shareholder proposal. Voting against director elections is a globally consistent signal of concerns when boards do not seem to have acted in shareholders’ long-term financial interests. BIS votes in support of management and shareholder proposals that, in the team’s assessment, are aligned with long-term shareholder value creation.

Between the 2020-2021 and 2021-2022 proxy years, BIS noted significant progress being made by the companies included in the BIS Climate Focus Universe on the management and disclosure of climate-related risks and opportunities. As a result, BIS was more supportive of management proposals in the 2021-2022 proxy year compared to the 2020-2021 proxy year and supported fewer climate-related shareholder proposals. Reasons for a higher percentage of support for management included company progress on climate-related reporting and enhancements made to the management of climate-related risks and opportunities, as well as the more prescriptive nature of climate-related shareholder proposals in the 2021-2022 proxy year.

Globally, BIS voted to signal concerns addressing risk on climate-related issues at 234 companies (321 in the 2020-2021 proxy year). BIS did not support the election of 176 directors for concerns about the companies’ or directors’ ability to address climate-related risk or disclosure (254 in the prior proxy year). Based on the team’s assessment, 291 of the companies in the BIS Climate Focus Universe demonstrated progress in climate disclosures since 2020. BIS engaged with and/or voted on climate-related concerns at 81% of these improving companies during that period. Exhibit S.3 highlights engagement and voting statistics for climate-related concerns across investee companies for the 2020-2021 proxy year.

Regarding climate-related shareholder proposals, as BIS explained in the commentary published in May 2022 titled “2022 climate-related proposals were more prescriptive than 2021”, the nature of the shareholder proposals that came to a vote in the 2021-2022 proxy year changed compared to the prior year. This change was enabled, in part, by an update to US Securities and Exchange Commission (“SEC”) guidance. Many shareholder proposals were overly prescriptive or unduly constraining on management’s decision-making. Where BIS did not consider them to be consistent with BlackRock’s clients’ long-term financial interests, the team did not support them.

During the 2021-2022 proxy year, as described in the 2022 voting spotlight, BIS supported environment-related shareholder proposals at 29 companies globally, which was 27% of such proposals (or 33 out of 121). Importantly, voting on shareholder proposals represents 1% of BIS’ total voting on behalf of BlackRock’s clients. The overwhelming majority of these proposals, or nearly two-thirds, were on the shareholder meeting agendas of US companies. Of that 1%, environmental-related proposals made up less than one-sixth (or 121) of the shareholder proposals BIS voted on during the 2021-2022 proxy year globally. The majority (79%) of environmental-related shareholder proposals focused on climate-related issues, of which BIS supported 28% in the 2021-2022 proxy year.

Exhibit S.3: Engagement and Voting for climate-related concerns

| 2,058 engagements on climate and natural capital in the 2021-2022 proxy year | 291 companies in the BIS Climate Focus Universe made progress in climate disclosures since 2020 | 176 directors BIS did not support due to climate-related concerns | 234 votes at companies where BIS voted to signal concerns about management or disclosure of material climate risks and opportunities | 33 environmental shareholder proposals supported at 29 companies globally |

Source: BlackRock and Institutional Shareholder Services (“ISS”). ISS classifications used. Sourced on July 11, 2022, reflecting data from July 1, 2021 through June 30, 2022. For more information refer to BIS’ 2022 Voting Spotlight available at: https://www.blackrock.com/corporate/literature/publication/2022-investment-stewardship-voting-spotlight.pdf. Limited to companies within the BIS Climate Focus Universe who improved their GHG reduction targets disclosures since July 1, 2020, according to MSCI. Abstentions are included. Votes not supporting unique companies on climate include: 1) votes not supporting or abstaining on director elections and director-related proposals, and 2) votes supporting or abstaining on climate-related shareholder proposals. Excludes the Japanese market, where numerous shareholder proposals are filed every year due to low filing barriers, and where shareholder proposals are often legally binding for directors in this market.
**BlackRock Voting Choice**. While many asset owners are pleased to have BlackRock’s stewardship team serve as a bridge between them and the companies they are invested in, others want the choice to actively participate in proxy voting. Following the announcement in 2021, in January 2022, BlackRock launched BlackRock Voting Choice, a capability that gives eligible clients – who are the true owners of the assets the firm manages – the option to engage more directly in proxy voting.

BlackRock Voting Choice was first made available to institutional clients invested in index strategies, within institutional separate accounts globally and certain pooled funds managed by BlackRock in the US and UK. In response to growing client demand, in June 2022, BlackRock announced the expansion of the program for eligible clients. This second phase of the BlackRock Voting Choice program expanded the institutional pooled fund ranges eligible for BlackRock Voting Choice in the UK and also expanded BlackRock Voting Choice to Canadian and Irish institutional pooled funds.

In November 2022, the BlackRock Voting Choice program expanded further by extending the pool of eligible client assets that can participate, expanding the range of voting guidelines from which clients can choose, and working on a pilot to bring this capability to individual investors in select mutual funds in the UK. The ongoing expansion of the BlackRock Voting Choice program reflects the firm’s commitment to democratize participation in the financial markets by providing clients with one of the industry’s broadest range of choices across their investment portfolios. For the many clients who choose to continue to use BlackRock’s voting policies, BIS will continue to focus on how companies are delivering long-term profitability for their shareholders. Continuing to rely on BlackRock to exercise voting authority is itself a choice and a deliberate decision by the client to trust BlackRock as a fiduciary asset manager to look after their long-term economic interests.
Risks, opportunities & scenario analysis

BlackRock recognizes the importance of effective identification, monitoring, and management of climate-related risks and opportunities across its global business. Before discussing the climate-related risks and opportunities that BlackRock has identified, it is important to revisit BlackRock’s business model for context.

BlackRock’s exposure to climate-related risk is primarily indirect, with such risk primarily having the potential to affect future revenues and expenses, as opposed to assets and liabilities. This is because the assets that BlackRock manages belong to BlackRock’s clients, not BlackRock. BlackRock typically earns investment management fees as a percentage of AUM. BlackRock also earns performance fees on certain portfolios relative to an agreed-upon benchmark or return hurdle. For some products, BlackRock also may earn securities lending revenue.

In addition, BlackRock offers its proprietary Aladdin investment system as well as risk management, outsourcing, advisory, and other technology services to institutional investors and wealth management intermediaries. Revenue for these services may be based on several criteria including value of positions, number of users, or accomplishment of specific deliverables.

Although BlackRock’s global offices could be impacted by adverse physical climate events, the direct financial impact to BlackRock is limited, as BlackRock leases most of its facilities, and sites are evaluated for physical risks during the selection process. Further, BlackRock maintains insurance, which helps to mitigate the potential financial impact of physical climate risks. Additionally, BlackRock maintains business continuity plans to facilitate the continuity of business in the event of a business disruption, which can include disruptions related to physical climate risks. Further discussion of business continuity management is included on page 32.

Exhibits S.4a and S.4b provide an overview of climate-related risks and opportunities that BlackRock has identified.

Exhibit S.4a: Summary of Key Climate-Related Opportunities

<table>
<thead>
<tr>
<th>Opportunity</th>
<th>Description</th>
<th>Primary Anticipated Financial Impact*</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Products &amp; Services</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Investment Solutions</strong></td>
<td>BlackRock believes that its $586 billion¹ dedicated sustainable investment platform is well-positioned to meet the increased demand of clients to invest in products aligned with sustainability. BlackRock’s iShares® Sustainable ETF range is one of the largest in the industry, both in terms of AUM and the number of investment options provided to investors.</td>
<td>Increased revenues</td>
</tr>
<tr>
<td><strong>Products &amp; Services</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Aladdin</strong></td>
<td>There is increasing demand from Aladdin clients to understand their exposure to climate-related risks and opportunities in their portfolios. Building on BlackRock’s strength in risk management through the Aladdin® platform, BlackRock launched Aladdin Climate to address this need. Aladdin Climate was built to quantify climate risks and opportunities in financial terms by bridging climate science, policy scenarios, asset data, and financial models to arrive at climate-adjusted valuations and risk metrics. Aladdin Climate illustrates (i) financial impact of transition and physical risk on portfolios under a variety of forward-looking emission scenarios, and (ii) portfolio’s alignment to net zero emissions pathways. Aladdin Climate scenarios and models have inherent risks and limitations, including that they may not capture compounding effects of climate change or the scale of monetary and fiscal policy response.</td>
<td>Increased revenues</td>
</tr>
<tr>
<td><strong>Resource Efficiency</strong></td>
<td>As a corporate entity, BlackRock pursues an environmental sustainability strategy that is focused on reducing GHG emissions and increasing the efficiency of BlackRock’s operations, where possible. Finding innovative solutions to increase energy efficiency at BlackRock’s facilities and data centers and leverage low-carbon energies such as renewable electricity reduces BlackRock’s environmental footprint.</td>
<td>Reduced Expenses</td>
</tr>
</tbody>
</table>

¹ There is no guarantee that the primary anticipated financial impact referenced above will be achieved.
Climate Scenario Analysis

Scenario analysis is used to inform assessments of the resilience of an organization’s business or strategy to disruptions and/or the organization’s ability to adapt to changes or uncertainties that might affect its performance. In the case of climate change, scenario analysis allows an organization to develop insight into how the physical and transition risks and opportunities arising from climate change might impact its business over time. The TCFD recommends that companies "consider how climate-related risks and opportunities may evolve and their potential business implications under different conditions." While climate scenario analysis is not meant to predict the future, BlackRock believes it is a helpful tool to hone its understanding of climate-related risks and opportunities. Climate scenarios allow organizations to explore possible outcomes, the assumptions they depend upon, and the courses of action and/or events that could bring them about. The risks of climate change can be considered in two categories: transition and physical risks.

Transition Risk. Climate-related transition risks arise as the economy moves from a reliance on carbon-based energy toward a lower-carbon economy through policy, legal, technology, and market changes. Depending on the nature, speed, and focus of these changes, the global climate transition is expected to create meaningful shifts within sectors and across the entire economy.

Physical Risk. Physical risks of climate change arise from the direct impacts of a changing climate in the short- and long-term. Physical risks are both acute and chronic. Acute physical impacts represent more extreme weather or climate events, and chronic impacts represent longer-term shifts in the climate such as temperature increases or sea level rises. Such risks can include the risks of extreme weather events and rising global temperatures impacting operations, leading to impairment of infrastructure and facilities, as well as disrupting supply chains. With respect to physical climate risk, uncertainty surrounds the degree of warming that may occur and the associated implications for the planet’s climate over the long term.

Exhibit S.4b: Summary of Climate-Related Risks*

<table>
<thead>
<tr>
<th>Risk</th>
<th>Description</th>
<th>Primary Anticipated Financial Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market</td>
<td>Market-related risks are among the key risks to which BlackRock’s profitability may be exposed. Fluctuations in asset value due to climate-related risks could lead to a reduction in investment management revenues as a result of decline in the value of BlackRock’s AUM, withdrawal of funds from BlackRock’s products or the rebalancing or reallocation of assets into BlackRock products that yield different fee levels.</td>
<td>Reduced revenues</td>
</tr>
<tr>
<td>Product</td>
<td>BlackRock may be unable to develop new products and services to suit clients’ climate-related needs and the development of new products and services may expose BlackRock to reputational harm, additional costs, or operational risk. Unsuccessful efforts to develop products or services to suit clients’ climate-related needs could expose BlackRock to additional costs and/or cause revenue and earnings to decline. Changes in client preferences and/or changes to regulation to which its clients are subject to could reduce demand for certain investment products offered by BlackRock.</td>
<td>Reduced revenues</td>
</tr>
<tr>
<td>Reputation</td>
<td>Stakeholder scrutiny and divergent views related to the impact of BlackRock’s client portfolio holdings on the climate as well as perceived action or lack of action by BlackRock on climate and sustainability-related matters could create reputational risk, impact client and employee relationships, subject BlackRock to heightened legal scrutiny or lead to shareholder divestment.²</td>
<td>Reduced revenues</td>
</tr>
<tr>
<td>Regulatory</td>
<td>New or divergent environmental and sustainability-related disclosure requirements, or regulations or guidance that apply to BlackRock’s products or other aspects of BlackRock’s operations could increase compliance costs or require BlackRock to alter business or operating activities. New law, regulations or guidance could impact client investment strategies or allocations in a manner that is adverse to BlackRock.</td>
<td>Increased expenses or reduced revenues</td>
</tr>
<tr>
<td>Physical</td>
<td>BlackRock’s global offices could be impacted by adverse climate events; however, the direct financial impact is limited, as BlackRock leases most of its facilities³ and evaluates such sites for physical risks during the selection process. Further, BlackRock maintains insurance, which helps to mitigate the potential financial impact of physical climate risks. Additionally, BlackRock maintains business continuity plans to facilitate the continuity of business in the event of a business disruption, which can include disruptions related to physical climate risk.</td>
<td>Increased expenses</td>
</tr>
</tbody>
</table>

*The inclusion of climate-related risks in Exhibit S.4b should not be construed as a characterization regarding materiality or financial impact of these risks. For a discussion of risks that BlackRock has determined could be financially material, please see Item 1A. Risk Factors in BlackRock’s Annual Report on Form 10-K, as well as the firm’s subsequent Form 10-Q filings.

BlackRock 2022 TCFD Report
Aladdin Climate helps investors understand their exposure to climate-related risks and opportunities. Aladdin Climate illustrates (i) financial impact of transition and physical risk on the portfolio under a variety of forward-looking emission scenarios, and (ii) a portfolio’s alignment to net zero emissions pathways. In 2021, BlackRock leveraged Aladdin Climate analytics to conduct its analysis for the 2021 TCFD report, which incorporated separate transition risk and physical risk scenarios into its analysis. In 2022, enhancements were made to Aladdin Climate to enable BlackRock to conduct scenario analysis and consider transition and physical risk under the same scenarios. This is an important enhancement to conducting scenario analysis because of the interaction between transition and physical risks associated with each scenario. Future physical impacts of climate change are expected to be largely contingent on actions (transition) that society takes to curb GHG emissions in the coming years and decades. Transition risks and physical risks are therefore closely linked as opposed to isolated – scenarios with increased transition risk are likely to have lower physical risks, and vice versa. The analysis for both 2021 and 2022 combined quantitative analytics in Aladdin Climate with assumptions that were derived from internal workshops conducted to discuss implications of the scenarios for BlackRock’s asset management business. These discussions informed the development of the assumptions around data inputs not included in pre-specified scenarios. In the future, BlackRock intends to explore widening its scenario analysis to consider impacts on its corporate operations. Below is a description of the process through which BlackRock produced its 2022 climate scenario analysis.

**Analysis Overview**
BlackRock’s 2022 climate scenario analysis entailed the key steps outlined in Exhibit S.5.

**Risk Identification**
BlackRock evaluated climate-related risks relevant to BlackRock’s business referencing guidance provided by the TCFD. Five key climate-related risks were identified, as shown in Exhibit S.4b. Importantly, as discussed on pages 21 and 22, BlackRock’s exposure to climate-related risk is primarily indirect, affecting potential future revenues and expenses, rather than the assets and liabilities on BlackRock’s balance sheet. As such, BlackRock’s climate scenario analysis focused on assessing climate-related impacts to the valuation of AUM and the associated management fees generated from that AUM. The analysis also sought to evaluate potential client reactions to the different scenarios, recognizing that whether or not BlackRock is able to offer the products and services BlackRock’s clients will need under different scenarios is a key input to ascertaining potential impacts to BlackRock under each scenario.

As highlighted in Exhibit S.4b, market-related climate risk is one of the key risks to which BlackRock’s future profitability may be exposed. More specifically, fluctuations in asset values due to climate-related risks could lead to a reduction in BlackRock’s investment management revenues as a result of: (i) a decline in the value of AUM; (ii) the withdrawal of funds from BlackRock’s products; or (iii) the rebalancing or reallocating of assets into BlackRock products that yield different fee levels. As such, the primary

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### Exhibit S.5: Steps of BlackRock’s Climate Scenario Analysis

1. **Risk Identification**
   - Identified key climate-related risks to BlackRock

2. **Scenario Selection**
   - Selected three scenarios which consider a range of potential future climate outcomes (and lead to a spectrum of transition and physical risk)

3. **Impact Assessment**
   - Identified required data inputs and analytical specification
   - Utilized Aladdin Climate tools to assess asset-level climate-related impacts through climate-adjusted security and portfolio risk metrics
   - Conducted internal workshops to discuss the implications of the scenarios for BlackRock’s business and developed assumptions around data inputs not included in pre-specified scenarios
   - Updated analytical specification based on internal workshops to produce final output
focus of BlackRock’s climate scenario analysis was on the potential impact that transition and physical risks may have on the firm’s revenues under different climate scenarios. Key drivers of outcomes under the various scenarios were expected capital market returns under each scenario (as it relates to (i) a decline in the value of AUM) and the expected client investment flows into and out of different types of investment products (as it relates to (ii) the withdrawal of funds from BlackRock products).

As mentioned previously, climate scenario analysis is not meant to predict the future, but rather to guide companies’ understanding of how these risks might affect their businesses over time. All the aforementioned facets of climate-related market risk could be influenced by both transition and physical climate risks to markets.

Scenario Selection

In 2021, BlackRock conducted scenario analysis for both transition and physical risks for the first time. Through Aladdin Climate, BlackRock leveraged two sets of scenarios to assess the impact of transition and physical risk, respectively. These scenarios included two climate transition scenarios developed by the Network for Greening the Financial System (“NGFS”) and two scenarios developed by the Integrated Assessment Modeling Consortium (“IAMC”). For the 2022 climate scenario analysis, BlackRock was able to evolve its analysis to consider the impact and relationship of physical and transition risks under the same scenarios. With this enhancement, for the 2022 analysis, as previously mentioned, BlackRock consolidated the analysis on three NGFS scenarios:7 Orderly – Net Zero 2050, Disorderly – Delayed Transition, and Hot House World – Current Policies.

A key unknown within the context of the global climate transition is the degree of orderliness and the timing under which the transition will unfold. Exhibit S.6 illustrates the full range of NGFS scenarios at a glance and highlights that the scenarios reflect a wide variety of future policy and technology outcomes and hence provide a broad range of plausible climate transition pathways.

Exhibit S.6: NGFS scenarios characterized by transition and physical risks

<table>
<thead>
<tr>
<th>Category</th>
<th>Scenario</th>
<th>Physical Risk</th>
<th>Transition Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Policy Ambition</td>
<td>Policy Reaction</td>
</tr>
<tr>
<td>Orderly</td>
<td>Net Zero 2050</td>
<td>1.5°C</td>
<td>Immediate and smooth</td>
</tr>
<tr>
<td></td>
<td>Below 2°C</td>
<td>1.7°C</td>
<td>Immediate and smooth</td>
</tr>
<tr>
<td>Disorderly</td>
<td>Divergent Net Zero</td>
<td>1.5°C</td>
<td>Immediate but divergent</td>
</tr>
<tr>
<td></td>
<td>Delayed Transition</td>
<td>1.8°C</td>
<td>Delayed</td>
</tr>
<tr>
<td>Hot House World</td>
<td>National Determined</td>
<td>~2.5°C</td>
<td>NDCs</td>
</tr>
<tr>
<td></td>
<td>Contributions (&quot;NDCs&quot;)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Current Policies</td>
<td>3°C+</td>
<td>None – current policies</td>
</tr>
</tbody>
</table>

The color coding in the chart indicates whether the characteristic makes the scenario more or less severe from a macro financial risk perspective:

- Lower Risk
- Moderate Risk
- Higher Risk

Footnotes to Exhibit S.6

a. Adapted from NGFS Climate Scenarios for central banks and supervisors. Original figure and additional information available at: Network for the Greening of Financial Services ("NGFS") “NGFS Climate Scenarios for central banks and supervisors”, available at: https://www.ngfs.net/sites/default/files/media/2021/08/27/ngfs_climate_scenarios_phase2_june2021.pdf

b. According to the NGFS, “Risks will be higher in the countries and regions that have stronger policy. For example, in Net Zero 2050 the EU, USA and Japan reach net zero GHGs by 2050, but globally only net zero CO2 is reached by this point.” Please see additional information from the Network for the Greening of Financial Services ("NGFS") “NGFS Climate Scenarios for central banks and supervisors”, available at: https://www.ngfs.net/sites/default/files/media/2021/08/27/ngfs_climate_scenarios_phase2_june2021.pdf

c. According to the NGFS, “This assessment is based on expert judgement on how changing this assumption affects key drivers of physical and transition risk. For example, higher temperatures are correlated with higher impacts on physical and the economy. On the transition side of economic and financial impacts increase with: a) strong, sudden and/or divergent policy, b) fast technological change even if carbon prices are modest, c) limited availability of carbon dioxide removal meaning the transition must be more abrupt in other parts of the economy, d) stronger policy in those particular countries and/or regions. Please see additional information from the Network for the Greening of Financial Services ("NGFS") “NGFS Climate Scenarios for central banks and supervisors”, available at: https://www.ngfs.net/sites/default/files/media/2021/08/27/ngfs_climate_scenarios_phase2_june2021.pdf
As seen in Exhibit S.6, the NGFS outlines three categories of climate scenarios – Orderly, Disorderly, and Hot House World. Within each of these respective categories, the NGFS has developed climate scenarios. BlackRock selected one scenario from each of the three NGFS categories for its analysis. Specifically, BlackRock elected to conduct its analysis on the Orderly – Net Zero 2050 scenario, Disorderly – Delayed Transition scenario, and Hot House World – Current Policies scenario. BlackRock selected these scenarios to observe a range of outcomes in its analysis.

**Impact Assessment**

BlackRock developed analytical specifications to consider the potential impact to BlackRock’s AUM and operating margin across the chosen scenarios. As BlackRock derives revenues from management fees earned on AUM, key elements of the specification included:

- BlackRock’s AUM broken down by asset class and investment style;
- Management fees, establishing the management fee level for each analyzed asset class and investment style;
- Aladdin Climate analytics (refer to Exhibit S.7) to assess asset class level climate-related impacts to BlackRock’s AUM through climate-adjusted security and portfolio risk metrics;
- Market return assumptions based on BlackRock Investment Institute Capital Market Assumptions; and
- Assumptions around client behavior in response to the respective scenarios derived from internal workshops with various subject-matter experts across the firm.

Exhibit S.7 provides a summary of Aladdin Climate’s approach to quantifying transition and physical climate risks.

**Conclusions**

The results of the analysis indicate that, despite a lack of direct exposure to climate-related risks, BlackRock’s AUM and associated revenues and profit margin may be impacted by climate change, which could accordingly impact BlackRock’s offerings to its clients. Each scenario reviewed presented different plausible challenges, risks, and opportunities that BlackRock and its clients may face through 2050.

While these challenges are profound, BlackRock’s diversified platform and commitment to providing choice to its clients create flexibility in its business model that is likely to support the firm’s resilience as it adapts to the impacts of both physical and transition climate risks.

Over the long-term through 2050, based on this analysis, BlackRock could expect that both the Orderly – Net Zero 2050 and Disorderly – Delayed transition scenarios lead to better outcomes for BlackRock and its clients, than the Hot House World – Current Policies scenario, where global warming is not limited to well below 2 degrees Celsius. This is because it is assumed that if significant momentum towards the transition occurs, this will reduce the potential magnitude of physical climate risks over the long-term. This in turn is beneficial to economic growth and stability. However, in the short- and medium-term, the Orderly – Net Zero 2050 and Disorderly – Delayed Transition scenarios create risks that must be managed including through continued efforts to adapt BlackRock’s business to account for the global transition to a low-carbon economy.

The Orderly – Net Zero 2050 scenario is most likely to affect BlackRock in the short- to medium-term, as under this scenario, decisive climate policy actions are taken in the very near-term. This scenario enables BlackRock to offer

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**Exhibit S.7: Summary of Aladdin Climate Approach to Modelling Climate Risk**

<table>
<thead>
<tr>
<th>01</th>
<th>02</th>
<th>03</th>
<th>04</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Select a Climate Scenario</strong></td>
<td><strong>Assess the sector &amp; Economic Impact</strong></td>
<td><strong>Map to Company &amp; Asset Information</strong></td>
<td><strong>Translate into Financial Terms</strong></td>
</tr>
</tbody>
</table>

Select a climate scenario which translates socioeconomic projections, climate policy assumptions and technology choices into a GHG emissions pathway

For the selected scenario, assess the transition and physical impacts on the broad economy and sectors across all global regions

Map the impacts to corporations’ cash flows based on their sector, current financials, transition plans, and geolocation of their revenue and expenses

Translate into financial risks at security and portfolio level

Source: BlackRock, October 2022. Notes: Produced using Aladdin Climate approach for modeling climate physical risk for individual securities and portfolios.
clients the opportunity to invest in strategies that take advantage of the opportunities posed by the transition to a low-carbon economy and therefore could present increased demand for BlackRock products as well as demand for new products. Under the Disorderly – Delayed Transition scenario, BlackRock could be affected with the need to adapt to a potentially uncoordinated or disjointed regulatory environment across jurisdictions. The scenario could present with increased demand for the solutions it offers but would need to consider the affect this scenario would have on client demand for different products in different jurisdictions.

BlackRock believes that the Hot House World – Current Policies scenario would create significant risks for the firm over the long-term. The magnitude of the physical effects may not only reduce asset values and therefore BlackRock’s AUM and revenue, but it could also potentially reduce the pool of capital markets investment by BlackRock’s clients who would likely need to divert their capital to address losses to physical property or require greater liquidity to manage other challenges created by the significant physical risks that are outlined in this scenario.

**Limitations**

Scenario analysis is a dynamic exercise and iterative process that is meant to help envision potential future outcomes, rather than predict the future. The climate scenario analysis exercise provided a structured way to evaluate climate-related risks and opportunities – both in a quantitative and qualitative manner, and it opened a wider discussion as to how transition and physical risks could affect BlackRock’s business. As with any scenario analysis, there are limiting factors worth highlighting.

First, assessing and quantifying the impact of climate change is inherently complex – in how climate change will impact asset values, how companies will react to regulatory and market pressures, as well as how BlackRock’s clients will react and adapt to these impacts.

With that, there are uncertainties that arise from the climate scenarios formulated by NGFS itself, as these scenarios also partly rely on assumptions on policy, technology, and society made by the NGFS; furthermore, the NGFS has self-identified several gaps in their approach relating to scope, coherence, and uncertainty, which can further limit BlackRock’s climate scenario analysis. As noted earlier, Aladdin Climate scenarios and models have inherent risks and limitations, including that they may not capture compounding effects of climate change or the scale of monetary and fiscal policy response. With that, Aladdin Climate models do not attempt to predict the scale of monetary and fiscal policy responses among other financial markets factors. The models’ assumptions about changes in financial valuations may, therefore, be incorrect. Given the evolving nature of climate analytics, the firm expects input data and models to change over time, with potentially significant impacts on results.

Further, assumptions about client responses to each scenario are a significant driver of outcomes in the scenario analysis but are also inherently difficult to predict with any certainty. The assumptions regarding client responses to the scenarios were developed based on the qualitative judgement of subject-matter experts across the firm. As such, there is no guarantee that clients will respond in the manner assumed. This introduces inherent uncertainty into the results established by the analysis.

As such, BlackRock reiterates that this discussion is intended to highlight the tools and analytical specifications the firm established to refine its understanding of potential climate-related risks and opportunities; it is not meant to predict future outcomes.
Operations

In operating its own business, BlackRock pursues an environmental sustainability strategy that is focused on reducing GHG emissions and increasing the efficiency and resiliency of its operations by utilizing low-carbon energy solutions such as renewable electricity to power the firm’s operations and using sustainable aviation fuel (“SAF”), where possible.

In 2021, BlackRock made progress in its operational environmental sustainability strategy by employing energy efficiency strategies, achieving its 100% renewable electricity goal,¹ and compensating for those emissions the firm could not otherwise eliminate through the purchase of high-quality carbon credits.²

Science-aligned Emissions Reduction Goals

Underpinning BlackRock’s environmental strategy, the firm is working to achieve the following 2030 science-aligned emissions reduction goals (relative to a 2019 baseline): (i) 67% reduction of Scope 1 and 2 emissions by 2030; (ii) 40% reduction in Scope 3 business travel emissions by 2030; and (iii) engage suppliers representing 67% of the firm’s emissions (estimated based on spend) to set science-aligned goals by 2025.

BlackRock is committed to achieving its science-aligned emissions reduction goals. Below is a discussion of some of the larger sources of emissions from BlackRock’s operations and the efforts BlackRock is undertaking to reduce those emissions.

Electricity

BlackRock began tracking its electricity usage in 2014 and since then has worked to manage its usage. In doing so, electricity usage from direct operations has not exceeded 2014 levels in either 2019,³ 2020, or 2021. BlackRock accomplished some of this through redesigning office space, upgrading lighting and HVAC systems to more efficient technology, and utilizing flexible desking for employees.⁴ BlackRock has also worked to make its enterprise data centers more efficient by designing, building, and operating them to maximize efficient use of energy, water, and materials.

As primarily a tenant in multi-tenant buildings globally, energy efficiency initiatives are undertaken on an office-by-office basis. However, energy efficiency is a key driver in BlackRock’s office selection process, in its renovations and in ongoing operations. BlackRock’s new headquarters, which will be fully occupied in 2023, is an example of the firm’s proactive efforts to incorporate leading practices in energy efficiency. See information on 50 Hudson Yards on the following page.

BlackRock has made it a priority to not only become more energy efficient, but also to ensure that energy purchased comes from clean sources, wherever possible. To achieve this, the firm leverages renewable electricity, a zero-carbon energy, to reduce electricity related emissions associated with BlackRock’s global operations. BlackRock achieved its 100% renewable energy goal for the first time in 2020 and maintained it in 2021. This goal reflects BlackRock’s commitment to match the same amount of renewable electricity as the electricity that BlackRock’s global operations consume annually.

Business Travel

Business travel by employees constitutes a significant source of emissions for BlackRock’s operations. BlackRock recognizes the environmental impact of travel, but also believes that its culture and connections with clients and other stakeholders can be enhanced by the personal connections that come from face-to-face meetings. This is why BlackRock continues to apply carbon credits to 100% of its employee travel related emissions and, where available, purchases SAF directly, or SAF credits for private aviation. BlackRock continues to work to achieve its science-aligned emissions reduction target for a 40% reduction in Scope 3 business travel emission by 2030. In addition, recognizing that air travel emissions remain a universal challenge to address for all travelers globally, the BlackRock Foundation supports innovation in the production of SAF through its $100 million grant to Breakthrough Energy Catalyst. See page 29 for more information on Catalyst’s latest investment in Alcohol-to-Jet SAF.
BlackRock expects its new headquarters at 50 Hudson Yards will exemplify the firm’s sustainable operations goals; that is to achieve best-in-class energy efficiency, reduce BlackRock’s environmental footprint, and create a healthy indoor environment for its employees. Examples of energy conservation and waste reduction measures include:

**Energy Conservation Measures**
- Utilization of Under Floor Air Conditioning with perimeter chilled beams
- High efficiency magnetic bearing chillers for low condenser water temperature
- Heat recovery chillers to support domestic hot water and perimeter heaters
- Air-side economizer for high occupancy floors
- All LED lighting with daylight harvesting and vacancy controls
- Dedicated Outside Air Systems with CO2 based “demand” ventilation

**Waste Reduction and Indoor Environmental Quality Measures**
- Low-flow fixtures and drought resistant plants
- Low or no-volatile organic compounds (VOC) interior materials
- Standard display technology to reduce paper use
- Focus on recycling and reusability for consumables

**Carbon Credits**
As part of BlackRock’s efforts to mitigate its environmental impact, BlackRock purchases what it considers to be high-quality carbon credits to compensate for the emissions from its operations that cannot currently be eliminated. While BlackRock does not solely rely on carbon credits to reach its emissions reduction goals, carbon credits are a key supplemental and transitional strategy.

In 2022, BlackRock further enhanced its selection criteria and process for sourcing high-quality carbon credit projects. The firm contracted the carbon management company Carbon Direct to conduct due diligence of reduction and removal projects. This due diligence informed purchasing decisions for 2021 carbon credits and will inform purchasing decisions in the future. Carbon Direct’s due diligence included guiding BlackRock through a comprehensive evaluation framework to identify the highest quality available credits, assessing the strengths and potential weaknesses (if any) as well as project impact metrics such as carbon tonnes and co-benefits.

**Green Team Network**
The Green Team Network (“GTN”) is BlackRock’s community of conservation-minded employees who steward environmental sustainability initiatives for BlackRock’s employees to participate in. GTN members are critical to bringing about a more sustainable culture at BlackRock. 51 BlackRock offices host GTN chapters with participation from more than 3,800 employees. GTN initiatives include efforts to reduce single-use plastic, reduce paper use and waste, plant trees, and support biodiversity in communities. GTN is also focused on educating employees about the global energy transition and other sustainability and climate-related topics.

Examples of GTN initiatives in 2022 include:
- The “Plastic Not Fantastic” campaign featured over 20 in-person volunteer events globally, ranging from multiple beach cleanups to a shoe recycling drive. GTN members and fellow employees took action to clean plastic from local environments and responsibly dispose of or recycle plastic-based items.
- A pilot composting program was rolled out to 15 global offices. GTN members are maintaining composting devices in office pantries, actively contributing to the reduction of waste sent to landfills and producing rich soil for employees to use in home gardens.
- The Global Tree Planting Campaign continues into its 3rd year, with over 36,000 trees planted since 2019. This surpasses the 3-year goal of planting 30,000 trees.
Social Impact

**Social Impact** is the firm’s charitable arm that seeks to advance more sustainable economies and communities. Social Impact has two distinct pillars: (i) The BlackRock Foundation (the “Foundation”), which funds and partners with organizations globally that help people beyond the reach of the firm’s core business build financial security and participate in the transition to a low-carbon future; and (ii) Social Impact employee engagement programs, which enable employees to drive local impact and address the needs of the firm’s communities. Please see BlackRock’s 2021 Sustainability Disclosure for an overview of BlackRock’s Social Impact program.

Below are examples of the Foundation’s philanthropic commitments and programs that support the transition to net zero:

- **Breakthrough Energy Catalyst.** Since September 2021, the Foundation has been involved in championing clean technology innovations through its 5-year $100 million grant to Breakthrough Energy Catalyst, a program within the larger Breakthrough Energy network founded by Bill Gates. Catalyst is a new model for how businesses, governments, and private philanthropy can help build the foundation of the net zero economy. Catalyst identifies technologies at critical junctures where investments and blended financing can reduce the “Green Premium” – the difference in cost between a carbon emitting technology and its cleaner alternative. Catalyst’s initial focus is to help speed the development and commercialization of four clean energy technologies: direct air capture, green hydrogen, SAF, and long-duration energy storage. In 2022, Catalyst committed an initial $50 million grant to support Alcohol-to-Jet SAF technology development, which could lower emissions by at least 70% compared to fossil jet fuel. In addition to making this project operational, the intent of the grant is to spur further SAF innovation by helping create a new market for scalable, low-carbon ethanol from sustainable sources. Beyond the philanthropic funding from the Foundation, BlackRock supports Catalyst on a pro bono basis through strategic advisory and subject matter expertise, in addition to ongoing private sector engagements around clean technologies.

- **Generation.** In February 2021, the Foundation committed to support an equitable economic recovery from Covid-19 through a 2-year, $13 million grant to Generation, a nonprofit that supports jobseekers across seventeen countries with the skills to access sustainable employment. The Foundation is funding and partnering with Generation’s country operations in the US, UK, France, Italy, Spain, and India to help scale programs to train and place people into growth sectors that are compatible with a sustainable, low-carbon economy, including green jobs opportunities. With the Foundation’s grant support, in 2022 Generation launched several green employability pilot programs, including an energy efficiency advisor program in the UK, a bike repair technician program in France, and a solar PV installer program in Spain. These professional pathways were identified by Generation based upon employer demand and are designed to help program graduates launch stable careers and ultimately support their communities in the transition to a green net zero economy.

Below are examples of Social Impact’s employee engagement programs that support local communities:

- **Responding to natural disasters.** The firm activates 2:1 matching for employee donations in response to significant natural disasters and humanitarian crises. In 2022, disaster relief campaigns addressing massive flooding in Pakistan and Australia, as well as the hurricanes in Puerto Rico, the Dominican Republic and Florida collectively raised more than $250,000 in employee donations and BlackRock matched contributions for charities responding on the ground. In addition, BlackRock supported The Florida Disaster Fund with a $250,000 direct donation towards response and recovery efforts in the aftermath of Hurricane Ian.

- **Employee-driven grantmaking.** Social Impact runs a community grantmaking program (“Gives”) and a network grant program (“Network Grants”), which enable employees to champion a range of cause areas and organizations, including climate and environment-focused nonprofits. In 2022, Gives has directed more than $160,000 in funding to 13 nonprofit organizations dedicated to environmental conservation in Australia, the UK and Singapore, among others. In addition, the Network Grants program has also directed $200,000 in funding to support various BlackRock GTN initiatives and programs, which are described on the prior page.
Industry Engagement & Public Policy

BlackRock advocates for public policies that it believes are in the long-term best interests of the firm’s clients. BlackRock supports the creation of regulatory regimes that increase financial market transparency, protect investors, and facilitate the responsible growth of capital markets, while preserving consumer choice and properly balancing benefits versus implementation costs. BlackRock’s Global Public Policy Group (“GPPG”) contributes to financial services standard-setting efforts and public policy discourse. The team comments on public policy topics through, among other things, its published ViewPoints series of whitepapers, which examine public policy issues and assess their implications for investors, and through comment letters and consultation responses that BlackRock submits to policy makers and publishes on the firm’s website. BlackRock’s approach to public policy engagement is further described in BlackRock’s 2021 Sustainability Disclosure.

As it relates to climate and sustainability disclosure-related policy matters, BlackRock strives to engage constructively in the global dialogue through participation in industry initiatives as well as through engagement with regulators and standard setters around the world.

Industry Initiatives

BlackRock and its employees participate in industry initiatives to contribute to a dialog on issues that are important to the firm’s clients, including those related to climate-related risks and the transition to a lower-carbon economy as well as those to support the development of consistent industry standards and approaches around climate-related disclosure standards.

One of the initiatives that BlackRock participates in is the Taskforce on Nature-related Financial Disclosures (“TNFD”) which aims to create a disclosure framework for nature-related risks and opportunities. BlackRock has contributed to the TNFD since its launch in summer 2021. BlackRock’s goal in participating in the TNFD is to encourage consistent and comparable nature-related disclosures for a better assessment of how companies are managing and mitigating these risks, to the extent they are material for an issuer, while positioning their strategy appropriately to account for the use of and reliance on natural capital. The final release of the TNFD is scheduled for September 2023. To prepare for the TNFD and to help address an increased interest in nature-based solutions, earlier this year, BlackRock established an internal working group of subject-matter experts focused on biodiversity and natural capital which looks to provide thought leadership and insight on natural capital across the firm.

BlackRock remains a member of the Glasgow Financial Alliance for Net Zero (“GFANZ”) and the Net Zero Asset Managers Initiative (“NZAMI”). In 2022, BlackRock issued its 2030 net zero statement, which it also submitted to NZAMI.

Public Policy

BlackRock supports corporate sustainability disclosure aligned with the TCFD framework and is pleased to observe that the quality of issuers’ disclosures is increasing over time. In 2022, BlackRock contributed comments on several policy efforts to heighten the quality of sustainability-related reporting globally, including consultations by the International Sustainability Standards Board (“ISSB”), the European Financial Reporting Advisory Group (“EFRAG”), and the US Securities and Exchange Commission (“SEC”). BlackRock’s responses to these developing frameworks are guided by and build on the firm’s principles for high quality climate-related disclosures.

Global: In 2021, the International Financial Reporting Standards (“IFRS”) Foundation established the ISSB to develop a global baseline of climate and sustainability-related disclosure standards upon which different jurisdictions can build. The ISSB released two exposure drafts on climate-related and general sustainability disclosure, which BlackRock responded to in July 2022, strongly supporting the objective, and welcoming the alignment with the TCFD framework. BlackRock sees the standard setting work of the ISSB as an important contribution to a multi-year, multi-jurisdictional effort towards improving the availability, quality, comparability, timeliness, and interoperability of climate and sustainability-related disclosures globally.

Regional: In 2022, the EU Corporate Sustainability Reporting Directive (“CSRD”) set out the scope of the EU’s issuer sustainability disclosure regime. In parallel, the European Commission asked EFRAG to develop technical standards setting out the detail of what must be reported. Thirteen draft standards were published for consultation, including two cross-cutting standards on reporting principles, and eleven topical standards covering environmental, social and governance factors. BlackRock responded in August 2022, welcoming the incorporation
of the core tenets of the TCFD framework and calling for further alignment with the ISSB baseline standards to support international comparability. Following the consultation, a revised set of standards were published by EFRAG in November 2022, for the consideration of the European Commission.

National: In 2022, the SEC proposed rules to require enhanced climate-related corporate disclosure and announced plans to propose further rules related to disclosure of human capital management and board diversity for public issuers. BlackRock responded to the proposed rules on climate-related corporate disclosure in June 2022, supporting the SEC’s goal of implementing a framework for public issuers to provide investors with more comparable, high-quality climate-related disclosures and proposing a degree of flexibility necessary for continuing development of best practices. BlackRock continues to engage with further national policy initiatives to improve sustainability reporting, such as the UK Financial Conduct Authority’s proposal for Sustainability Disclosure Requirements (“SDR”) and Investment Labels, published in October 2022.

BlackRock also supports efforts to provide end-investors with more clarity regarding the sustainability characteristics and claims related to investment products. Products that rely on sustainability metrics to meet their investment objectives or sustainability claims should provide appropriate disclosure on those metrics to enable investors to evaluate such claims. In 2022, the SEC proposed rules to enhance ESG disclosures by investment companies and investment advisers. BlackRock responded in August 2022, expressing broad support for efforts to provide clarity to the disclosure of ESG information in fund documents and suggesting certain clarifications, alignment with industry best practices, and other changes that would reduce the risk of potential investor confusion and/or “greenwashing”.

In Asia-Pacific, BlackRock responded in February 2022 to the Monetary Authority of Singapore’s industry consultation on proposed disclosure requirements for ESG funds, supporting enhanced transparency while calling for alignment with key international developments. BlackRock continues to engage with regulators and industry associations in the region on existing or proposed regulations on sustainability-related investment products in jurisdictions including Australia, Hong Kong, Japan, Singapore and Taiwan.

BlackRock submitted a response to the International Organization of Securities Commissions (“IOSCO”) consultation on sustainability-related regulatory and supervisory expectations in asset management following the release of the consultation report, “Recommendations on Sustainability-Related Practices, Policies Procedures and Disclosure in Asset Management” on June 30, 2021. In that response, BlackRock supported IOSCO’s endorsement of asset managers disclosing how their investment processes map to the four pillars of the TCFD. It is BlackRock’s view that mandatory corporate issuer disclosure is an important first step to achieving consistent and comparable product-level disclosure, and that disclosure at the product level is essential to give investors a consistent and comparable understanding of the various types of sustainable investing solutions available to them.

In the UK, BlackRock responded to the Government’s call for evidence on the Updated Green Finance Strategy. In the firm’s response, BlackRock highlighted the progress that has been made towards the objectives of the first Green Finance Strategy, stressing that there was now the opportunity to focus on how the UK can enable further green investment in the updated strategy. The firm is also responding to the UK consultation on extending TCFD reporting to Local Government Pension Schemes. BlackRock believes that TCFD is the foundation for an investment-driven disclosure framework and is supportive of efforts to drive consistency in climate reporting across the pensions’ ecosystem.
An integral part of BlackRock’s identity is the core belief that rigorous risk management is critical to the delivery of high-quality asset management services. BlackRock employs a three-lines of defense approach to managing risks in client portfolios. BlackRock’s investment teams and business management are the primary risk owners, or first line of defense. Portfolio managers and research analysts are responsible for evaluating the material environmental (as well as social and governance) risks and opportunities for an industry or company just as they consider other potentially material economic issues related to their investments. Examples of climate-related risks taken into account include risks from regulatory change or litigation and exposure to physical impacts such as flooding or other extreme weather events or changes in temperature. In addition, BlackRock has developed a framework to monitor exposure to carbon intensive assets to support the understanding and management of potential climate-related risks.

BlackRock’s risk management function, RQA, serves as the second line of defense in BlackRock’s risk management framework. RQA is responsible for BlackRock’s Investment and Enterprise risk management framework, which includes oversight of sustainability-related investment risks. RQA conducts regular reviews with portfolio managers to ensure that investment decisions are taken in light of relevant investment risks, including sustainability-related risks, complementing the first-line monitoring of material climate-related considerations across the firm’s investment platform. RQA also has a dedicated Sustainability Risk Team that partners with risk managers and businesses to reinforce this constructive engagement. RQA collaborates with working groups throughout the Investments Platform and with Aladdin Sustainability Lab to advance the firm’s sustainability toolkit through consultation on firmwide data, modelling, methodologies, and analytics. The third line of defense, BlackRock’s Internal Audit function, operates as an assurance function. The mandate of Internal Audit is to independently assess the adequacy and effectiveness of BlackRock’s internal control environment to improve risk management, control, and governance processes.

**Business Continuity Risk Management**

BlackRock is committed to providing high-quality, resilient services to its clients. Significant resources and effort are dedicated to Business Continuity Management (“BCM”) and technology Disaster Recovery programs, which are designed to meet or exceed legal and regulatory obligations in the locations in which BlackRock operates.

BlackRock maintains business continuity plans to facilitate the continuity of business in the event of a business disruption. BlackRock’s executive management provides oversight and governance to the firm’s BCM program, supported by the BCM team, which manages the program.

BlackRock’s Enterprise Resilience Team conducts assessments of physical locations to create individual site risk models and plans for BlackRock offices and data centers that are then incorporated into BlackRock’s risk management framework and reported on a monthly basis to the firm’s risk management committees. These risk models consider acute climate-related risks, including severe weather, wildfires, and flooding, as well as long-term risks such as climate change.

BlackRock uses weather modeling to assess risks from natural disasters across multiple phases, including site selection, facility design processes, and routine facility management operations. Evaluation criteria include scale and type of energy use, GHG emissions, local climate, facility type, location, occupancy status, and potential financial impact.
Metrics & Targets

Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material.

BlackRock recognizes the importance of leading by example in its own disclosure and is encouraged by the continued growth of companies that take this into account with their own disclosure of sustainability and climate-related topics.

In this section, BlackRock outlines four categories of climate-related metrics to provide stakeholders with transparency on BlackRock’s sustainability journey including:

- **Business Indicators.** Exhibit M.1 provides business indicator metrics across sustainable investing and investment stewardship.

- **Corporate GHG Emissions.** BlackRock reports Scope 1, Scope 2, and all relevant categories of Scope 3 emissions. BlackRock obtains third-party assurance for specified Scopes 1 and 2 emissions, and for a portion of Scope 3 categories. Exhibit M.2 provides BlackRock’s corporate GHG emissions, in addition to select intensity and energy metrics. As discussed below, BlackRock believes that Scope 3 (Investments) should refer to emissions from investments made with assets that are owned by the company rather than those managed by an asset manager on behalf of external asset owners. As such, the Scope 3 (Investments) figure reported in Exhibit M.2 represents emissions from BlackRock’s seed and co-investment portfolios (where data is available), which reflect investment of BlackRock’s own capital. Emissions associated with BlackRock’s AUM in corporate and real estate securities, and emissions intensity metrics associated with BlackRock’s AUM for sovereign debt assets, are reported separately as described in the following bullet.

- **Firm-Level Climate and Portfolio Alignment Metrics for BlackRock’s AUM.** This Report marks the second time that BlackRock is reporting preliminary estimates reflecting the absolute emissions associated with BlackRock’s AUM in corporate securities and real estate. In addition, BlackRock is reporting for the first time the adjusted carbon footprint figures for corporate securities to account for enterprise value including cash volatility. Preliminary estimates of these metrics are provided in Exhibit M.5. BlackRock is also reporting, separate from absolute emissions and carbon footprint metrics associated with AUM, preliminary estimates for emissions intensity metrics associated with BlackRock’s AUM for sovereign debt assets. Emissions intensity metrics are provided in Exhibit M.8.

- **Product-Level Climate and Portfolio Alignment Metrics.** BlackRock manages thousands of portfolios, each with their own investment strategy, guidelines, and constraints. As an asset manager, one of the components of transparency BlackRock provides is with respect to the Sustainability Characteristics of certain investment products offered to clients. Sustainability Characteristics provide investors with specific non-traditional metrics on certain ESG characteristics. Alongside other metrics and information, these provide investors with information to evaluate funds. Sustainability Characteristics do not provide an indication of current or future investment performance, nor do they represent the potential risk and reward profile of a fund. They are provided for transparency and for information purposes only. Sustainability Characteristics should not be considered solely or in isolation, but instead are one type of information that investors may wish to consider when assessing a fund.

BlackRock makes Sustainability Characteristics publicly available for certain publicly-offered funds that it manages, including ETFs (where reliable data is available). As of December 2022, one or more climate-related metrics are publicly available for funds totaling approximately $3.4 trillion in AUM (note holdings value as of September 30, 2022).
# Business Indicators

## Exhibit M.1: Business Indicators

<table>
<thead>
<tr>
<th>Business Indicators</th>
<th>2019 a</th>
<th>2020 a</th>
<th>2021 a</th>
<th>2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sustainable Investing AUM ($ billions) b</td>
<td>$107</td>
<td>$199</td>
<td>$509</td>
<td>$586</td>
</tr>
<tr>
<td>Flows into Sustainable Products ($ billions) b</td>
<td>$25</td>
<td>$60</td>
<td>$93</td>
<td>$67</td>
</tr>
<tr>
<td>Investment Stewardship Team Size c</td>
<td>46</td>
<td>48</td>
<td>69</td>
<td>73</td>
</tr>
<tr>
<td>Total Investment Stewardship Engagements d</td>
<td>2,585</td>
<td>3,501</td>
<td>3,642</td>
<td>3,693</td>
</tr>
<tr>
<td>Total Investment Stewardship Engagements on Environment-Related Issues d</td>
<td>621</td>
<td>1,939</td>
<td>2,293</td>
<td>2,058</td>
</tr>
</tbody>
</table>

Footnotes to Exhibit M.1:

a. AUM and flows data is as of year-end.
b. AUM and flows data is as of year-end. BlackRock’s sustainable investing platform includes portfolios that use sustainability as a principal strategy in selecting investments. These dedicated strategies exist across asset classes, in both index and active, and are categorized as “Screened”, “Uplift”, “Thematic” or “Impact.”
c. Investment stewardship team size data is as of year-end.
d. BlackRock counts only direct interaction as an engagement. BIS also writes letters to raise companies’ awareness of thematic issues on which BIS is focused or BIS changes in its policies, but this outreach is considered distinct from engagement and therefore it is not included in the figures shown in this row. Total investment stewardship engagements data and total investment stewardship engagements on environment-related issues is as of calendar year-end, with the exception of 2022 which reflects data for the 2021-2022 proxy year (covering the period from July 1, 2021 to June 30, 2022, representing the US Securities and Exchange Commission’s (SEC) 12-month reporting period for US mutual funds, including iShares). To learn more about Investment Stewardship engagements please refer to the 2020 and 2021 Annual Reports; the quarterly Global Engagement Summary reports; the quarterly Stewardship Statistics reports; and the 2022 Voting Spotlight. All reports are available through the BIS website here: https://www.blackrock.com/corporate/about-us/investment-stewardship. Subsequent reports and publications distributed may include additional information, updates, and modifications, as appropriate.
Corporate GHG Emissions

Exhibit M.2 provides BlackRock’s corporate GHG emissions covering Scope 1, Scope 2, and relevant Scope 3 categories. Please see Operations on pages 27–28 for a discussion on BlackRock’s strategy to achieve its emission reduction goals. Note that the data provided in this section is for the year-ended 2021.

### Exhibit M.2: Corporate GHG Emissions

<table>
<thead>
<tr>
<th>in metric tons of CO₂e</th>
<th>2019* (baseline)</th>
<th>2020*</th>
<th>2021</th>
<th>% Change from 2019*</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Scope 1 and 2</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scope 1</td>
<td>5,589</td>
<td>3,278</td>
<td>4,407</td>
<td>-21%</td>
</tr>
<tr>
<td>Scope 2 (Location-Based)</td>
<td>23,126</td>
<td>19,363</td>
<td>18,637</td>
<td>-19%</td>
</tr>
<tr>
<td>Scope 2 (Market-Based)</td>
<td>4,454</td>
<td>2,256</td>
<td>2,207</td>
<td>-50%</td>
</tr>
<tr>
<td>Total Scope 1 and Scope 2 (Location-Based)</td>
<td>28,715</td>
<td>22,641</td>
<td>23,044</td>
<td>-20%</td>
</tr>
<tr>
<td>Total Scope 1 and Scope 2 (Market-Based)</td>
<td>10,043</td>
<td>5,534</td>
<td>6,614</td>
<td>-34%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>in metric tons of CO₂e</th>
<th>2019* (baseline)</th>
<th>2020*</th>
<th>2021</th>
<th>% Change from 2019*</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Scope 3</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Purchased Goods &amp; Services</td>
<td>249,356</td>
<td>214,957</td>
<td>241,526</td>
<td>-3%</td>
</tr>
<tr>
<td>2. Capital Goods</td>
<td>8,015</td>
<td>2,337</td>
<td>29,410</td>
<td>267%</td>
</tr>
<tr>
<td>3. Fuel- and Energy-Related Activities (Location-Based)</td>
<td>7,865</td>
<td>6,825</td>
<td>9,396</td>
<td>19%</td>
</tr>
<tr>
<td>Fuel- and Energy-Related Activities (Market-Based)</td>
<td>3,093</td>
<td>2,465</td>
<td>3,019</td>
<td>-2%</td>
</tr>
<tr>
<td>4. Transportation &amp; Distribution</td>
<td>1,709</td>
<td>973</td>
<td>1,313</td>
<td>-9%</td>
</tr>
<tr>
<td>5. Waste Generated in Operations</td>
<td>1,162</td>
<td>379</td>
<td>146</td>
<td>-87%</td>
</tr>
<tr>
<td>7. Employee Commuting (employee shuttles in India)</td>
<td>1,161</td>
<td>26</td>
<td>30</td>
<td>-97%</td>
</tr>
<tr>
<td>8. Leased Assets (Location-Based)</td>
<td>777</td>
<td>928</td>
<td>937</td>
<td>21%</td>
</tr>
<tr>
<td>Leased Assets (Market-Based)</td>
<td>0</td>
<td>0</td>
<td>334</td>
<td>-</td>
</tr>
<tr>
<td>9. Transportation &amp; Distribution</td>
<td>Not Relevant</td>
<td>Not Relevant</td>
<td>Not Relevant</td>
<td></td>
</tr>
<tr>
<td>10. Processing of Sold Products</td>
<td>Not Relevant</td>
<td>Not Relevant</td>
<td>Not Relevant</td>
<td></td>
</tr>
<tr>
<td>11. Use of Sold Products</td>
<td>Not Relevant</td>
<td>Not Relevant</td>
<td>Not Relevant</td>
<td></td>
</tr>
<tr>
<td>12. End-of-Life Treatment of Sold Products</td>
<td>Not Relevant</td>
<td>Not Relevant</td>
<td>Not Relevant</td>
<td></td>
</tr>
<tr>
<td>13. Leased Assets</td>
<td>Not Relevant</td>
<td>Not Relevant</td>
<td>Not Relevant</td>
<td></td>
</tr>
<tr>
<td>14. Franchises</td>
<td>Not Relevant</td>
<td>Not Relevant</td>
<td>Not Relevant</td>
<td></td>
</tr>
<tr>
<td>15. Investments (BlackRock balance sheet only – see Exhibit M.5 for AUM-related metrics)</td>
<td>-</td>
<td>116,015</td>
<td>80,868</td>
<td>-</td>
</tr>
</tbody>
</table>

**Emissions Intensity Metrics**

<table>
<thead>
<tr>
<th></th>
<th>2019*</th>
<th>2020*</th>
<th>2021</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scope 1 &amp; Scope 2 location-based tCO₂e / $1 million revenue</td>
<td>2.0</td>
<td>1.4</td>
<td>1.2</td>
<td>-40%</td>
</tr>
<tr>
<td>Scope 1 &amp; Scope 2 location-based tCO₂e per Employee</td>
<td>1.8</td>
<td>1.3</td>
<td>1.3</td>
<td>-28%</td>
</tr>
<tr>
<td>Scope 3 Business Travel per Employee</td>
<td>2.4</td>
<td>0.4</td>
<td>0.2</td>
<td>-92%</td>
</tr>
</tbody>
</table>

**Electricity**

<table>
<thead>
<tr>
<th></th>
<th>2019*</th>
<th>2020*</th>
<th>2021</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Electricity Consumed (MWh)</td>
<td>70,605</td>
<td>64,225</td>
<td>65,616</td>
<td>-7%</td>
</tr>
<tr>
<td>Percent Renewable Electricity</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>-</td>
</tr>
</tbody>
</table>
Footnotes to Exhibits M.2


a. The year over year percent change in this table was calculated by management using the 2021 GHG Emissions information presented within this table and comparable 2019 information. The 2019 GHG Emissions information used in the calculation and included within this table and the 2020 GHG Emissions Information included in this table was not subject to Deloitte’s review and, accordingly, Deloitte does not express a conclusion or any form of assurance on such information. The 2019 and 2020 GHG Emissions information was subject to limited assurance by Lloyd’s Register Quality Assurance, Inc. (LRQA). Deloitte’s Independent Accountant’s Review Report for the year-ended December 31, 2021 and LRQA’s Independent Assurance Statement for the year-ended December 31, 2020 can be found on BlackRock’s Environmental Sustainability webpage. Please see additional information at: https://www.blackrock.com/corporate/responsibility/environmental-sustainability.

b. As defined by the GHG Protocol: “A location-based method reflects the average emissions intensity of grids on which energy consumption occurs.”

c. Scope 2 emissions include indirect emissions arising from purchased electricity and purchased heat.

d. As defined by the GHG Protocol: “A market-based method reflects emissions from electricity that companies have purposefully chosen. It derives emission factors from contractual instruments, which include any type of contract between two parties for the sale and purchase of energy bundled with attributes about the energy generation, or for unbundled attribute claims.”

e. Scope 2 (Market-Based) and Total Scope 1 and 2 (Market-Based) emissions for 2019 and 2020 have been recalculated based on an updated interpretation of market matching for EACs under the GHG Protocol. When EACs are used, BlackRock seeks to match the country in which the electricity was generated to the country in which the EAC is issued. In some cases, country-by-country matching is not possible; for example, where EACs are not available or cost prohibitive. In those cases, BlackRock will cover electricity usage with EACs from a neighboring region. The updated calculation applies 0 emissions only when the EAC matches the country or market-boundary (e.g., US or EU) of usage.

f. BlackRock has a renewable energy contract with Calpine for its New York offices located at 40, 49 and 55 East 52nd Street, that includes purchase of wind power energy on behalf of BlackRock. The associated RECs are not provided as part of the transaction. BlackRock considers its wind power electricity contract with Calpine to allow for market-based emissions reporting to be zero. BlackRock does not receive the associated RECs from the wind asset as they are used and retired by NYSERDA to meet its compliance obligations under the State renewable energy standards.

g. The 2019 and 2020 GHG emissions for this category were calculated using USEPA 2020 v1.0 emission factors. 2021 emissions were calculated using a different source, US EPA 2020 v1.1 emission factors.

h. Capital Goods in 2021 increased primarily due to construction of BlackRock’s New York City headquarters.

i. FERA increase reflects changes that UK DEFRA made to its 2021 methodology for calculating country level average well-to-tank emissions factors for electricity, and specifically to add in impacts from thermal renewables. UK DEFRA has not published revised emissions factors for previous years.

j. T&D 2019 amount was not subject to LRQA’s limited assurance review in 2019.

k. Waste includes waste that is landfilled, recycled, composted, or incinerated. In 2021, BlackRock reported Scope 3 waste emissions based on actual data for sites where employees representing 53% of BlackRock’s total headcount were located. Average waste volumes for sites with actual data are used to estimate waste-related emissions for the remaining sites without reported data. Emissions were calculated using DEFRA 2021 emission factors.

l. Certain emissions declined significantly in 2020 and 2021 primarily due to changes to the firm’s operating model arising from COVID-19.

m. The 2019 and 2021 business travel amounts include commercial air travel, rail, car rental and car services. The 2020 business travel amounts include commercial air travel, rail, car rental and car services, and corporate housing and hotels.

n. Upstream leased assets emissions are for unmanned co-located data centers and executive suites.

o. This is not a comprehensive measure of S3C15. Reported emissions for S3C15 is limited to corporate equities and bonds and associated derivatives in BlackRock’s seed portfolios and co-investments. This figure excludes emissions from strategic investments, carried interest, and seed and co-investment portfolio investments in non-corporate fixed income, commodities, derivatives not linked to corporate issuers, and alternatives. BlackRock has sought, and will continue, to incorporate additional asset classes as data and methodologies become available. As such, BlackRock has updated its analysis and reported figures for S3C15 for 2020 and 2021. Data coverage represents approximately 51% for 2020 and approximately 59% for 2021 of BlackRock’s seed and co-investment portfolios. PCAF Data Quality Score is between 2 and 3. Methodology and Limitations are discussed on pages 40-45.

p. BlackRock’s analysis of its seed and co-investment portfolios for 2020 and 2021 indicated that the decrease in emissions could be associated with, but not limited to, changes in BlackRock’s ownership of seed and co-investment portfolios, changes in the list of portfolios included in BlackRock’s seed and co-investment portfolios, changes in methodology for green bond treatment, or changes in the emissions of the seed and co-investment portfolios themselves.

q. Denominator includes full time employees and contingent workers.

r. 100% renewable energy metric covers electricity loads from facilities, data centers, and upstream leased assets. Where BlackRock does not have operational control to procure its own renewable electricity, the firm purchases environmental attribute certificates (EACs) as a means to achieve the 100% renewable electricity goal.
**Scope 3 (Investments)**

For Category 15 of Scope 3, “Investments” (hereafter, “Scope 3 Investments” or “S3C15”), a key question that arises for asset managers, like BlackRock, is the treatment of investments that are managed on behalf of external clients, who are the asset owners.

The Corporate GHG Protocol (“GHGP”) distinguishes asset owners from asset managers under S3C15 in that it requires asset owners to report emissions associated with their investments, whereas asset managers are not required to report emissions associated with their AUM for external clients under S3C15 (although they may optionally do so).

While the GHGP draws this distinction between asset owners and asset managers, it does not fully address S3C15 reporting for asset managers. Moreover, were asset managers to optionally report emissions associated with investments managed on behalf of their external clients under S3C15, there would be double counting with their clients’ (the asset owners) S3C15. BlackRock believes this is a problematic outcome that would lead to confusion and reduce the comparability and usability of S3C15 data across financial institutions.

The lack of clarity in the existing GHGP guidance could also likely lead to underreporting of emissions associated with asset management for external clients, particularly in instances where financial institutions manage investments of their own capital in addition to investments on behalf of other asset owners.

BlackRock encourages the development of a level playing field for S3C15 reporting across financial institutions operating in the same lines of business regardless of corporate structure, and by reflecting within that framework the unique nature of different types of financial activities. In BlackRock’s view, S3C15 should consider balance sheet loans and owned investments, and GHG emissions associated with assets managed on behalf of external clients should be reported separately.

This view has been reflected within the reporting provided in this document. S3C15 in Exhibit M.2, which covers BlackRock’s corporate GHG emissions, reflects emissions associated with BlackRock’s seed investments and co-investments portfolios, which are made with BlackRock’s own capital. Note that the emissions reported reflect emissions for a subset of BlackRock’s seed and co-investments portfolios that are invested in corporate equity, corporate fixed income, and associated derivatives.

Reported S3C15 excludes emissions from strategic investments, carried interest, and seed and co-investment portfolio investments in non-corporate equity and fixed income, commodities, derivatives not linked to corporate issuers, and alternatives. These assets have been excluded from this year’s reporting due to insufficient data and methodologies available to report this information.

BlackRock intends to incorporate additional asset classes as data and methodologies become available over time.

As discussed below, preliminary estimates of emissions associated with BlackRock AUM in corporate securities and real estate is provided separately in Exhibit M.5. BlackRock is also providing preliminary estimates on emissions intensity metrics associated with BlackRock AUM for sovereign debt assets which is provided in Exhibit M.8. The following section provides a detailed description of the analysis performed to develop preliminary estimates of emissions associated with BlackRock’s AUM (where sufficient data and methodologies were available) and emissions intensity metrics associated with BlackRock’s AUM for sovereign debt assets. The same methodologies were applied to calculate S3C15 for BlackRock’s seed and co-investment portfolios.
Firm-Level Climate Metrics for BlackRock’s AUM

BlackRock is an asset manager. Asset managers act as agents investing assets that belong to their clients on their clients’ behalf. BlackRock reports preliminary estimates reflecting the absolute emissions associated with the investments BlackRock makes on behalf of its clients in corporate securities and real estate (where data is available). BlackRock is also reporting preliminary estimates reflecting the unadjusted and adjusted carbon footprint associated with the investments BlackRock makes on behalf of its clients in corporate securities (where data is available) as well as emissions intensity for sovereign debt assets (where data is available). Several advancements have enabled BlackRock’s ability to produce these estimates, namely:

i. Corporate and sovereign issuers are increasingly reporting their GHG emissions through voluntary and regulatory initiatives;

ii. BlackRock's commitment to put sustainability at the center of the Aladdin platform has resulted in the incorporation of a breadth of climate-related metrics and data into BlackRock's analytical systems; and

iii. Industry efforts have formed to facilitate the development of methodologies for calculating climate-related and portfolio alignment metrics and setting net zero-aligned targets.

The following is a discussion of the methodology, results, and limitations of an analysis performed in 2022 to compute preliminary estimates of the absolute emissions associated with BlackRock’s AUM in corporate securities (listed equities, corporate bonds, and associated derivatives) and real estate and the unadjusted and adjusted carbon footprint associated with BlackRock’s AUM in corporate securities. These asset classes were included in the analysis because there is consensus around the methodologies for attributing emissions to investors and sufficient reported or estimated data were available. As of year-end 2021, collectively, absolute emissions for investments in corporate securities and real estate assets included in this analysis represent more than 53% of BlackRock’s AUM. Additionally, BlackRock is reporting, for the first time, the adjusted carbon footprint figures for corporate securities to account for enterprise value including cash volatility. Separately, BlackRock is reporting emissions intensity metrics for investments in sovereign debt assets associated with BlackRock’s AUM in 2020 and 2021. As consensus around methodologies and available data for additional asset classes builds, BlackRock will seek to incorporate those asset classes into future TCFD reports.

Metrics Selection

There is currently no consensus on how to measure portfolio alignment to net zero and/or exposure to the climate transition. BlackRock in 2022 continued to evaluate existing climate-related and portfolio alignment metrics and methodologies, with the goal of reporting aggregate statistics (where sufficient data and methodologies exist) for BlackRock’s AUM and to the uses and limitations of existing approaches. One conclusion from the exercise was that there is no single metric that provides full insight into a portfolio’s trajectory or exposure as it relates to the transition to a low-carbon economy. Moreover, some metrics are more appropriate for disclosure at the portfolio or fund level, and others are more appropriately reported at a firm or institution level. Exhibit M.3 shows a summary of key climate-related and portfolio alignment metrics. Each of these metrics comes with its own uses and limitations, as shown in Exhibit M.3.

For BlackRock’s TCFD firm-level reporting, absolute emissions and carbon footprint were selected. Absolute emissions in this context refers to proportionate exposure to an investee company or asset’s emissions (based on % ownership). While the absolute emissions metric has the benefit of intellectual consistency with other GHG emissions metrics reported at the corporate level, a drawback of absolute emissions is that it does not account for the size of the investor. In other words, absolute emissions are likely to grow if the portfolio or AUM grows and vice versa if the portfolio shrinks. To account for this limitation, carbon footprint, which refers to absolute emissions divided by AUM (rounded to the nearest million), was also estimated. Carbon footprint normalizes emissions for the size of the portfolio. Global consistency in entity level reporting was also a factor in the selection of these metrics, as both absolute emissions and carbon footprint are metrics that will be required to be reported by asset management entities based in the European Union under the SFDR.

Further discussion of metrics utilized for fund-level reporting is provided on page 46.
Exhibit M.3: Overview of Key Climate-Related and Portfolio Alignment Metrics & Incorporation into BlackRock Reporting

<table>
<thead>
<tr>
<th>BACKWARD-LOOKING EXPOSURE</th>
<th>EXPOSURE TO 'GREEN' ACTIVITIES</th>
<th>EXPOSURE TO EMISSIONS</th>
<th>FORWARD-LOOKING METRICS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Green Exposure</td>
<td>Absolute Emissions</td>
<td>Emissions Intensity</td>
</tr>
<tr>
<td></td>
<td>$ or %</td>
<td>tCO2e</td>
<td>tCO2e per unit</td>
</tr>
<tr>
<td>What it measures</td>
<td>Proportionate exposure to “green” assets or revenues</td>
<td>Proportionate exposure to investee GHG emissions</td>
<td>Emissions exposure per unit of output or investment (i.e., revenue, AUM, MWh)</td>
</tr>
<tr>
<td>Pros</td>
<td>• Helps identify opportunities associated with financing the transition</td>
<td>• Standard data inputs</td>
<td>• Standard data inputs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Direct connection to net zero goals</td>
<td>• Normalizes for size, allowing comparability</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Industry standard (PCAF)</td>
<td></td>
</tr>
<tr>
<td>Cons</td>
<td>• Lack of consensus on definition of “green”</td>
<td>• Doesn’t account for size</td>
<td>• Market movements can create noise</td>
</tr>
<tr>
<td></td>
<td>• Limited data availability</td>
<td>• Market movement can create noise</td>
<td>• Incomplete data / asset class coverage</td>
</tr>
<tr>
<td>Current BlackRock Use of Metric</td>
<td>Future Development</td>
<td><strong>Firm-level</strong> Absolute Emissions of AUM (corporates, real estate)</td>
<td><strong>Firm-Level</strong> Carbon Footprint of AUM (tCO2e / $ million AUM)</td>
</tr>
<tr>
<td>Future Development</td>
<td></td>
<td>Firma-level Absolute Emissions of AUM (corporates, real estate)</td>
<td><strong>Firm-Level</strong> Carbon Footprint of AUM (tCO2e / $ million AUM)</td>
</tr>
</tbody>
</table>

*Note that WACI and ITR are not reported for all BlackRock funds. The metrics that are reported vary by asset class and strategy in addition to available data and methodologies. For examples of these disclosures on BlackRock funds, please visit [www.ishares.com](http://www.ishares.com) and [www.blackrock.com](http://www.blackrock.com).
Methodology

The Partnerships for Carbon Accounting Financials ("PCAF") is a consortium of financial institutions working to develop an open source GHG emissions accounting standard for lending and investment activities.\textsuperscript{12} PCAF published the Global GHG Accounting & Reporting Standard for the Financial Industry ("PCAF Standard"), which BlackRock referenced as a starting point for estimating absolute emissions associated with BlackRock’s AUM.\textsuperscript{13} However, the PCAF Standard does not address all asset classes and has a number of methodological issues still to be explored. Further, the PCAF Standard was developed primarily for use by banks and, therefore, has not yet fully addressed the asset management and portfolio context. As such, BlackRock made several methodological decisions that are not included in the PCAF Standard, which are discussed below. Exhibit M.4 highlights key methodological choices.

**Corporates.** For corporate securities (listed equity, corporate bonds, and associated derivatives), emissions were apportioned based on the proportion of the company’s enterprise value including cash ("EVIC") represented by BlackRock’s investments on behalf of its clients. Issuer-level Scope 1 and 2 emissions data were obtained from MSCI, as were issuer-level EVIC data. MSCI utilizes reported data from companies where emissions are disclosed. Where companies do not disclose their emissions, MSCI applies proprietary methods to estimate emissions.

Treatment of derivatives and short positions when calculating exposure to each issuer was an important consideration for a subset of portfolios in the analysis. Neither derivatives nor short positions are addressed by the PCAF Standard. Further, there are different views within the industry as to the application of short positions and derivatives in the emissions context. On the one hand, long exposures through physical securities are the most direct representation of engagement rights with companies. On the other hand, omitting derivatives and short positions could misrepresent the economic exposure of the portfolio to a given issuer. After reviewing the pros and cons of each approach, BlackRock concluded that metrics that best approximate economic exposure are most appropriate because they align more closely to how financial metrics are reported. As such, the preliminary estimates reported herein reflect net exposure to each corporate issuer including exposure obtained through derivatives. These methodological choices had a minimal impact on absolute emissions and carbon footprint estimates for the firm given that the majority of BlackRock’s AUM is held in long-only index portfolios where short positions and derivatives are not a significant component of the investment strategy. For individual portfolios with more significant use of derivatives or short positions, it may be appropriate to report long and short positions separately.

Another consideration was the treatment of emissions associated with green bonds. Green bonds are bonds whose funding is provided exclusively to projects that are aligned with the International Capital Markets Association ("ICMA") Green Bond Principles.\textsuperscript{14} BlackRock believes that qualifying green bonds should not carry the emissions of the issuer when calculating portfolio emissions, which would appropriately recognize their emissions impact and provide suitable incentives for their acquisition. In this year’s report, under BlackRock’s proprietary shading taxonomy for green bonds, the firm considered green bonds that are “medium” or “dark” green bonds only, thereby not categorizing “light” and “very light” green bonds as having zero emissions. As such, medium and dark green bond holdings were excluded when calculating exposure to each issuer across both corporates and sovereigns. However, all other exposures to those issuers were included.\textsuperscript{15}

### Exhibit M.4: GHG Emissions from AUM - Methodological Highlights

<table>
<thead>
<tr>
<th>Emissions Included</th>
<th>Scope 1 &amp; 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emissions Excluded</td>
<td>Scope 3</td>
</tr>
<tr>
<td>Asset Classes Included</td>
<td>• Listed equities, corporate bonds, and associated derivatives</td>
</tr>
<tr>
<td></td>
<td>• Direct real estate</td>
</tr>
<tr>
<td>Asset Classes Excluded</td>
<td>• Non-corporate fixed income</td>
</tr>
<tr>
<td></td>
<td>• Commodities</td>
</tr>
<tr>
<td></td>
<td>• Alternatives other than real estate</td>
</tr>
<tr>
<td></td>
<td>• Derivatives not linked to corporate issuers</td>
</tr>
<tr>
<td>Data Sources</td>
<td>MSCI (corporates)</td>
</tr>
<tr>
<td>Standards Referenced</td>
<td>PCAF (with adjustments to reflect issues not yet fully contemplated by PCAF Standard)</td>
</tr>
</tbody>
</table>
Another key challenge to estimating absolute emissions was obtaining emissions data that is contemporaneous with holdings data. This issue arises because companies typically report their emissions for a given year well after year-end. In addition, there is typically a lag between the date when emissions data is reported and the date that data is incorporated into the MSCI dataset. As such, holdings values measured at year-end will not be contemporaneous with emissions data that is available at that time. To mitigate the impact of this timing mismatch to the extent possible, this analysis utilizes different dates for: (i) the date at which exposure to each issuer is measured (“holdings value analysis date”); and (ii) the date on which the latest available emissions data is provisioned by a third-party data provider (“emissions effective date”).

Whereas the holdings analysis date is December 31 of each reporting year; the emissions effective date is September 30 of the following year. As discussed in the limitations section below, while this approach is unlikely to address all instances of lagged emissions data, it increases the likelihood that emissions and holdings are measured as of the same or similar time periods.

**Real Estate.** For directly invested, physical real estate, BlackRock has long-established data programs to collate, measure, and report key sustainability metrics, including GHG emissions, at the individual property-level and aggregated portfolio-level. Operational Scope 1 and 2 emissions for each property were apportioned to BlackRock based on the proportionate investments in each property represented by BlackRock’s clients’ assets.

**Unadjusted and Adjusted Carbon Footprint metrics.** The PCAF Standard has been very helpful in setting a foundation for reporting absolute emissions and by default, carbon footprint, which measures absolute emissions per unit of AUM. However, as a relatively new standard, the metrics defined by PCAF have limitations that have yet to be fully addressed. One of those limitations is the sensitivity of absolute emissions and carbon footprint to fluctuations in asset values – particularly, though not exclusively, due to changes in EVIC from one period to the next. In other words, as financial institutions use the metrics defined by PCAF to demonstrate progress towards decarbonization of their portfolios, market volatility can introduce noise that reduces comparability from one year to the next. To address this, BlackRock partnered with the PCAF industry working group to develop methodology which manages for the impact of market volatility. As such, BlackRock is reporting the unadjusted and adjusted carbon footprint for BlackRock’s 2021 AUM in corporate securities to illustrate the influence of market value fluctuations on these metrics driven by EVIC. As noted, while EVIC is a factor in driving fluctuation in asset values there are other factors that drive changes in absolute emissions and carbon footprint. Please see the limitations section on page 44 for further information.

**Results & Discussion**

Exhibit M.5 provides preliminary estimates of absolute emissions for BlackRock’s AUM in corporate securities and real estate (where data was available). Estimated absolute emissions were 340.9 million tons CO2e in 2021, up from 320.4 million tons of CO2e in the prior year. Among other elements, one of the drivers of growth in emissions from 2020 to 2021 was the overall increase in BlackRock’s AUM.

As previously discussed, BlackRock is also reporting the unadjusted and adjusted carbon footprint for BlackRock’s AUM in corporate securities. The unadjusted carbon footprint in 2021 was 50 tons of CO2e per million dollars of AUM, down from 57 tons per million dollars of AUM in 2020. Based on the established methodology, an adjustment is only relevant for 2021, since the adjustment factor is calculated to be applied relative to an unadjusted base carbon footprint, in this case 2020. As such, the 2021 adjusted carbon footprint, which adjusts for the 2020–2021 market volatility, was 55 tons of CO2e per million dollars of AUM, relative to the unadjusted carbon footprint of 57 tons per million dollars of AUM in 2020. When comparing the unadjusted numbers, BlackRock observed that over this period markets had rallied and exaggerated the reduction in carbon footprint, and with the adjusted carbon footprint figure it identifies a less dramatic reduction after removing the effect of market volatility. BlackRock believes that the adjusted carbon footprint number for 2021 serves as a better point of comparison to the unadjusted 2020 carbon footprint, since changes should be largely driven by asset allocation decisions and changes in reported investee company emissions, rather than by market volatility over

<table>
<thead>
<tr>
<th>Metric</th>
<th>2020b</th>
<th>2021c</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Absolute Emissions</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(million tCO2e)</td>
<td>320.4</td>
<td>340.9</td>
</tr>
<tr>
<td><strong>Unadjusted Carbon Footprint</strong></td>
<td>57</td>
<td>50</td>
</tr>
<tr>
<td><strong>Adjusted Carbon Footprint</strong></td>
<td></td>
<td>55</td>
</tr>
</tbody>
</table>

Data above represents unaudited, preliminary estimates. Not comprehensive – Figures reflect coverage of over 53% of AUM. Changes in reported AUM coverage from previous reports can be attributed to shifts in list of portfolios and positions in scope of the analysis. There are several limitations associated with these figures. Please review results in conjunction with the limitations section provided on page 44.

**Exhibit M.5 Footnotes**

a) Absolute Emissions includes corporate securities (listed equity, corporate bonds, associated derivatives) and physical real estate where data was available and excludes all other AUM. Unadjusted and Adjusted Carbon Footprint metrics includes corporate securities where data was available and excludes all other AUM. Changes in reported absolute emissions or carbon footprint from previous reports can be attributed to shifts in the portfolios and/or positions in scope of the analysis as well as methodology enhancements identified for the treatment of green bonds.

b) Holdings value analysis date is as of December 31, 2020. The emissions effective date, on which emissions and EVIC data is reported and provisioned by third party data providers is September 30, 2021.

c) Holdings value analysis date is as of December 31, 2021. The emissions effective date, on which emissions and EVIC data is reported and provisioned by third party data providers is September 30, 2022.
this time period. These estimates are based on the portion of BlackRock’s AUM for which emissions data and methodologies are available to calculate the emissions attributable to BlackRock’s AUM. This portion reflects approximately $5.3 trillion in 2021, representing over 53% of BlackRock’s total AUM.

The limitations of the estimates should be reviewed carefully (see the Limitations section below). The analysis indicates that the emissions associated with the investments that BlackRock makes on behalf of its clients are generally aligned with the state of global emissions. The scope of this analysis was corporate securities and real estate (where data was available), representing approximately $5.3 trillion of BlackRock’s AUM (over 53% of BlackRock’s total AUM), which equates to approximately 1% of global financial assets. Similarly, the emissions associated with the investments in the analysis represent just under 1% of total annual global emissions. These results comport with BlackRock’s intuition about its business given that the majority of the investments BlackRock makes on behalf of its clients are held in index funds. Index funds provide numerous benefits to millions of people around the world by democratizing access to diversified and professionally managed portfolios. However, index funds, by their very nature, are meant to reflect the underlying markets in which they invest, which would suggest that the magnitude of emissions from BlackRock’s investments on behalf of clients would be consistent with its proportionate market share of global aggregate emissions.

Another finding from BlackRock’s analysis, which is shown in Exhibit M.6, is that companies and countries are continuing to set targets to reduce their emissions. Earlier in 2022, BlackRock shared its estimated anticipation of the proportion of its AUM in 2030 that will have science-based targets, or the equivalent aligned with reaching net zero by 2050. As noted in the firm’s 2030 net zero statement, approximately 25% of BlackRock’s AUM with respect to corporate and sovereign issuers was invested for clients with science-based targets or equivalent. BlackRock continues to observe an increase in the number of issuers and asset owners globally that have set science-based targets or the equivalent to position themselves in front of the transition. To illustrate this, BlackRock conducted an analysis of the MSCI ACWI IMI to identify the percentage of issuers that have set science based or equivalent targets. BlackRock elected to conduct its analysis on this index as it captures a broad range of the investable equity market globally. As outlined in the Exhibit M.6 below, there has been significant momentum around target setting since 2019 and despite the nascency of science-based targets for certain sectors there continues to be growth in the number of issuers setting targets across sectors as identified in Exhibit M.7. In addition to this, countries around the world are making progress in support of the transition by setting net zero pledges. As of December 2022, the Net Zero Tracker illustrates that 133 countries which represent over 90% of global GDP and over 80% of global emissions have set science-based targets.
Sovereigns

BlackRock is reporting emission intensity metrics for sovereign debt assets (where data is available) for the first time in this year’s TCFD report. The calculations of these metrics were made possible due to progress towards developing methodologies for various emissions intensity metrics. While there is not yet consensus on which intensity metrics to use when determining emissions intensity for sovereign assets, BlackRock believes it is important to provide a preliminary view of the measures to support the firm’s commitment to transparency. For this year’s TCFD report, BlackRock elected to report GHG intensity per GDP Purchasing Power Parity (“PPP”) associated with BlackRock’s AUM in sovereign assets (where data is available).

Methodology. Due to fundamental differences between sovereign and corporate securities, emissions footprinting for sovereign assets is reported separately from corporate assets. One of the issues that arises when comparing sovereign and corporate emissions footprints is the doublecounting of emissions. Sovereign emission levels are calculated by summing all emissions produced within that sovereign territory – this includes emissions produced by individual private entities, which are already counted in a corporate portfolio’s attributed emissions. This means that any footprinting of sovereign emissions should be done separately from other securities to avoid doublecounting emissions for certain assets.

Another, more fundamental difference in sovereign emission attribution is a breakdown in the concept of ownership when it comes to sovereign issuers. Corporate emissions exposure is calculated based on percentage ownership of the issuer’s total emissions; however, there is no analogous concept of ownership of sovereign nations resulting from investments in sovereign bonds. Footprinting of a sovereign portfolio’s exposure to emissions is therefore done based on average emissions intensity, instead of percent ownership of the issuer.

Results & Discussion

Sovereign emissions intensity is a metric which represents the nation’s carbon efficiency, or how dependent its economic activity is on carbon emissions. A higher emissions intensity indicates a relatively higher exposure to transition risks associated with emissions regulations, as well as greater contribution of global GHG levels and the associated impact on warming.

As previously mentioned, BlackRock is reporting GHG intensity per GDP PPP which was produced utilizing MSCI data. The GHG intensity per GDP PPP was aggregated as a weighted average, with weights proportional to the investment into each sovereign represented by BlackRock’s client assets. Exhibit M.8 outlines the GHG intensity per GDP PPP.

BlackRock has selected GHG intensity per GDP PPP to represent the emissions intensity for sovereign bond investments. GHG intensity per GDP PPP represents the carbon efficiency of an economy’s production of goods and services, which is a representation of the carbon intensity of the economy and how exposed it is to changes in emissions regulations. PPP adjusted GDP is used as the denominator because it represents the relative size of different economies while adjusting for price-level changes over time. This gives GDP PPP an advantage over nominal or real GDP metrics, which would make GHG intensity highly dependent on inflation and price-level changes as opposed to fundamental changes. Exhibit M.8 identifies the GHG intensity per GDP PPP for sovereign assets included in BlackRock’s AUM (where data was available).

Exhibit M.8: BlackRock GHG emissions intensity metric for Sovereigns included in BlackRock’s AUM

<table>
<thead>
<tr>
<th>GHG intensity per GDP PPP</th>
<th>2020</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>203.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>193.6</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Data above represents unaudited, preliminary estimates.

Exhibit M.8 Footnotes
a) GHG intensity per GDP PPP includes sovereign assets and excludes all other AUM. The above metrics were derived from an analysis of sovereign assets as a portion of BlackRock’s AUM which represents approximately 11% in 2020 and 10% in 2021.
b) Holdings value analysis date is as of December 31, 2020. The emissions effective date, on which emissions and EVIC data is reported and provisioned by third party data providers is September 30, 2021.
c) Holdings value analysis date is as of December 31, 2021. The emissions effective date, on which emissions and EVIC data is reported and provisioned by third party data providers is September 30, 2022.
**Limitations**

**Data Quality**

Accurate computation of climate-related metrics in investment portfolios requires high quality security-level data including GHG emissions for underlying investee companies. Many companies are measuring and publicly reporting their GHG emissions, which facilitates the type of high-quality data that investors need to effectively calculate climate-related portfolio metrics. However, many companies have not yet begun their emissions reporting journey. Recognizing that deferring measurement and reporting until 100% reported data is available would impede the progress BlackRock could make in the near-term in providing transparency to stakeholders, estimates were used to fill data gaps, when necessary. Estimated data reduces the reliability of the metrics since estimated emissions may not accurately reflect the actual emissions of any given company.

The PCAF Standard recognizes that data availability is a challenge for GHG emissions reporting by financial institutions and provides a methodology for computing a Data Quality Score (ranging from “1” – highest quality to “5” – lowest quality). The PCAF Data Quality Score is designed to provide insight on the level of estimation involved with the disclosure of financed emissions. An overview of the PCAF Data Quality scores is provided in Exhibit M.9.

As discussed in the methodology section, BlackRock leveraged MSCI data for emissions and EVIC data for the corporate securities included in the analysis. In the case that companies in MSCI’s dataset have not reported their emissions, MSCI uses proprietary methods to estimate the company’s emissions.

To derive a PCAF Data Quality Score, PCAF recommends calculating an average of data scores for individual securities weighted by assets invested in each security. BlackRock sought to estimate a PCAF Data Quality Score for this analysis by mapping fields provided by MSCI that reflect the methodology used for producing emissions data as well as mapping the firm’s own data on physical real estate to the PCAF categories. Based on this approach, the PCAF Data Quality Score is approximately 2 to 3. This means that a significant portion of the underlying data used in the analysis is reported, but a portion is estimated. Increasing regulatory and voluntary climate-related reporting by companies will likely increase the availability of reported data over time, which should improve data quality.

**Lagged Data**

ESG data reporting by companies is often produced on a lag relative to financial data – as most ESG data disclosure and reporting takes place on an annual basis and requires significant time to produce. In addition, there may be a lag between the time when data is disclosed by companies and when it is incorporated into the dataset produced by MSCI. While BlackRock sought to mitigate the impact of lagged data on the estimates by varying the holdings analysis date and the emissions effective date, emissions data included in the analysis for a given holding each year may reflect GHG emissions from prior year(s) for at least a subset of holdings included in the analysis.

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**Exhibit M.9: PCAF Data Quality Scores Overview**

<table>
<thead>
<tr>
<th>Score</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Score 1</td>
<td>Reported Emissions</td>
</tr>
<tr>
<td>Score 2</td>
<td>Emissions estimated based on physical intensities</td>
</tr>
<tr>
<td>Score 3</td>
<td>Emissions estimated based on economic intensities</td>
</tr>
<tr>
<td>Score 4</td>
<td>EVIC is known</td>
</tr>
<tr>
<td>Score 5</td>
<td>EVIC is not known</td>
</tr>
</tbody>
</table>

Note that the above figure is oversimplified for illustrative purposes. Please refer to PCAF Standard for additional detail.
**Backward-Looking**

While BlackRock believes that absolute emissions and carbon footprint are an appropriate starting point for its firm-level reporting of climate-related and portfolio alignment metrics, it is worth noting that these metrics are backward-looking in that they only consider past emissions of investees. They do not provide an assessment of how those investees may evolve their businesses to reduce their emissions in the future based on transition plans, emissions reduction targets, and goals. Other metrics, such as ITR and Portfolio Coverage, are better placed to incorporate this forward-looking component. While these metrics have not been included in BlackRock’s 2022 TCFD reporting, they may be incorporated into future TCFD reports.

**AUM Coverage**

As discussed in the methodology section, several asset classes in which BlackRock makes investments on behalf of its clients are not included in the preliminary estimates in this Report – either because insufficient data was available or because methodologies to compute GHG emissions associated with an asset class have not yet been established. Due to this, the metrics outlined in Exhibit M.5 were derived from an analysis of corporate securities and real estate assets as a portion of BlackRock’s AUM which represents approximately 53% for 2021. The metrics outlined in Exhibit M.8 were derived from an analysis of sovereign assets as a portion of BlackRock’s AUM which represents approximately 10% in 2021. BlackRock will seek to incorporate additional asset classes into its TCFD reporting over time, which will naturally increase the amount of reported absolute emissions.

**Sensitivity to Market Volatility**

As outlined in the methodology section, the PCAF Standard has been very helpful in setting a foundation for reporting absolute emissions and by default, carbon footprint, which measures absolute emissions per unit of AUM. However, as a relatively new and incomplete standard, the metrics defined by PCAF have limitations that have yet to be addressed. One of those limitations is the sensitivity of absolute emissions and carbon footprint to fluctuations in asset values – particularly, though not exclusively, due to changes in EVIC from one period to the next. In other words, as financial institutions use the metrics defined by PCAF to demonstrate progress towards decarbonization of their portfolios, market volatility can introduce noise that reduces comparability from one year to the next. Other factors that drive changes in absolute emissions are: (i) changes to emissions of the underlying investee companies, and (ii) changes to asset allocation. Sensitivity to market volatility can obscure which of these factors is driving the changes in the metric year-over-year. As such, the figures provided for 2020 and 2021 are not directly comparable. Users should proceed with caution when drawing conclusions based on changes from one year to the next.

**Next Steps**

While the estimates included herein reflect a significant step forward in BlackRock’s journey to provide greater transparency to its stakeholders, the firm recognizes the importance of continuing to refine this analysis – in particular working to improve data quality and to establish methodologies for asset classes where methodologies do not exist today. In addition, BlackRock will continue to work on refinements to the metrics, such as those to address the sensitivity of both metrics to market volatility. With these necessary refinements in mind, the firm fully expects that the metrics will be updated through time.
Sustainability Characteristics for Client Reporting

BlackRock provides publicly available data on Sustainability Characteristics of investment products offered to clients. At the fund level, BlackRock publishes climate-related metrics including WACI and ITR, on product websites for funds where sufficient and reliable data are available.

WACI measures a portfolio’s exposure to carbon intensive companies by representing the estimated GHG emissions per $1 million in sales across the fund’s holdings. WACI is one of the metrics recommended for client reporting in the TCFD Supplemental Guidance for Asset Managers. Investors can use WACI as a comparable and standardized metric to assess the average emissions output associated with a specific portfolio.

A large portion of the assets that BlackRock manages are held in index portfolios. These products provide numerous benefits to BlackRock’s clients by democratizing access to diversified and professionally managed portfolios for millions of investors around the world. Index funds, by their very nature, are meant to reflect the underlying markets in which they invest. As such, the WACI and ITR of index funds reflect the underlying markets in which those funds invest.

In December 2021, BlackRock began publishing ITR on product websites for funds (where reliable data are available). The ITR metric incorporates both current emissions intensity and forward-looking assessments of projected emissions to produce a temperature indication, expressed in half-degree Celsius bands. ITR can help shed light on whether indexes and portfolios are progressing toward the temperature goal of the Paris Agreement, which calls for countries to limit global warming to well below 2°C, and ideally 1.5°C.

As of December 31, 2022, one or more climate-related metrics are publicly available for funds totaling approximately $3.4 trillion in AUM.
Endnotes

About this Report

1. Please see additional information about the TCFD Recommendations at: https://assets.bbhub.io/company/sites/60/2021/07/2021-TCFD-Implementing_Guidance.pdf
2. The inclusion of information contained in this Report should not be construed as a characterization regarding the materiality or financial impact of that information. Please also see BlackRock’s Annual Report on Form 10-K filed on February 25, 2022 (“2021 Annual Report”) and other publicly filed documents for additional information at: https://ir.blackrock.com/

Executive Summary

1. The BlackRock Sustainable Investing Platform includes: 1) “Screened” strategies that constrain investments by avoiding specific issuers or business activities with certain ESG characteristics, 2) “Uplift” strategies with a commitment to investments with improved ESG characteristics versus a stated universe or benchmark, 3) “Thematic” strategies with targeted investments in issuers whose business models may not only benefit from but also may drive long-term sustainability outcomes and 4) “Impact” strategies with a commitment to generate positive, measurable, and additional sustainability outcomes
2. In this Report, the firm makes frequent reference to terminology pertaining to the transition to a low-carbon economy. These references include, but are not limited to, terminology such as “transition to a low-carbon economy”, “low-carbon transition”, “global energy transition” and “the transition”.
3. As of December 30, 2022
5. BlackRock achieved its 100% renewable electricity goal to match the same amount of renewable electricity as the electricity that BlackRock’s global operations (including facilities, data centers, and upstream leased assets) consume annually. BlackRock contracts directly for renewable electricity wherever possible. Where BlackRock does not have operational control to procure its own electricity, or where renewable electricity is not available, BlackRock purchases environmental attribute certificates as a means of achieving its 100% renewable electricity goal.
6. Active sustainable funds across Fixed Income, Equity, Multi Asset & Alternatives, excluding separate accounts and cash.
7. The BIS Climate Focus Universe includes over 1,000 carbon-intensive public companies that represent nearly 90% of the global scope 1 and 2 GHG emissions of the firm’s clients’ public equity holdings. Please see additional information available at: https://www.blackrock.com/corporate/literature/publication/blk-climate-focus-universe.pdf.
8. BlackRock Investment Stewardship (BIS) counts only direct interaction as an engagement. BIS also writes letters to raise companies’ awareness of thematic issues on which BIS is focused or BIS changes in its policies, but this outreach is considered distinct from engagement. The 2021-2022 proxy year covers the period from July 1, 2021 to June 30, 2022, representing the US Securities and Exchange Commission’s (SEC) 12-month reporting period for US mutual funds, including iShares. To learn more, please see additional information in the BlackRock Investment Stewardship’s 2022 Voting Spotlight report at: https://www.blackrock.com/corporate/literature/publication/2022-investment-stewardship-voting-spotlight.pdf. Subsequent reports and publications distributed may include additional information, updates, and modifications, as appropriate.
9. This list is developed from publicly available information and is intended to focus engagement efforts where the energy transition is likely to have the most material impact on a company. The list is available at: https://www.blackrock.com/corporate/literature/publication/blk-climate-focus-universe.pdf.
10. Based on MSCI data.
11. The 2021-2022 proxy year covers the period from July 1, 2021 to June 30, 2022, representing the SEC’s 12-month reporting period for US mutual funds, including iShares. The 2020-2021 proxy year, or “last year,” covers the period from July 1, 2020 to June 30, 2021.
12. In the US, the SEC revised guidance on shareholder proposals and broadened the scope of permissible proposals that address “significant social policy issues.” This resulted in a marked increase in environmental and social shareholder proposals of varying quality coming to a vote in the 2021-2022 proxy year. Please see BIS’ commentary available at: “2022 climate-related shareholder proposals more prescriptive than 2021” and the US SEC “Shareholder Proposals: Staff Legal Bulletin No. 14L (CF)”.
16. As defined by Breakthrough Energy: The Green Premium is the additional cost of choosing a clean technology over one that emits a greater amount of greenhouse gases. Please see additional information available at: https://www.breathroughenergy.org/our-challenge/the-green-premium.
17. Holdings values as of September 30, 2022.
18. Based on MSCI data.

Governance

1. Sustainability-related matters, for the purposes of this Report, include: the integration of ESG factors into firmwide processes, sustainable investment strategies, investment stewardship engagement on climate-related matters, corporate sustainability strategy and disclosures, and public policy and philanthropic activities related to climate change.

Strategy (Investment Approach, Investment Stewardship)

1. Please see additional information on the BlackRock Investment Institute’s research and commentaries available at: https://www.blackrock.com/corporate/insights/blackrock-investment-institute/publications
2. BlackRock’s sustainable investing platform includes portfolios that use sustainability as a principal strategy in selecting investments. These dedicated strategies exist across asset classes, in both index and active, and are categorized as “Screened”, “Uplift”, “Thematic” or “Impact.”
3. BlackRock seeks to offer consistency in its approach to exclusionary screening for commingled funds, while continuing to assist clients who wish to eliminate specific exposures to sectors or activities.

4. An Authorized Contractual Scheme (ACS) is a tax-transparent collective investment scheme in the UK. Please see additional information at: https://www.fca.org.uk/firms/authorised-recognised-funds.


6. Note that the term “Active” is used to refer to investment strategies that seek to achieve returns that are greater than an index return, as well as absolute return strategies. This terminology is meant to distinguish this subset of products from index investment strategies, which seek to match the return of an index.


8. The last business day of 2022 was 12/30/2022, therefore exposure is run as of that date.


11. LEED is the most widely used green building rating system in the world. Please see more information available at: https://www.usgbc.org/help/what-leed.

12. These environmental, social, and governance KPIs are transformed and normalized so they can be compared across sectors and aggregated into composite scores.


18. As of December 31, 2022. 97,000 CER credits are awaiting retirement.


21. Please see additional information on BlackRock Investment Stewardship's approach to engagement on climate risk and natural capital.

22. In 2020, BIS focused its climate-related engagement on 440 public companies that represented about 60% of the global scope 1 and scope 2 GHG emissions of the companies in which BlackRock invests on behalf of clients. In 2021, BIS expanded the focus universe to over 1,000 carbon-intensive public companies that represent nearly 90% of the global scope 1 and 2 GHG emissions of the firm’s clients' public equity holdings. The list is developed from publicly available information and is intended to focus engagement efforts where the energy transition is likely to have the most material impact on a company. The list is available at: https://www.blackrock.com/corporate/literature/publication/blk-climate-focus-universe.pdf.

23. Based on MSCI data.

24. The 2021-2022 proxy year covers the period from July 1, 2021, to June 30, 2022, representing the SEC’s 12-month reporting period for US mutual funds, including iShares. The 2020-2021 proxy year, or “last year,” covers the period from July 1, 2020, to June 30, 2021. Please see BlackRock Investment Stewardship's 2022 Voting Spotlight report available at: https://www.blackrock.com/corporate/literature/publication/2022-investment-stewardship-voting-spotlight.pdf. Subsequent reports and publications distributed may include additional information, updates, and modifications, as appropriate.

25. Limited to companies within the BIS Climate Focus Universe who improved their GHG reduction targets disclosures since July 1, 2020 according to MSCI. Please see BlackRock Investment Stewardship’s 2022 Voting Spotlight report available at: https://www.blackrock.com/corporate/literature/publication/2022-investment-stewardship-voting-spotlight.pdf. Subsequent reports and publications distributed may include additional information, updates, and modifications, as appropriate.

26. In the US, the SEC revised guidance on shareholder proposals and broadened the scope of permissible proposals that address “significant social policy issues.” This resulted in a marked increase in environmental and social shareholder proposals of varying quality coming to a vote in the 2021-2022 proxy year. Please see BIS commentary available at: “2022 climate-related shareholder proposals more prescriptive than 2021” and the US SEC “Shareholder Proposals: Staff Legal Bulletin No. 14L (CF).”

27. Excludes the Japanese market, where numerous shareholder proposals are filed every year due to low filing barriers, and where shareholder proposals are often legally binding for directors in this market. Includes proposals requesting a report on metrics and efforts to reduce water related risk, a report on efforts to reduce plastic use, a report on efforts to eliminate deforestation in supply chain, a report on sustainable packaging, among others.

28. Globally, BIS voted on, behalf of those clients who authorized us to do so, at more than 18,000 shareholder meetings on more than 173,000 proposals in the 2021-2022 proxy year. Similar to previous years, shareholder proposals represented less than 1% of the total proposals BIS voted on. Please see the BIS 2022 Voting Spotlight available at: https://www.blackrock.com/corporate/literature/publication/2022-investment-stewardship-voting-spotlight.pdf.


30. Excludes the Japanese market, where numerous shareholder proposals are filed every year due to low filing barriers, and where shareholder proposals are often legally binding for directors in this market. Includes proposals requesting a report on metrics and efforts to reduce water related risk, a report on efforts to reduce plastic use, a report on efforts to eliminate deforestation in supply chain, a report on sustainable packaging, among others.

Strategy (Risk, opportunities & scenario analysis)
1. As of December 31, 2022, BlackRock’s sustainable investing platform includes portfolios that use sustainability as a principal strategy in selecting investments. These dedicated strategies exist across asset classes, in both index and active, and are categorized as “Screened”, “Uplift”, “Thematic” or “Impact.”
2. This refers to the sale of BlackRock, Inc. securities by those who hold shares of BlackRock, Inc. stock, as well as redemption from BlackRock managed funds or accounts.
3. BlackRock’s principal office, which is leased, is located at 55 East 52nd Street, New York, New York. In addition, BlackRock’s future principal office space, which will also be leased, will be located in 50 Hudson Yards, New York, New York, with occupancy beginning in December 2022. BlackRock leases additional office space in New York City at 40 East 52nd Street and 49 East 52nd Street, and throughout the world, including Atlanta (Georgia), Belgrade (Serbia), Budapest (Hungary), Edinburgh (UK), Gurgaon (India), Hong Kong (China), London (UK), Mumbai (India), Princeton (New Jersey), San Francisco (California), and Singapore (Singapore). BlackRock also owns an 84,500 square foot office building in Wilmington, Delaware and a 43,000 square foot data center in Amherst, New York.
5. The Intergovernmental Panel on Climate Change (“IPCC”) defines physical risk as risk to facilities and infrastructure, impact on operations, water and raw material availability and supply chain disruptions. See more in the concept of risk in the IPCC Sixth Assessment Report: a summary of cross Working Group discussions (September 2020). Available at: https://www.ipcc.ch/site/assets/uploads/2021/02/IPCC_AR6WG2_FINAL_Report.pdf.
6. Please see the Scenario Implementation section for further insight on how BlackRock arrives at the assumptions about potential client reactions.
7. BlackRock utilized phase II of the NGFS scenarios to conduct its 2022 scenario analysis.
8. Exhibit 5.6 was developed by the NGFS and derived from their NGFS Phase II climate scenarios material. BlackRock recreated this chart and respective legend in its own color scheme for the purposes of this Report. Please see the original chart and additional information available at: https://www.ngfs.net/sites/default/files/media/2021/08/27/ngfs_climate_scenarios_phase2_june2021.pdf.
9. Baseline socio-economic assumptions are assumed to be the same across scenarios. As of now, NGFS does not model where some of current policies are regressed.

Strategy (Operations, Social Impact, Industry Engagement & Public Policy)
1. BlackRock achieved its 100% renewable electricity goal to match the same amount of renewable electricity as the electricity that BlackRock’s global operations (including facilities, data centers, and upstream leased assets) consume annually. BlackRock contracts directly for renewable electricity wherever possible. Where BlackRock does not have operational control to procure its own electricity, or where renewable electricity is not available, BlackRock purchases environmental attribute certificates as a means of achieving its 100% renewable electricity goal.
2. For its 2021 operational GHG emissions, BlackRock applied carbon credits to its Scope 1, Scope 2, and select Scope 3 categories including Business Travel, Employee Commuting, Fuel & Energy-Related Activities (“FERA”), Upstream Leased Assets, Upstream Transportation & Distribution, and Waste.
3. BlackRock’s most recent normal operating year was 2019. Facilities were open during 2020 and 2021, but due to COVID-19 restrictions, the firm’s facilities experienced low occupancy resulting in lower electricity consumption.
4. Flexible desking is a seat allocation strategy that allows for workstations to be booked and occupied as needed rather than being permanently dedicated to each employee. This practice leads to less space being dedicated for permanent workstations and this space can instead be used for collaboration. By utilizing flexible desking, BlackRock can ensure employees are able to work in office as needed while also limiting the amount of real estate, infrastructure and resources used as the firm grows. Flexible desking is a part of BlackRock’s multi-pronged strategy to increase the efficiency and resiliency of its operations.
8. In 2022, Generation expanded its operations to Chile, Colombia, and Thailand.
10. In joining various industry groups, BlackRock does not make any commitments or pledges that may interfere with the firm’s fiduciary duty to clients. BlackRock’s investment decisions are governed strictly by the firm’s fiduciary duty to clients, and that duty requires BlackRock to prioritize their financial interests above any commitments or pledges not required by law.


Metrics & Targets


2. Consistency in terminology is a key challenge in sustainability. The term “carbon footprint” in this Report refers to absolute emissions financed by BlackRock’s clients’ investments in corporate and real estate securities divided by BlackRock’s AUM (rounded to $ millions) in those securities. This aligns with the terminology used in the European Union’s Sustainable Financed Disclosure Regulation (“SDFR”).

3. World Resources Institute and World Business Council for Sustainable Development (2020). Technical Guidance for Calculating Scope 3 Emissions. Chapter 15, Category 1.5: Investments. Please see for e.g., page 141 (“Whether an organization is required to report on equity investments depends on whose capital is being invested. Asset owners are investing their own capital, so they are required to report emissions from equity investments (although they may establish a threshold, as described in table 15.1). Asset managers investing clients’ capital may optionally report on emissions from equity investments managed on behalf of clients (e.g., mutual funds). Emissions from these types of equity investments can be calculated using the methods described in this section, however it should be noted that mutual funds and other funds managed on behalf of clients are not the primary audience for the calculation methods described here and some of their specific issues have not been addressed, including the business goals relevant to a fund manager and the appropriate use of inventory results.”) Please see additional information available at https://ghgprotocol.org/sites/default/files/standards_supporting/Chapter15.pdf.

4. This is one of the reasons why BlackRock joined the Partnership for Carbon Accounting Financials (“PCAF”) in 2021 to support the development of financial industry standards for reporting emissions associated with financial activities.

5. BlackRock primarily holds seed and co-investments in sponsored investment products that invest in a variety of asset classes. Investments generally are made for co-investment purposes, to establish a performance track record, or for regulatory purposes. BlackRock does not engage in proprietary trading activities that could conflict with the interests of its clients. GHG emissions associated with BlackRock’s AUM are reported separately in Exhibit M.

6. In-scope derivatives are derivatives with corporate issuer underlier and include equity warrants and options, convertible debt and equity, total return swaps, and credit default swaps. The following derivative types are out of scope: equity index options, currency options, options on commodities and volatility index, CDX, swaps (other than CDS and total return), and synthetics.

7. The term “carbon footprint” in this Report refers to absolute emissions financed by BlackRock’s clients’ investments in corporate securities and real estate divided by BlackRock’s AUM (rounded to $ millions) in those investments. This aligns with the terminology used in the European Union’s Sustainable Financed Disclosure Regulation (“SDFR”).

8. In-scope derivatives are derivatives with corporate issuer underliers and include equity warrants and options, convertible debt and equity, total return swaps, and credit default swaps. The following derivative types are out of scope: equity index options, currency options, options on commodities and volatility index, CDX, swaps (other than CDS and total return), and synthetics.

9. BlackRock was represented on the TCDF’s Portfolio Alignment Team in the publication of a report titled “Measuring Portfolio Alignment: Assessing the Position of Companies and Portfolios on the Path to Net Zero” which provided an assessment of the options available to measure the alignment of financial portfolios with climate goals.

10. While absolute emissions for AUM is intellectually consistent with other emissions metrics reported at the corporate level, it is worth noting that a significant majority of the investments BlackRock makes on behalf of its clients are in publicly traded equity and debt securities. Unlike emissions associated with real economy activities, the buying and holding of equity or fixed income securities does not cause the release of GHG emissions into the atmosphere. In that sense, GHG emissions for AUM are decidedly different than Scope 1 and 2 emissions (as well as many categories of Scope 3 emissions) reported by companies, where the metric reflects activities that directly result in the release of emissions into the atmosphere.

11. Regulation (EU) 2019/2088 of the European Parliament and of the Council of 27 November 2019 on sustainability-related disclosures in the financial services sector. Although BlackRock, Inc. is not in scope of the SFDR, individual subsidiary entities of BlackRock, Inc. are subject to this regulation.


13. BlackRock also consulted the Corporate GHG Protocol and the EU SFDR Regulatory Technical Standards.

15. PCAF is consulting on methodologies for green bonds. The methodology utilized by BlackRock differs from the green bonds methodology currently being proposed by PCAF. Note: green bonds reflect only 0.5% of BlackRock’s AUM as of December 31, 2022.


18. UN Environment Programme (2022). Emissions Gap Report. Available at: https://www.unep.org/resources/emissions-gap-report-2022?gclid=Cj0KCQiAmaibBhCAARIsAKUlaKQ6SmZWh4l5-Dib7KT-k-afL9c8PUlZkmQRzSxmybysymHLK7f66NsALqkMfALw_wcB.


20. BlackRock elected to conduct this analysis on the MSCI All Country World Index (“ACWI”) Investable Market Index (“IMI”) because it captures large, mid, and small cap representation across developed and emerging markets. The index is comprehensive and covers approximately 99% of the global and equity investment opportunity set. Please see further information on the index available at: https://www.msci.com/documents/10199/4211cc4b-453d-4b0a-a6a7-51d36472a703.

21. Please see additional information available at: https://zerotracker.net/.

22. Source: BlackRock as of December 2022

23. Source: BlackRock as of December 2022

Additional Resources

For further information on BlackRock’s sustainability efforts, please see:

**Investment Stewardship**
- BlackRock Investment Stewardship 2023 Global Principles
- BlackRock Voting Choice
- 2022 Engagement Priorities
- 2022 Voting Spotlight
- BlackRock Investment Stewardship 2021 Annual Report

**Sustainable Investing & ESG Integration**
- 2030 Net Zero Statement
- ESG Integration Statement

**BlackRock Investment Institute Research**
- Managing the net-zero transition
- Positioning for the net-zero transition

**Corporate Reports**
- 2021 BlackRock Annual Report
- 2021 Sustainability Disclosure
- 2021 GHG Emissions Report
- The Power of Capitalism
- Larry Fink’s Annual Chairman’s Letter to Investors

**Public Policy**
- Public Policy - Insights
Disclosures

This Report contains information about BlackRock and may contain forward-looking statements within the meaning of the Private Securities Litigation Reform Act. All statements, other than statements of historical facts, may be forward-looking statements, including statements related to BlackRock's climate and other sustainability-related strategies, plans, developments, targets and goals. The forward-looking strategies, plans, developments, targets and goals described in this Report are not guarantees or promises.

BlackRock cautions that forward-looking statements are subject to numerous assumptions, risks, and uncertainties, which change over time. Forward-looking statements speak only as of the date they are made, and BlackRock assumes no duty to and does not undertake to update forward-looking statements. Actual results could differ materially from those anticipated in forward-looking statements and future results could differ materially from historical performance.

Factors that can cause results to differ, as well as additional factors that can affect forward-looking statements, are discussed in BlackRock's Annual Report on Form 10-K and Quarterly Reports on Form 10-Q, accessible on the SEC’s website at www.sec.gov and on BlackRock’s website at www.blackrock.com. The inclusion of information contained in this Report should not be construed as a characterization regarding the materiality or financial impact of that information.

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Important Notes: This document includes non-financial metrics that are subject to measurement uncertainties resulting from limitations inherent in the nature and the methods used for determining such data. The selection of different but acceptable measurement techniques can result in materially different measurements. The precision of different measurement techniques may also vary. The information set forth herein is expressed as of December 2022 and BlackRock reserves the right to update its measurement techniques and methodologies in the future.

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