Breckinridge CAPITAL ADVISORS

2023 Issuer Engagement Report CONTINUED PROGRESS ON ESG RISKS & OPPORTUNITIES AMID CONTINUING CHALLENGES





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EXECUTIVE Summary

THROUGH ENGAGEMENT WITH ISSUERS, WE GAIN A DEEPER UNDERSTANDING OF INVESTMENT RISKS

Through Breckinridge's Issuer Engagement program, our analysts meet with corporate and municipal security issuers for in-depth examinations of risks that can affect operational and financial performance. Primary among the risks addressed in 2023 are greenhouse gas (GHG) emissions and pursuit of the 2015 Paris Agreement goal of net zero emissions by 2050. We also addressed risks that gained heightened media and market attention in 2023, including consumer financial protection and bank liquidity, drought and wildfire risks, and labor/management pressures.

As engaging discussions often will, one topic leads to another. For example, during our carbon transition conversations with utilities, we covered efforts to assure rate affordability for consumers during the transition to low- or no-carbon energy production. When we spoke with telecommunications companies about environmental topics, we also discussed their efforts to provide equitable broadband internet access to rural and underserved communities across America. When we were talking with management teams in the Aerospace and Defense sector about net zero, we also opened discussion of supply chain management, product quality, and employee safety.

These experiences reinforce our belief that a productive engagement meeting opens a two-way conversation between security issuers and investors. A successful engagement meeting offers issuers and investors a chance to talk about their risk management approaches, gauge investor perceptions of their effectiveness, and gain further insights about best practices for enhanced risk management, mitigation, and adaptation. As investors, we have the chance to more fully explore risks that companies and municipalities face and their strategies to address them. Insights like these can be difficult to surface and discuss during traditional corporate earnings calls or municipal security due diligence meetings. We believe that an effective issuer engagement program offers a wider lens through with to review and assess investment risk.

During 2023, our research team members held nearly 130 direct Engagement discussions also support development of our ESG risk assessment frameworks and related qualitative research designed engagement discussions with issuers and subject matter experts to identify issuers that are not adequately addressing specific risks. (SMEs). These meetings were in addition to interactions that Until issuers respond effectively, they may become more exposed Breckinridge analysts routinely have with issuers as they conduct to potential operational, regulatory, and reputational costs. In time, new security research and ongoing surveillance of securities in those costs can be expected to impair a company's profits, our investment portfolios. a community's growth, and, over the long term, their viability.

In 2023, we engaged in three ways:

- 1. We held direct conversations to gain a better understanding of the issuer, industry, or sector's, ESG profiles, material issues, opportunities, and risks. These engagements also provide an idea generation opportunity for our analysts. We will also encourage the transparent reporting of material ESG issues, as we believe improved disclosure enhances our ESG analysis to the benefit of our clients.
- 2. We participated in collaborative engagements through the Climate Action 100+¹ (CA100+) and the Ceres Banks Working Group² (CBWG) of the Ceres Investor Network. Breckinridge was involved in four CA100+ engagements, serving as a co-lead investor for three U.S. industrial companies and a contributing investor for a U.S. utility. Breckinridge also led the engagement with a regional bank through the CBWG. Through these engagements, Breckinridge encouraged these companies to make important progress on managing their climate transition risks.
- 3. Breckinridge signed on to the Net Zero Asset Managers initiative (NZAM) in December 2021. As part of the commitment, Breckinridge pledged to engage with 70 percent of our financed emissions starting in 2023. We met this goal by holding engagement discussions with our twelve largest emitters in sectors that included utilities and energy.

We believe that the most sustainable businesses and municipal operations will be those that best plan for, manage, mitigate, and adapt to ESG risks. To augment and, at times, fulfill an investor's need for complete and informative risk disclosures, issuer engagement is an essential part of our investment research approach.

Summaries of our 2023 engagement efforts follow in this report. They demonstrate that issuers of corporate and municipal securities across sectors recognize the operational risks associated with climate change and other ESG risks. More to the point for investors, our engagement meetings demonstrate that many issuers are taking important and productive steps to address ESG risks within their operations and, in doing so, distinguish themselves from others in their sectors who do not. We will continue to conduct a robust issuer engagement program as we move forward.



Rob Fernandez, CFA Director, ESG Research



About BRECKINRIDGE

Breckinridge Capital Advisors is a Boston-based, independently owned asset manager working to provide the highest caliber of investment management.

We believe the following characteristics set us apart:

- Commitment to staying independent
- Disciplined portfolio management
- Rigorous fundamental credit analysis
- Forward looking and integrated ESG research
- Ability to customize separate accounts at scale
- Proprietary technology platform
- Culture of exceptional responsiveness and access
- Competitive pricing

We serve high-net-worth individuals and large institutions through a network of financial advisors, consultants, and family offices. Breckinridge's assets under management totaled more than \$47 billion as of December 31, 2023.

Reflecting our commitment to ESG and sustainability, Breckinridge is a Massachusetts Benefit Corporation and a certified B Corp.³ We believe these designations help us in our goals to create positive, long-term impact for our clients, employees, and the communities in which we live, work, and invest.



ABOUT BRECKINRIDGE'S ESG APPROACH

A decade ago, leveraging the capacity for self-determination that our independence affords us, we departed from the path most other asset managers were following and decided to fully integrate ESG research into our investment process.

Breckinridge believes that material ESG issues can identify long-term and idiosyncratic risks. ESG fits seamlessly with our investment philosophy, which holds that investors are well served by counterbalancing higher-risk assets with investment grade fixed income investments.

Our annual program of engagement with security issuers is a component of our ESG research. Driven by our research teams, engagement meetings with issuers and SMEs are opportunities to:

- Gain a better understanding of the ESG profiles, material issues, opportunities, and risks of issuers, industries, or sectors;
- Provide an idea generation platform for our analysts; and
- Encourage the transparent reporting of material ESG issues, as we believe improved disclosure enhances our ESG analysis to the benefit of our clients.

By better understanding and addressing investment risks across ESG and fundamental financial factors, we can better recognize risks and opportunities that may not be reflected in the long-term value of a security. We also believe ESG factors can provide useful insights into the character and caliber of management. An essential element of our ESG approach is an annual effort to actively engage with security issuers and SMEs on material ESG risks.



Breckinridge analysts play critical roles tracking the progress and materiality of ESG in our economy. Each year, the work of the members of the Breckinridge investment research team is the essential driver of our ESG Issuer Engagement Report. Their initiative and examination of ESG risks and opportunities in discussions with security issuers and SMEs forms the foundation of the insights and perspectives offered in this report. The members of the team are presented here.





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ENVIRONMENTAL *Discussions*







INTRODUCTION

Transitioning to clean energy remains high on the agenda of companies Breckinridge met with during 2023. For these companies, the task encompasses two wide ranging efforts: 1) understanding and reducing greenhouse gas (GHG) emissions, and 2) developing lower carbon revenue streams for high-emitting sectors.

Our analysts conducted engagement meetings with 19 companies from the Aerospace and Defense (A&D), Banking, Retail, Technology, and Telecommunications sectors about GHG reduction and energy transition (*See Part I: Cutting GHG emissions is an ongoing effort and challenge.*).

In addition, we met an additional 16 companies from the Utilities, Oil and Gas, and Chemicals sectors to discuss their pathways to net zero emissions, in fulfilling our pledge as a Net Zero Asset Manager⁴ to conduct engagement meetings annually with companies comprising at least 70 percent of our top financed emissions.⁵ (See Part II: Engaging on the energy transition for high-emitting industries is part of our NZAM commitment.).

During engagement meetings focused on GHG emissions reductions, companies told our analysts they are making progress and acknowledged challenges that persist.

PART I: CUTTING GHG EMISSIONS IS AN ONGOING EFFORT AND CHALLENGE.

During engagement meetings focused on GHG emissions reductions, companies told our analysts they are making progress and acknowledged challenges that persist. Goals often accounted for 1) the intended percentage GHG emissions reduction, 2) the past baseline emission level for comparison, and 3) a path to achieve net zero⁶ GHG emissions during a year before 2050, the year established at the Paris Climate Agreement⁷ in 2015.

Several companies are recording Scope 1, 2, and 3⁸ reductions, while others are citing goals. One A&D company scored big emissions reductions with a 20-year agreement for wind power for one of its largest facilities. Another A&D company reported that it sources half of its electricity from renewable sources and achieved net zero operational emissions for three consecutive years due to efficiency efforts, renewable energy purchases, and the use of thirdparty verified offsets.

One company we met expressed concerns about sourcing wind and solar supply. The renewable industry landscape grew more uncertain in 2023, as certain developers backed out of projects in the face of higher costs and interest rates, as well as supply chain and construction concerns. To address supply needs, this company and others more frequently seek renewable energy through power purchase agreements (PPAs)9 and virtual power purchase agreements (VPPAs)¹⁰ with large established players.

A company that is both a Real Estate Investment Trust (REIT) and a Telecommunications company that owns and operates wireless and broadcast communications infrastructure delineated challenges in sourcing renewable power in emerging markets compared with economically developed markets. In economically developed countries, its main challenges are securing access to clean energy, while the challenges in emerging markets are unreliable or non-existent power grids.

Two Communications companies cited the challenge of electrifying vehicle fleets, which comprise two-thirds of Scope 1 emissions for one. The availability of medium and heavy-duty electric vehicles (EVs) is a concern. The two companies are establishing partnerships to develop and manufacture EV trucks, as well as to address related infrastructure charging needs. Several A&D issuers cited the use of Sustainable Aviation Fuel (SAF)¹¹ as a potential means to reduce the category of Scope 3 GHG emissions, defined as those stemming from the use of sold products. Challenges include limited refining capacity and higher costs of SAFs. Issuers in the sector are working with both SAF startups, oil companies, and industry peers to unlock SAF business growth.

Other strategies we discussed with issuers include both natureand technology-based solutions, such as ecosystem restoration and methane reduction projects. In addition, a major agribusiness and food company is expanding its processing capacity, known as crushing, in the U.S. to handle an expected increase in demand for fuels manufactured from biomass.

THE CHALLENGE OF SCOPE 3 GHG EMISSIONS REMAINS COMPLICATED.

Scope 3 emissions can comprise as much as 95 percent of a company's carbon impact and are outside of a company's direct control. Defining, estimating, tracking, and reporting them can be complicated.

One Retail company takes a categorical approach to Scope 3 emissions strategies. It engages suppliers in its global value chain to reduce or avoid GHG emissions. The company also encourages suppliers to design products to reduce emissions throughout the product lifecycle, through consumer use, or by using raw materials in product manufacturing that can lower emissions.

Similarly, a Technology company with Scope 3 emissions primarily from use of sold products emphasizes a partnership approach, working with product component suppliers to set their own net zero goals. Another Technology company told Breckinridge analysts that it is making assumptions for technology advancements, such as longer battery life and more sustainable materials, as it plans future Scope 3 reductions. This approach may increase the risk of missing goals.

An issuer in the Banking sector calculated financed emissions¹² across its entire lending portfolio. Its focus is operationalizing a climate data framework to support decision making based on captured data. With more years of accumulated financed emissions data, management expects to revisit its Scope 3 reduction goal, with the potential to target emissions reductions in certain portfolios faster.







PART II: ENGAGING ON THE ENERGY TRANSITION FOR HIGH-EMITTING INDUSTRIES IS PART OF OUR NZAM COMMITMENT

Companies that represent the largest source of financed emissions in Breckinridge's multi-sector portfolios, told our analysts about emissions reduction goals and progress and discussed developing technologies that can advance a transition to a low- or no-carbon economy.

GOALS AND PROGRESS ARE SHAPED BY BUSINESS MODEL AND SERVICE AREA.

Utility companies on our engagement agenda, accounting for more than 60 percent of financed emissions, are well positioned to achieve intermediate GHG reduction goals, in our assessments. In the intermediate term, Utilities expect material emission reductions from coal plant retirements, and by replacing capacity with wind, solar, and batteries. They are seeking to green the grid¹³ to accommodate renewable power sources and higher power loads.

However, longer-term decarbonization challenges remain as certain emissions will be hard to fully abate. In other words, as one company representative told us, "There is no silver-bullet solution." Companies are developing and testing technologies such as hydrogen, renewable natural gas (RNG),¹⁴ networked geothermal, and longer-duration batteries to meet targets. Goals and progress depend on each company's business model, geography, and state regulation. Utilities must maintain grid reliability in the face of extreme weather and growing demand. Regulated utilities must balance capital investments with rate affordability.

Business model considerations: Decarbonization challenges for a company that offers transmission and distribution (T&D) infrastructure, often called a Wires-Only Utility, differ from challenges for Vertically Integrated Utilities, which operate fossil fuel power plants.

Emissions intensity and financed emissions are lower for Wires-Only Utilities. Scope 3 emissions for Wires-Only Utilities can exceed 90 percent, including purchased power and customer usage. Their Scope 1 and 2 emissions typically consist of electricity lost over transmission lines, facilities, vehicle fleets, and methane pipeline leaks. Longer-term competitive market dynamics, regional grid fuel mix, and state and federal policy impact Scope 3 trends. Wires-Only Utilities can also employ energy efficiency initiatives to reduce demand and, therefore, power purchases from Scope 3 sources.

Scope 1 emissions for Vertically Integrated Utilities can be higher than 50 percent of emissions. These companies have higher emissions intensity but more control over emissions. One such utility plans to retire all coal plants by 2032, while investing in renewables. It will also maintain existing nuclear reactors to maintain clean, reliable power generation.

Service area and regulatory considerations: Regulations can be supportive if, for example, the service area has a clean energy mandate. In contrast, state regulations that require Utilities to generate power using the lowest-cost resource methodology can limit use of cleaner energy sources at current costs. Onshore wind and solar costs can be more competitive than fossil fuels, especially in areas with strong solar irradiance and wind intensity.

DECARBONIZING PRESENTS CHALLENGES ACROSS SECTORS.

Our analysts learned more about the cost challenges of decarbonization. Management at one Energy company, with Scope 3 GHG emissions accounting for 95 percent of emissions, said reductions require "breakthrough technologies." Another Energy company is counting on lower future costs to make carbon capture usage and storage (CCUS) more feasible. A third Energy company representative was more direct, saying setting a Scope 3 emissions reduction goal would require reduced oil products and natural gas sales, "effectively handing over customers to competitors."

Integrated oil and gas companies, in our view, are generally better positioned than companies in other energy subsectors due to higher capital allocations to lower carbon investments, greater scale, large retail footprints. These factors can allow integrated oil and gas companies to offer low carbon fuels, EV charging stations, and liquid natural gas (LNG) asset bases, which can help emerging markets reduce emissions from coal by switching to natural gas. Natural gas generates approximately 40 percent less GHG emissions than coal.

The Chemicals sector also faces unique circumstances. For example, because the Science-Based Targets initiative (SBTi)¹⁵ does not have a GHG measurement methodology for the sector, issuers are not able to set a SBTi-aligned target. Guidance is expected in 2024.



Nevertheless, Chemicals companies plan to reduce emissions. One company seeks to reduce CO2 emissions intensity by one-third by 2030 from a 2015 baseline. Another company plans more than \$15 billion in capital to be either spent on or committed to energy transition between 2018 and 2027. A third Chemical company runs a fully operational CCUS process, venting and capturing CO₂ emissions onsite, preventing its release.

BUSINESS OPPORTUNITIES MAY EMERGE AS THE ENERGY TRANSITION PROCEEDS.

Rising electricity demand amid the energy transition may bring business growth while posing challenges for reliability. During a one-year period from 2022 to 2023, grid planners nearly doubled the forecasted percentage growth of the five-year electricity load from 2.6 percent to 4.7 percent, based on Federal Energy Regulatory Commission filings. Estimated peak demand in 2028 was predicted in 2022 to grow to 835 gigawatts (GW). The estimate was reset in 2023 to 852 GW by 2028. The increase in the estimate is driven by expected demand increases from sources including electric vehicle charging, population growth, and data centers supporting the artificial intelligence (AI) boom. One Utility's Integrated Resource Plan expects the data center industry's power usage in its territory to quadruple over the next 15 years, based on current market conditions.

Accommodating this growth requires grids with increased capacity and power load capabilities. More than half of industry spending relates to T&D, which includes preparing the grid for green investment, redundancy to prevent outages, and storm hardening.

An Energy company plans to increase transition growth investments to as much as \$9 billion of capital expenditures, including mergers and acquisitions (M&A) and investments in bioenergy, EV charging, renewables, and hydrogen, including recent acquisition of a RNG producer.

COMPANIES ARE EXPLORING NEW TECHNOLOGIES TO ADVANCE THE ENERGY TRANSITION.

RNG, hydrogen, geothermal, and long-duration batteries are among new technologies considered in the Utility, Energy and Chemicals sectors. While expectations for feasibility vary, companies monitor them with interest.

An Energy company launched a venture investment effort in 2021 intended to reduce emissions and innovate new technologies for enhanced leak detection, T&D repair, and solar power generation, RNG, CCUS, and hydrogen.

A Utility partners with start-ups, established players, government institutions, and universities to evaluate emerging technologies including hydrogen, RNG, multiple battery technologies, and small modular reactors (SMRs) that generate nuclear power.

Energy and Utility companies are exploring blending hydrogen with natural gas. They acknowledged continued research is needed and current distribution infrastructure poses limitations because cast iron pipes cannot manage hydrogen blends. However, Utilities are replacing old pipes with plastic, which can carry hydrogen blends. One Utility expects scalable green hydrogen applications in the late 2030s, believing hydrogen in industrial processes and power generation is more feasible than blending hydrogen with natural gas delivered to households.

A Chemicals company that operates hydrogen plants is converting CO_2 from hydrogen processing from grey to blue, produced with natural gas with captured emissions, which can then be converted to green hydrogen, produced with renewable energy.

A gas Utility's community geothermal pilot that will be evaluated in 2024 connects more than 100 homes and commercial businesses to a shared geothermal network. The Environmental Protection Agency (EPA) suggests residential geothermal systems can be 30 percent to 70 percent more efficient for heating and 20 percent to 50 percent on cooling.

Battery technology is expected to continue to advance, with benefits across the value chain, including storing energy for delivery during peak demand periods. Current four-hour lithium-ion batteries may be solutions in regions with tight reserve margins and increase capacity for existing wind and solar facilities.

Engagement meetings with companies transitioning to low- or no-carbon operations demonstrated active net zero commitments. Their efforts also reveal business opportunities and challenges, inspiring new technologies that can support further progress along the way.

CARBON CREDITS MAY HAVE A ROLE IN A NET ZERO STRATEGY, BUT IT MAY BE LIMITED.

 CO_2

Breckinridge analysts discussed the purchase of carbon credits²⁰ with companies in several sectors. One company told our analysts it is focused on decarbonization first, but if emissions remain in the way of getting to net zero, it may consider buying them. This perspective was shared among several of the companies across sectors.

Another company has purchased renewable energy credits but is delaying purchase of carbon offsets, explaining it "does not believe in just writing a check." Instead, the company is investing in solutions that reduce its carbon footprint. Similarly, a company told our analysts, that its current use of carbon offsets is nominal, because it is "not looking to buy our way out of it."

Carbon offsets have been subject to criticism related to validity and documentation, which was mentioned by some issuers. The concerns may help explain hesitancy among some about the carbon offset markets and the commitment to achieving measurable GHG reductions in their own operations. SBTi allows the purchase of credits for carbon removal projects to neutralize no more than 10 percent of a company's hard to abate emissions to help achieve a net zero by 2050.



Water, Wildfires, Weather, and Waste Are Persistent Environmental **Concerns for Issuers**



Across multiple engagement meetings with Technology, Telecommunications, Utility, and Retail companies, our analysts explored steps being taken to use water efficiently, reduce wildfire risk by hardening the electrical grid, and manage hazardous waste.

The three issues are interrelated as additional means of assessing how companies interact with their local environment. Through water conservation, high intensity users like computer chip manufacturers can help sustain the environment. Utilities proactively address service and environmental concerns through grid hardening. Retailers and Technology companies are reducing the generation of waste and improving disposal or regenerative uses.

WATER CONSERVATION:

One Technology company explained that water consumption is an issue often raised by its investors. In response it set a goal to reduce water consumption by 80 million gallons by 2025. For another Technology company, while water usage is not a material risk, it focuses on conserving water in offices and collaborating with key suppliers within semiconductor value chain to raise awareness of the issue.

A three-step process characterizes a third Technology company's water conservation strategy: (1) find other alternatives; (2) recycle, reuse, and recover; and (3) some form of treatment of wastewater.

WILDFIRES, WEATHER EXTREMES AND THE POWER GRID:

Utilities undertake grid hardening or storm hardening as they assess and proactively mitigate potential risks to electric grid infrastructure, with the goal of avoiding outages. Among the tactics management at one Utility explained were covered conductors, pairing lines with sensors for power shutoffs, and investing in new weather monitoring technology. The Utility, which operates in an area at high risk for wildfires, attributed a recent credit rating agency upgrade, at least in part, to its grid hardening efforts, and cited four consecutive years with no catastrophic fires as evidence of their effectiveness.

Another Utility operating in an area of low wildfire risk focuses on tree trimming, preventative maintenance, and grid hardening to reduce fire risk and improve performance during severe weather, such as harsh winter weather. The company

also carries wildfire insurance as part of its general liability coverage. More than half of another Utility's multi-billion capital plan relates to transmission and distribution (T&D) to prepare the grid for green investment, redundancy to prevent outages, and hardening against storms. A third Utility improved defense against physical risks following a major hurricane, spending more than \$1 billion on grid hardening and raising substations above flood levels.

WASTE MANAGEMENT AND THE SUSTAINABILITY OF BUSINESSES.

Effective waste management has significant economic implications because unmanaged or poorly managed waste can harm biodiversity and ecosystems, diminish the long-term sustainability of wildlife and natural resources, and weaken economic resilience and the ability of a business to sustain operations.

During engagement meetings, our analysts explored the earliest stages of the product lifecycle—including materials sourcing-and its role in waste management at the end of the production process. One Technology company told us that sustainability in manufacturing starts with design, guides sourcing decisions, and how waste is managed. Another Technology company said that batteries are the biggest source of hazardous waste, and more work needs to be done to minimize it.

One Retail company we met with set a goal in Canada, Mexico, and the U.S. to generate zero operational waste by 2025 by addressing secondary packaging, unsold food, and general merchandise, as well as other items such as automotive waste and signage.

OUR ANALYSTS ALSO DISCUSSED WASTE MANAGEMENT WITH A UTILITY **OPERATING A NUCLEAR POWER PLANT.**

Nuclear waste management is regulated at federal level through Nuclear Regulatory Commission (NRC). The management of the Utility we met with described safety processes at the company as robust, redundant, and more conservative than allowed by technical specifications detailed by NRC license. Waste is stored and transported under NRC guidance and requirements, Dry fuel is stored onsite in reinforced steel cannisters and two-foot-thick concrete. Solid used fuel is sealed and stored in metal tubes within steel-lined concrete vaults under water, which acts as a barrier for radiation and keeps the spent fuel cool. Management said that reactor buildings and canisters can withstand impacts from natural disasters and man-made objects.

For risks associated with water, wildfires and extreme weather, and waste, most of the companies we spoke with are addressing concerns because these risks will likely become more consequential as water consumption grows, weather events increase in severity, and for extending nuclear operating licenses. Successful mitigation of these risks can result in lower insurance costs and avoidance of multibillion dollar liabilities exposures.









Exploring Strategies at Institutions of Higher Education to Achieve Net Zero Goals

SECTORS:

To better understand the path colleges and universities are following to lower carbon emissions, our analysts met with leadership at five institutions of higher learning. We also met with an organization that collaborates with schools on climate action. Students at colleges and universities were among the first to amplify the call for lower carbon emissions more than a decade ago. As a result, progress on the net zero pathway in the higher education sector tends to be ahead of other economic sectors.

While sustainability efforts continue, an ongoing challenge to further GHG emissions reductions is getting buy-in and securing funding for projects. Universities are also grappling with the appropriate use of carbon offsets in their net zero strategies.

A mid-western university boasts a 30-year effort driven from top and aligned with a core mission of social responsibility, including protecting the environment. Its biggest GHG reductions resulted from a geothermal plant that replaced the campus's coal burning power plants. School officials said its goal to be carbon neutral by 2030 will be difficult to realize without buying carbon credits to offset emissions.

Students at colleges and universities were among the first to amplify the call for lower carbon emissions more than a decade ago. The university hired a Chief Sustainability Officer to centralize efforts. A strategic sustainability plan includes climate adaptation, tapping expertise from different academic departments, such as urban planning, sociology, and geography, with the goal of ensuring best practices. The sustainability plan incorporates environmental and social initiatives and a climate adaptation plan intended to balance people, profits, and the environment. Now, efforts are focused on chipping away at margins by improving building efficiency and encouraging energy suppliers to offer cleaner products.

A university in the northeast achieved carbon neutrality in 2019 with the assistance of carbon offsets. The college performs annual GHG inventories. While integration of sustainability and carbon reduction goals throughout departments is not unusual, a sustainability curriculum supports change on campus.

In the mid-Atlantic, a private university is making progress since its 2007 pledge to be carbon neutral by 2024. It expects carbon offsets will be needed to reach the goal. Overall emission reductions are due to a combination of discontinuing the use of coal on campus, reducing travel, and increasing building and utility plant efficiency.

Colleges and universities we met with cited their approach to building efficiency. One mentioned its commitment to all new construction and major renovations achieving at minimum a LEED Silver rating. Another follows LEED principles and standards for new buildings but does not pursue certification due to costs and time. Another university's builds new facilities to LEED Silver standards, but several are LEED Gold certified.

A New England college released its Carbon Neutral Plan in 2009 and achieved a 50 percent reduction in emissions by 2015. The school's Net Zero goals include Scope 1, 2, and 3 emissions. Students drive sustainability initiatives, which include a single-stream recycling program, renewable energy certificate purchases, and EV charging stations.

A university located in a southern state accomplished the second largest deployment of solar energy in the higher education sector. School representatives told our analysts that messaging plays a key role in getting buy-in for projects. For example, framing the benefits of carbon-reduction projects in terms of lifecycle financial savings, efficiency, and employment growth resonates with audiences.

A university in the northeast took an innovative approach to financing. It established a green revolving loan fund in 2018 specifically earmarked for energy efficiency, renewable energy, and other projects that generate cost-savings over time, while reducing the university's carbon and ecological footprints. Savings are tracked and reinvested in the next round of sustainability projects. The revolving loan fund also sustains itself, as each investment is repaid in full plus a percentage to help fund future projects.

Partnerships with host cities also play important roles for other institutions we met. For example, the southern university we met established a strong partnership with its host city to reinforce carbon reduction goals. Stakeholder meetings among the city, university, and community are focused on climate resilience. Stakeholders ranked proposed strategies based on topics that emerged during the meetings. At the midwestern university, the city and schools collaborate on recycling, planting trees, reducing combined sewer overflows (CSOs), and improving waterway quality, among other activities.

Several of the colleges and universities we met spoke about the influence and support of third-party organizations in their broad sustainability programs and specific GHG reduction efforts. Second Nature, Inc., the Association for the Advancement of Sustainability in Higher Education, and the American College & University Presidents' Climate Commitment were prominently credited by the schools for playing pivotal roles in progress towards carbon reduction goals.

Our analysts met with Second Nature to learn more about its mission to accelerate climate action in, and through, higher education. Second Nature members pay dues to access a network of institutions engaged in climate work and resources to support the work. For example, it provides expertise for annual GHG inventories, progress reporting, and creating a climate action plan. The representatives told our analysts that smaller, wealthier colleges with earlier carbon neutrality dates are performing campus decarbonization work at a more rapid rate than larger schools. Of the 10 institutions claiming carbon neutrality, all are private colleges, which Second Nature said have an easier time moving on projects. Decarbonization projects take time. For example, Second Nature representatives told our analysts that one college's coal plant conversion took 13 years: three years administrative work and 10 years to build out new generation and decommission the existing plant. Reaffirming a point we heard during an earlier engagement meeting with one of the institutions we met, Second Nature said that executive leadership turnover can be disruptive to climate momentum without strong institutional structure. The organization sees its role as adding accountability to the goals schools set.

Second Nature said the higher education sector sees positive benefits when the federal government is supportive of climate action. For example, one college executed a massive solar array thanks in part to federal tax credits for solar energy.

More recently, discussion of equity and social considerations helped GHG reporting become more relatable, Second Nature representatives said, by framing carbon reduction as social justice, which can assist with buy-in to climate commitments.

Looking to the future, Second Nature suggested that other sectors have been catching up to higher education and many institutions already have picked the "low hanging fruit" of GHG reduction initiatives. Second Nature indicated during our discussion that it continues to adapt strategies to support institutions, as they tackle new decarbonization approaches and tactics. Our analysts will be on the lookout for these changes in future capital and sustainability plans. COLLABORATIONS



VIEWS ON USING CARBON OFFSETS DIVERGE ACROSS SECTORS.

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The same divergence of opinions on carbon credits is evident in the higher education sector. One university told our analysts its philosophy is that carbon offsets should be an afterthought after exhausting all reasonable potential to reduce gross remissions. The school gained expertise on evaluating the quality of offsets, considering factors such as additionality, permanency, data transparency and calculation methodology. Another university also prefers to minimize offsets, deferring to renewable energy and energy conservation, procurement strategies, and LEED certifications for new buildings.

On the other hand, the 2019 achievement of carbon neutrality by a university in the northeast was assisted by the purchase of carbon credits. School officials at a midwestern university said their goal to be carbon neutral by 2030 will be difficult to realize without buying carbon credits to offset emissions. A college in the mid-Atlantic region expects carbon offsets will be needed to reach its goal of carbon neutrality by 2024.





Aviation May Face Among the Greatest Challenges to Decarbonize, but Progress Can Be Consequential

SECTORS:

Complex challenges face the aviation sector energy transition in accordance with net zero aspirations. Our engagement efforts in 2023 included two meetings with the management of an airport considered to be a leader in sustainability and decarbonization.

By boosting clean power purchases over time, the airport cut operational emissions by 83 percent compared to a 2010 baseline. In 2016, it became first North American airport to achieve carbon neutrality. More recently, it became the first airport in world certified at highest level of Airports Council International (ACI) Airport Carbon Accreditation (ACA) program.

The airport's goal is to be powered on 100 percent renewables by the end of decade. In 2022, approximately 69.3 percent of all energy came from renewable sources and 100 percent of purchased renewable energy came from wind farms. Management published a detailed 2022 ESG report. Breckinridge met with five airports in 2022 and only one prepared a similar report. Management explained sustainability is the most cost-effective way to operate and the right thing to do for the planet and children.

In November 2023, FactSet reported, "Global aviation contributes about 2.5 percent of global CO2 emissions. If passenger miles continue to increase at the currently estimated 5 percent per year, emissions from aviation will double within 14 years and could reach 8 percent to 11 percent of worldwide emissions as emissions in other areas diminish."²⁷



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ACI, which represents nearly 2,000 airports worldwide, established a goal of reaching net zero emissions by 2050, calling on its airport members to cut directly controlled emissions. In past engagement meetings, airport managements have credited ACI for bringing intellectual capital to build best practices. ACI programs and services relate to a variety of airport operations, including air cargo and security, shifting to zero- or low-carbon emission vehicle fleets, and installing onsite renewable power.

For ESG reports issued by airports, ACI developed 20 recommended disclosure elements and 40 recommended guidelines broken out by E, S and G and focusing on, among other topics:

Energy management, GHG emissions, climate change adaptation/ exposure to environmental impacts, environmental commitments, waste, water management/resources, biodiversity/natural resources, regulatory compliance, and noise and pollution

Human capital management, community/customer relations, and health and safety,

Organizational structure, risk management and reporting/transparency

ACI engages with investors, insurers, airlines, and other airports to gather feedback on the proposals to achieve broader consensus and uniformity related to ESG disclosure with a goal to establish industry standards and medians across industry and increase the number of medium and large airports that report on the recommended disclosures

During our engagements with the airport in 2023, management shared several metrics that could be standardized, asking for feedback on type of information useful from Breckinridge as a municipal bond investor. Management also asked Breckinridge to share our feedback on the airport's ESG report and insights on credit analysis and ESG integration. Breckinridge asked questions and provided feedback, offering recommendations about both the disclosure list as well as the topics proposed for a planned research paper. This type of two-way exchange between issuers and investors is a welcomed hallmark of the ESG issuer engagement effort.

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SECTORS:

Breckinridge analysts conducted engagements with six Real Estate Investment Trusts (REITs) to monitor and measure how they are managing Scope 3 GHG emissions. Recurring themes included renewable purchase power agreements, on-site renewable energy investments, understanding tenant energy consumption and emissions data, green-leasing, and sustainable building materials in new construction.

REITs included multi-family residential, retail, health care, and data centers. REITs face climate transition risks as well as property specific physical risks associated with climate change. The path to lower carbon emissions for residential buildings differs from the requirements needed for a data center or medical facility.

One of the REITs on our engagement list was among the first to set a SBTi GHG emissions reduction goal, which it is on track to achieve. Most of the issuer's emissions reductions are due to updating heating, ventilation, and air conditioning (HVAC) equipment, including boilers, as well as LED lighting.

Our analysts met with management teams at several REITs that are working towards reducing Scope 3 impacts.

Most of the issuer's emissions reductions are due to updating heating, ventilation, and air conditioning (HVAC) equipment, including boilers, as well as LED lighting.





LEED, ENERGY STAR, BREEAM CERTIFICATIONS ARE MEASURING TOOLS ON THE PATHWAY TO NET ZERO FOR REITS.

Thematically, we see that more REITs are seeking more green-certified space, such as those certified by LEED,²² Energy Star,²³ and Building Research Establishment Environmental Assessment Methodology (BREEAM).²⁴ While the criteria for green certifications vary across the three programs, pursuit of their certifications demonstrate that REITs are seeking higher levels of sustainability within their property portfolios.

For example, a multi-family residential REIT with more than 300 properties nearly doubled the number of its properties certified-green over the last three years. The path to improved energy efficiency for this REIT is complicated by the fact that most properties are older, requiring energy retrofits that can take longer than new construction and so sustainable certification is more challenging.

Another REIT that owns health care facilities hopes to double Energy Star certification for new construction as a way, at least in part, to help tenants meet their own sustainability goals. Most green leases allow the REIT to access energy usage data and install Energy Star certified equipment.

A medical facility REIT said 5 percent of its total portfolio is LEED Gold and 12 percent has some LEED certification. Management noted LEED is more commonly sought for lab properties and, while some outpatient medical facilities are LEED certified, 20 percent of lab buildings are LEED Gold certified.

POWERING FACILITIES WITH CLEANER ENERGY IS AN ONGOING INITIATIVE, MORE PREVALENT IS THE USE OF RENEWABLE PURCHASE POWER AGREEMENTS (PPAS)

A near term theme has been the use of renewable purchase power agreements as a way for REITs to report lower scope 2 emissions as they seek to better incorporate physical on-site renewable solutions where possible. A REIT that owns data center facilities, which are dense electricity consumers, is sourcing about 12 percent of renewable energy through various forms of PPAs due to a lack of available renewable energy supply from local sources. This REIT is also installing on-site renewable energy solutions to supplement its power needs.

A key effort for one residential REIT is building solar generation capabilities onsite that can be offered to tenants. Providing solar power to tenants can lower tenant costs and cut Scope 3 emissions for REITs.

SUSTAINABLE BUILDING MATERIALS CAN LOWER GHG EMISSIONS, BUT SUPPLY IS LOW, AND COSTS ARE HIGHER.

When planning new construction, an upscale residential REIT made it a priority to measure the embodied carbon²⁵ in building materials. It is the company's second largest source of Scope 3 emissions. Working with life cycle assessment²⁶ consultants, management and its design team met with concrete suppliers to evaluate carbon present in building materials. REIT management acknowledged a complicating factor is the limited supply of competitively priced low carbon concrete and acknowledged the relatively short history of the building material in use as an additional challenge. Another REIT works with a partner to create sustainability guidelines for construction materials including paint, carpets, flooring.

WORKING WITH TENANTS SUPPORTS PLANNING AND EXECUTION.

Especially when measuring and addressing Scope 3 emissions, most REITs depend on tenants to make data available. While all but one REIT's active leases include green language, which allows utilities to share energy data, rules and actions around data sharing can vary among utilities. While one REIT waits to see if SEC proposed climate risk disclosure rule will include tenant-related emissions data, others are working with tenants on data gathering.

For one REIT that manages many properties on a triple-net lease basis, tenants are responsible for all expenses including taxes and maintenance. The REIT has no direct control over a tenant's capital improvement plans, including those that may include emissions reduction goals. The REIT instead is tracking data and using surveys to better understand environmental characteristics of its portfolio of properties. The REIT's management hopes to help with transition efforts by providing financing for tenant initiatives.

An important strategy for a REIT managing health care facilities is collecting facility emissions data, with the goal of incorporating climate risks into property management, including more renewable energy. Addressing GHG emissions and advancing overall building sustainability will be essential, as REITs move forward on a path to net zero. The effort, if successful, offers the potential to improve the environmental and financial performance of their facilities. Increasing the supply of renewable energy and sustainable building materials along with SBTi guidance and cooperative efforts with tenants can play important roles in the future.







Coastal Cities, Municipal Utilities, Services Must Integrate Climate Risk and Resiliency in Spending Plans

SECTORS:

Breckinridge conducted 12 engagement meetings with municipal bond issuers to explore how climate change and weather-related extremes factor into capital spending plans. We met with six coastal communities, three municipal utility service providers, one urban development entity, and two municipal transportation agencies, as well as two organizations that offer resources to municipalities.

The engagement theme centered on budget planning in response to risks such as sea level rise (SLR), coastal erosion, flooding, storm surges, stormwater management, and saltwater intrusions. Budgeting for mitigation, management, and adaptation of other weather-related coastal area risks also requires consideration of extreme heat, cold, wind, and rain events, drought, and wildfires.

COASTAL CITIES ARE INTEGRATING COASTAL CONCERNS AND CLIMATE RISK IN CAPITAL SPENDING PLANS.

Budgeting for coastal resiliency is increasingly commonplace among the issuers we met. One major east coast city explained that drawing a line between traditional and additional resiliency spending is difficult because they have both grown integral with the budgeting process.

An urban development authority working in a large east coast metropolitan area told our analysts, "Everything being done now in terms of capital spending is to address sea level rise and storm surge adaptation." The issuer further stated, "climate adaptation work is a not a one-and-done task." The authority is working on storm and sea level rise projects intended to mitigate against a 100-year storm but acknowledged that, as more severe storms hit, it may change and moderate design work in response. A recently issued sustainable bond deal will fund flood control projects and additional design work.

OFFICIALS MUST BALANCE FUNDING SOURCES FOR COASTAL RESILIENCY PROJECTS WITH OTHER MUNICIPAL DEMANDS.

Federal, state, and local funds, municipal bond issuances, tax credits, as well as grants and pay-as-you go spending characterize resiliency funding among issuers we interviewed. One town located on New England's coast addresses SLR risks in its master plan, operational budget, and capital budget. In the last decade it committed state, federal and local funds to studies, hard structures, and natural solutions including beach nourishment. The town seeks grants as its first option, then state revolving fund programs, and then its own funds. In the past, grants followed town efforts to get projects to shovel-ready status. Another town is considering issuing beach bonds to build reserves.

Our analysts noted that issuers with experience in dealing with SLR risks often conduct and routinely update formal resiliency studies considered in budget planning. One issuer publishes sustainability plans every four years and has done so for 15 years.

A southern California beach community's climate action plan (CAP) faces additional challenges of addressing increasingly frequent and extended droughts and wildfires. The effort means planning for costs associated with brush management and putting utility wires underground in addition to SLR plans.

EXTERNAL PARTNERS CAN HELP MUNICIPAL BOND ISSUERS EFFORTS TO ADDRESS COASTAL RISKS.

External partners are important to advancing issuers' risk management. The Federal Emergency Management Agency (FEMA) helped fund grants to elevate high-risk homes as the sea advances and beaches erode. FEMA's Building Resilient Infrastructure and Communities program supports hazard mitigation projects.

In a coastal town where beach erosion is an ongoing problem, a growing but often unpopular topic of conversation is managed retreat, which is the strategic relocation of people, buildings, and other assets from areas vulnerable to natural hazards. Homeowners expressed high interest in FEMA's buyout offers.

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One town completed a five-year study with the Army Corps of Engineers to rebuild a major section of its seawall. The Coastal Advisory Commission offers resiliency and sustainability studies. An issuer also targets funding from the Water Infrastructure Finance and Innovation Act of 2014.

Issuers also collaborate with external consultants. A city on the northeast coast employed a consultant to update FEMA flood maps, creating overlaying zones for key risks such as SLR, heat stress, and storm surges. A mid-Atlantic beach community that relies on tourist-driven economic activity works with land surveyors to monitor and replenish sand for beaches, which continually lose sand from wear and tear.

Another collaborative effort was highlighted by a major northeast city, which discussed its involvement with the C40 Cities Climate Leadership Group (C40). C40 is a global network of mayors of the world's leading cities, advocates for incorporating climate spending into budgets. C40 draws on the work of independent scientists to provide information on future climate change, potential impacts, and how climate can inform budgeting.

STORMWATER SURGE AND SALTWATER INTRUSION ARE SIGNIFICANT, POTENTIALLY EXPENSIVE RISKS.

A major metropolitan area on the east coast with significant SLR exposure annually budgets for investments in green infrastructure to address combined sewer overflows (CSOs) and water quality. A smaller municipality further north must address three interconnected reservoirs exposed to infiltration of brackish water from SLR and more frequent algal blooms due to increasing drought conditions.

Stormwater mitigation work for coastal cities often includes enhanced runoff capabilities and storm water pump stations, flood prevention, and dredging waterways, in addition to beach monitoring and renourishment. Absent other funding, water systems likely will need to increase rates to cover additional debt service expenses. One issuer we met assesses storm water fees to fund ongoing work.

MUNICIPAL UTILITIES MUST PROTECT THEIR SERVICES FROM MULTIPLE RISKS OF CLIMATE CHANGE.

Climate-related risk and budget challenges for municipal utilities serving coastal communities, including water and sewer service providers, have multiple dimensions. For example, a utility providing water to a community may need to address the safety and security of the primary water source, while planning and investing for future water sources should the primary source become unusable or depleted. Ongoing and new expenditures are essential to assure a utility's viability over the long term.

Drought is a primary risk for water utilities in regions of the U.S. During one of our engagement meetings, our analysts discussed budgets with a utility that derives its primary water supply from mountain sources, while it simultaneously develops alternative water sources from rivers to manage through droughts.

In addition, rising temperatures and runoff due to extreme rainfall events cause deleterious effects. Wildfires that cause vegetation loss could negatively affect water quality and, in turn, drive higher expenses for water treatment.

Flooding presents its own challenges for districts facing the need to convey and store significant water volumes produced from atmospheric rivers and other major storms. These additional demands can increase budget pressures for municipal utilities.

Our analysts learned that one west coast municipal water utility assessed long-range financial needs in two phases in its Integrated Resource Plan. The estimated cost for the first phase alone ranges from \$5.5 billion to \$6 billion. While a portion of the costs will fall to customers through rate increases, the issuer must consider multiple funding sources, with grants increasingly attractive due to the rising cost of capital and the requirements of certain bond programs.

Since 2012, staff at an east coast water utility have evaluated coastal facilities for their ability to withstand a storm making landfall. In the short-term, mitigation includes temporary flood barriers for at-risk buildings and expanded fuel storage at wastewater stations. Over the long term, the plan is to update all facilities on a 20-year capital improvement plan (CIP) that includes resiliency measures.



MUNICIPAL TRANSPORTATION PROVIDERS IN COASTAL AREAS ALSO ADAPT TO WEATHER RISKS.

Coastal communities also must factor SLR and related risks in capital spending plans for mass transit systems. A large city on the New England coast is conducting meetings related to local transportation projects to ensure discussions include CAP recommendations and community input.

A large east coast regional transportation agency must plan for its significant exposure to seasonal weather extremes. For example, extreme cold stalls trains, coastal flooding inundates underground facilities, trees wreak havoc on overhead power lines during high winds, and extreme summer heat buckles tracks and causes communications and signaling failures.

The agency assesses risks in three dimensions. First, it conducts climate change vulnerability assessments and plans adaptation strategies. The vulnerability assessment incorporates 13 indicators that inform CIP funding decisions. Second, it embeds climate change risk into decision making. Third, it collaborates and coordinates with other state agencies, municipalities, watershed organizations, and the federal government in support of regional resiliency projects.

Another regional transportation authority responsible for airport and seaport facilities incorporates sustainable design and climate preparedness into capital spending plans to extend the lifecycle of critical infrastructure. Resiliency personnel sit in the engineering group, directly involved with infrastructure planning. In addition, the authority provides tools and educational opportunities to staff, tenants, and other key stakeholders to enhance climate change understanding.



ORGANIZATIONS ARE SUPPORTING MUNICIPAL ISSUERS AS THEY MANAGE THEIR CLIMATE-RELATED RISKS.

During our engagement with municipal issuers in coastal areas, we also met with an organization that provides financial assistance to borrowers for wastewater and drinking water projects, and a nonprofit with a mission to identify emerging approaches and solutions to climate and energy challenges and increase information sharing between cities, states, and companies.

We learned that the financing provider partners with government environmental departments to monitor climate resiliency in designs of borrowers' new water/sewer projects. A grant program supports cities and towns planning for climate change resiliency and implementing priority projects.

Discussion with the nonprofit highlighted for our analysts the view that the effects of climate change will likely impact a city's assets and expenses first, followed by revenues. The revenue impact is likely to be the most important to investors.

For example, if revenues drop due to a climate event or decline from worsening climate conditions, cities could have less available funds for post-disaster rebuilding or other adaptation work. The lack of funding and progress on resiliency could have implications for future credit ratings and credit worthiness.

The discussion emphasized the view that economic prosperity relies on climate resilience and highlighted the wisdom of local, state, and federal planners who connect climate resilience with the viability of cities.

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Industry Collaborations Advance Issuer Engagement Efforts



In 2023, Breckinridge participated in collaborative engagements with Climate Action 100+¹⁶ (CA100+) and the Banks Working Group¹⁷ of the Ceres Investor Network, two industry groups focusing on climate risk. Through these efforts, we met with management teams from companies in the aerospace and defense, financial, industrial, retail, and utility sectors. Discussions were framed by the ongoing guidance the investor-led groups provide the companies as they address, or consider addressing, key issues including GHG emissions reductions, net zero emissions plans, energy transitions, and rate affordability during the transition.

We have found that collaborative engagements enhance and strengthen our ability to identify and understand a company's exposure to and management of material ESG risks. The advantages include:

- Working with other investors through the CA 100+ amplifies Breckinridge's conviction that companies must act with urgency to address the transition to a low or no carbon economy, a serious and pervasive material risk facing businesses across sectors today.
- Breckinridge and other investors benefit from supporting research, including the CA 100+ Net Zero Benchmark that enables better understanding of a company's climate risk preparedness and identifies important areas for engagement.
- By participating in engagement discussions with other investors, Breckinridge can elevate our access with corporate management teams by engaging with additional C-suite executives.

In discussions with issuers who engage with CA100+, we have the opportunity to better understand the progress issuers are making on the initiative's guidance on addressing climate risks, such as the analysis provided in the *Net Zero Benchmark*. For example, a Utility described its annual review of and updates to GHG emission reduction targets based on its Integrated Resource Planning (IRP) across all jurisdictions. It decided to work with Edison Electric Institute to establish industry-based targets aligned with Paris Agreement rather than an SBTi-validated target. It also is incorporating IRA tax credits to incentivize renewable generation, as it looks to more than double carbon-free generation by 2032.

The Utility takes a proactive regulatory approach with policy makers, regulators, rate payers, businesses, and employees, as it pursues its energy generation goals. Just Transition¹⁸ is also avital piece to the sustainable journey, as communities lose jobs and property taxes during plant retirements. In recognition of this climate transition impact the Utility offers retraining, tuition reimbursement, and/or relocation as it allocates funds and resources to help communities transform/transition.

During our meeting with the management team of the Industrial sector company, we noted progress on CA100+ goals, including 1) publishing Task Force on Climate-Related Financial Disclosure¹⁹ (TFCD) and Scope 3 emissions reports, 2) selecting an experienced, new chief sustainability officer (CSO), and 3) adding two new board members with sustainability experience. During the meeting, we joined collaborators in commending the company's progress on disclosures, while urging further development. We also encouraged management to set a Scope 3 target, which it is reluctant to do considering its uncertainty regarding the pace of technology developments to decarbonize vehicles, which represent 95 percent of the company's total emissions.

During the Aerospace and Defense company engagement meeting, management expressed appreciation for comments shared about TCFD reporting, telling us that the feedback helped explain how the report can be more succinct. The company is focusing on the largest sources of GHG emissions—sold products and purchased goods and services—and management is evaluating target setting, with plans to refresh its full, five-year climate target, including actions associated with supply chain and product use in 2024.

Our collaborative CA100+ engagement with a large, multinational Retailer was an opportunity to offer a comparison of the company's disclosure with an issuer in another Consumer-related sector. The comparison approach allows investors to understand emissions reduction initiatives in context.

Through our commitment to work with the Ceres Banks Working Group, we join with other members to urge the largest banks to manage climate risks. The Climate risk framework at the Regional Bank we met with is an ongoing and well organized project. The climate risk effort is staffed, leveraging organizational expertise and collaboration to improve understanding of the impact climate change can have on operations. The Bank calculated and updated financed emissions across its entire 2022 portfolio. Going forward, the focus is to operationalize the climate data framework, to enable decision making based on captured data.



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COLLABORATION WITH MIT SLOAN'S SUSTAINABLE BUSINESS LAB

In 2023, Breckinridge continued its longstanding association with the Massachusetts Institute of Technology (MIT) Sloan Sustainable Business Lab (S-Lab). Through this action-learning class, students work on sustainability-related projects submitted by host companies.

Breckinridge asked the student team to develop a method for evaluating the use of carbon credits by companies. With guidance from our analysts, the students completed a research project that included helpful carbon market resources and an assessment checklist.

The students' conclusions also echoed insights gathered during our engagement discussion. The voluntary carbon market (VCM) is evolving quickly and has been marked by quality concerns, confusing and alarming potential corporate buyers. Despite the challenges, the VCM market grew modestly in 2023 to a new record level of carbon credit retirements and issuance.²¹







SOCIAL Discussions



Broadband Internet Access Offers a Business and Social Opportunity

SECTORS:

The COVID-19 pandemic limited employee travel to the office and student in-person school attendance. It also pointed to the need for improved and equitable internet access, especially for underserved urban and rural communities.

In 2021, Congress approved the \$1.2 trillion Infrastructure Investment and Jobs Act (IIJA), which includes \$42 billion to expand high-speed internet access through the U.S. The goal is to deliver reliable broadband to an estimated 8.5 million families and small businesses by 2030.

During our engagement meetings with Telecommunications companies and a municipal utility delivering community electrical services, we discussed their views on broadband access initiatives.

One Telecommunications committed in 2020 to providing internet access for 10 million students, pre-dating the IIJA. It had accomplished about a third of its target by the time we met. The \$10.7 billion program provides free internet service and free mobile hotspots to under-connected households with school-aged children. Another Telecommunications company confirmed its support of broadband buildout incentives and investments, stating it represents an unprecedented effort to close the digital divide. It plans to work with states that may not have experience or knowledge to administer such large investments.

During an engagement with a municipal bond issuer providing electric utility services to a large metropolitan area, our analysts explored the fiscal implications of its broadband build out. The issuer's leadership also noted that the fiber installed for broadband internet access can benefit grid operations, including improved grid reliability and energy management.

Looking beyond the U.S. and the IIJA's funding goals, another Telecommunications company, with a focus on providing access in emerging markets, has created 400 digital communities across 15 countries. Management maintained that the effort is about more than building branded towers. It also targets progress through collaboration with organizations, such as the U.S. Department of Commerce, and the Power Africa initiative of the U.S. Agency for International Development.



A Focus on Employee and Product Safety and Supply Chain Resilience

SECTORS:

Our 2023 issuer engagement meetings with companies in Aerospace and Defense, Technology, and Consumer Defensive sectors included discussion of risks associated with product and employee safety, manufacturing quality management, and supply chain resilience. Inadequate attention to any of these risks can endanger consumer or employee health, diminish brand value, and incur legal or regulatory costs, among other financial and business concerns.

PRODUCT AND EMPLOYEE SAFETY ARE KEY DISCIPLINES.

One company illustrated the importance and impact of product quality by recalling an instance when substandard manufacturing caused a part to fatigue and break. While the company worked with government agencies to recall the defective parts, it developed a quality control measure that applies a barcode to component engine parts. Now parts are traceable to specific products, allowing repairs.

Employee health and safety tends to focus largely on three activities: training, abatement, and prevention. Tactics include job hazard analysis, education, and communication about safety, and dissemination of health and safety best practices. During one engagement meeting, management explained how it uses data to identify safety risk needs, track actions, and manage a scorecard to drive improvements. In 2023, the total recordable injury rate decreased 17 percent year-over-year for that company.

The strongest employee safety management efforts we discussed start at the top with management and extend to the front line, where health and safety teams are present on the floor in every factory. All employees complete training to understand a company's product safety approach. Protocols empower employees to bring attention to these issues. More than one company provides performance metrics quarterly to boards of directors and audit committees.

MANUFACTURING QUALITY MANAGEMENT IS A MULTI-FACETED EFFORT.

A significant risk to product quality and safety in the Aerospace and Defense sector is assuring against parts in manufacturing operations from unsanctioned suppliers. Employee training to prevent, detect, and manage fraudulently manufactured materials follows guidance from the federal government and company standards and detection programs. One company's counterfeit material detection and avoidance program guides supplier purchasing and requires suppliers to prevent counterfeit parts.

At another company, a zero-defect plan (ZDP) focuses on quality improvement and removing waste while protecting customers. Since 2022, the company implemented more than 200 improvement projects. In addition, it achieved year-over-year reductions in costs for inferior quality or instances of products or services released from point of origin containing a deviation/defect. Product quality measures are regularly shared with the board nominating and governance committee, which oversees the company's sustainability efforts.

Product quality management oversight starts with the board of directors at one company, and, importantly, quality measures are incorporated in executive compensation. The company developed its product quality stewardship approach, partnering with customers to address materials and life cycle efficiency. Product quality is a sustainability goal intended to consider environmental impacts and opportunities.

MANAGING SUPPLY CHAINS FOR RELIABILITY AND SUSTAINABILITY.

The COVID-19 pandemic tested supply chain resilience. An Aerospace and Defense company faced disruption in microelectronics supply chains, which caused missed client deliverables. Employees worked around shortages by redesigning products using alternate parts.

Our analysts also discussed methods employed to assess suppliers' ethics, examine violations or controversies, and establish processes and requirements used to assure suppliers act ethically, including annual recertification of supplier performance. An Agribusiness and Food company started working 10 years ago to limit deforestation in its supply chain. Management expects to stop sourcing from suppliers linked to deforestation in South America and Southeast Asia by 2025. In addition, a pending acquisition should drive further non-deforestation progress through the acquired business's direct farmer relationships in the U.S. and Australia, which could support regenerative agriculture solutions.

Management at one Technology company told us that it can gain business value by working with suppliers and customers to incorporate ESG initiatives throughout the value chain. For example, the company wants to create energy efficient products and collaborates with suppliers to scale ESG initiatives to meet demand for semiconductors. An early participant in the Semiconductor Climate Consortium, the company described a new wafer manufacturing platform and an efficient software package that improves sustainability.

Another Technology company's approach targets circular economy goals through three initiatives. First, it seeks opportunities for circular design and sustainable materials sourcing to extend product service life and enable repair and refurbishment. Second, work with customers and partners on circular business models to reduce Information Technology's carbon footprint and introduce innovative business models. Third, seek additional opportunities to partner "because no company can do this alone." Two major partnerships to achieve circular goals are the Circular Electronics Partnership and Platform for Accelerating Circular Economy.

The resilience and quality of a company's supply chains can be a significant source of risk exposure, as well as a key element of business sustainability. Our engagement efforts with companies across manufacturing sectors revealed pervasive and common supply chain themes that are specific to manufacturers and other industrial companies that emphasize product consistency and safety for competitive advantage.









GOVERNANCE *Discussions*





Amidst Bank Upheaval, **Breckinridge Engaged Banks on Liquidity Trends, Consumer Protection, and Ethics**

SECTORS: (\$

We found several banks are taking steps to better align their stated commitments to improving ethical operations within their In March 2023, three small- to mid-sized U.S. banks failed, organizational structure. Increasingly we learned that banks triggering a sharp decline in global bank securities prices and a are establishing, staffing, and funding an independent Ethics swift response by regulators to prevent potential global contagion. office overseen by Chief Ethics Officers that leads annual Code In response to the bank failures, the three major U.S. federal bank of Business Conduct and Ethics updates across the organization, regulators and several large central banks undertook extraordinary including operation of a 24-hour whistleblower hotline. Some measures to reorganize or liquidate the failing banks, reassure banks continue to combine the function with the offices responsible depositors, and provide liquidity to stabilize the banking sector. for risk management, compliance, or ESG operations. By year-end 2023, the worst effects of the emergency had faded.

Against this backdrop, Breckinridge analysts conducted a series of ORGANIZATION'S COMMITMENT. engagement meetings throughout 2023 with management teams at Some best practices discussed during our meetings included eight large banks. The conversations focused on consumer financial annual employee performance reviews that consider ethical protections and business ethics risks. Among other key topics we conduct, and training that offers a practical users guide on fraud, addressed were core deposit flows and balance sheet liquidity trends, insider trading, anti-competitive behavior, market manipulation, regulatory discussions concerning deposit guarantees, and a risk financial crimes, and related financial industry laws or regulations management approach to interest-rate risk. training program. One bank's Code of Ethics helps employees better understand how to apply purpose, mission, and values to business conduct, with topics addressing managing client relationships, and guidelines for outside activities and employment. Banks also can make consumer financial protection part of employee training, such as fair lending and compliance, preventing elder financial abuse, and preventing unfair, deceptive, and abusive acts or practices.

We found regional bank management teams to be engaged, transparent, and laser-focused on optimizing funding mixes, monitoring deposit flows, and managing *short-term liquidity needs during the acute* market volatility in the Spring of 2023.

In our discussions, we found regional bank management teams to be engaged, transparent, and laser-focused on optimizing funding mixes, monitoring deposit flows, and managing short-term liquidity needs during the acute market volatility in the Spring of 2023.

The Consumer Financial Protections Bureau (CFPB) considers in its bank evaluations product stewardship and transparency, including efforts to mitigate potential reputational and regulatory risks arising from unethical lending practices or inappropriate financial product sales. In addition, Banks are evaluated on oversight and managemen of business ethics issues such as fraud, executive misconduct, corrupt practices, money laundering, or anti-trust violations. The CFPB can levy financially-material fines and other punitive penalties to banks that are found to be deficient in these categories.

ETHICS INFRASTRUCTURE CAN SET THE TONE FOR AN

Several of the banks we spoke with align compensation practices for executives and employees with a commitment to ethical behavior. For example, one bank evaluates executive performance across dimensions including business results, risk controls and conduct, customer satisfaction and stakeholder engagement, which can include community development and climate change, and teamwork and leadership.

Other banks incentivize employees through compensation programs that emphasize ethical behavior rather than simply sales targets. For example, one bank does not set sales targets for retail personnel and limits the level of variable employee compensation with a focus on product and service suitability. These compensation practices are seen among some banks we met with to help increase customer satisfaction, build long-term relationships, and reduce risk.

SOME BANKS ARE ADDRESSING OVERDRAFT FEES, A FOCUS OF CUSTOMER DISSATISFACTION.

In recent years, some banks have eliminated non-sufficient funds (NSF) and overdraft fees, partially in response to consumer and regulatory pressures. Banks garner income from the fees when a check or automated payment is presented for settlement and money in the account is too low to cover the full amount. As the fee practice came under scrutiny among consumer advocates, the CFPB and banking regulators alike, some banks took steps to eliminate them. Some reasoned the step was a customer relations improvement, while others felt the fees were punitive and unjustified, and not a large revenue generator in whole.

Several of the banks we met with during our engagement program have reduced or eliminated overdraft fees. The management of one bank told our analysts that it considered such fee dependence unsustainable and counter to its mission of high retention by providing a favorable customer experience. The bank is developing and introducing new products that help customers avoid fees, such as payment alerts to encourage one-time payments. The cost of eliminating all consumer account NSF for another bank was \$12 million. As a result, the bank has the smallest percentage of fee revenue driven by customer NSF fees by a wide margin. Another bank eliminated NSF charges and reduced the number of transactions that would trigger overdraft charges, lowering fee income by \$25 million, on an expectation that the change would lead to higher customer satisfaction ratings.

Governance Strategies Address Data Security and Privacy Risks

SECTORS:

Breckinridge analysts discussed data privacy and security during engagement meetings with issuers in the Telecommunications and Aerospace and Defense sectors. Topics explored with management included controls and procedures, compliance oversight, due diligence, training, and responses to data breaches. Additional considerations included ethical data-use, data ownership, and risk management and reduction.

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ADDRESSING THE POTENTIAL COSTS OF DATA SECURITY RISKS **REQUIRES ORGANIZATIONAL ALIGNMENT.**

Our engagement meeting with a Telecommunications company demonstrated the potential costs associated with data security risks. During a data breach, hackers stole social security numbers and driver's license information from nearly 80 million U.S. residents. The costs to the company included \$350 million to customers and another \$150 million to strengthen data security systems and practices.

The company created a cyber transformation office and initiated a cultural shift that places a high priority on protecting customer data. Initiatives include cyber audits, security access testing, and employee training. The investment protected sensitive data in a subsequent breach two years later.

Another Telecommunications company explained that it employs chief privacy officers for each business unit because each has unique privacy challenges. Chief privacy officers and general counsels form a corporate privacy council that meets regularly to discuss issues and to share best practices.

To address data security risks in Aerospace and Defense, our analysts noted companies often assign a Chief Information Security Officer responsibility to identify and address data security vulnerabilities and threats. At the company, a committee leads cross-company efforts to develop toolsets and oversee direct engagement to protect against data breaches.

Assessing the effectiveness of a company's efforts to manage risks often includes evaluating industry organizations that promulgate and support standards to address risk exposures. The Defense Industrial Base Cybersecurity Assessment Center leads efforts of the U.S. Department of Defense to ensure contractors implement appropriate cybersecurity requirements.

CUSTOMER DATA PRIVACY PRESENTS MULTIPLE BUSINESS RISKS.

During one engagement meeting with a Telecommunications company, management explained the four principles governing its privacy practices are transparency, choice and control, security, and integrity. Customer data can include passwords, payment information, and credit data. The company encrypts 94 percent of customer data and does not monetize it. Management told our analysts that without a focus on providing a secure network, it would be out of business quickly.

Another Telecommunications company focuses its data privacy efforts on three areas. It seeks to limit data collection to that which will affect the customer experience. It pursues transparency by making public its privacy policy, which is written to be easy to understand. Finally, it intends to empower customers to control their data by allowing customers to download data and request to have it deleted.





Hospitals Labor and Management **Pressures Follow the COVID-19 Pandemic**

SECTORS:

The COVID-19 pandemic exacerbated personnel shortages in the health care sector. Staffing concerns strained relationships between hospital management and labor. To learn more about how hospital managements are responding to ongoing labor concerns, particularly with respect to traveling nurses, our analysts held engagement meetings with five nonprofit healthcare systems and one company that served as a source of contract nursing staff during the pandemic. Successfully overcoming labor/management concerns and achieving adequate staffing are important to hospitals' near-term operating margins and long-term growth.

HEALTH CARE SECTOR ISSUERS CONFRONTED LABOR **PRESSURES DURING COVID-19.**

For one health care system, operational stress in 2022 continues after it took on more COVID patients than other systems. Management said that due to COVID-related issues, more than 15 percent of staff nurses left the system. It is now rebuilding workforce after prolonged Delta variant of the SARS-CoV-2, the virus that causes COVID-19.

Like many issuers in the health care sector, systems hired contract labor to fill open nursing positions. Contract labor costs can vary according to the number of nurses hired and the costs charged by staffing firms. One system saw the rate per-hour for temporary nurses double in the pandemic. Another hospital system reported operating losses in fiscal year 2022 into FY2023 due, in part, to the elevated costs related to temporary nursing staff.

Strikes by nurses further complicate the labor costs for many in the sector. Filling staffing gaps with temporary nurses, which cost as much as 3 times the full-time nursing staff, caused resentment from permanent workers. One health care system dealt with its third nurses strike in 12 years during 2022. Favorably, one management team we interviewed is seeing some stability in nursing pay rates and an increase in applicants for positions.

LABOR ISSUES DUE TO COVID EFFECTS ARE AFFECTING **BUSINESS STRATEGIES**

During the height of the COVID pandemic, health care systems adjusted operations. For example, many curbed or eliminated elective surgeries to maximize resources for those suffering the worst effects of the virus and to protect other patients. One health care system closed certain locations to shift nursing staff, force COVID patients to other systems and reduce the cost of staffing agencies. While margins turned positive and demands on staff and facilities declined, the system lost market share.

Management at a major metropolitan health care system told our analysts it is hearing increased discussion of unionized labor, including physicians, which it said reflects demand for better pay, benefits, and working conditions to accommodate tough schedules and the region's high cost of living.

As the post-COVID labor/management landscape evolves, we learned management teams at health care systems are adapting. One health care system is seeking to reduce reliance on temporary nurses by rebuilding its internal, permanent nursing staff by hiring new graduates. Another health care system is focusing is on the revenue side, as expenditures soared in the pandemic and will be difficult to cut. Another system is starting its own internal employment agency.

MANAGEMENT REALIZES THE CHALLENGES ARE PERSISTENT AND DEVELOPING NEW PROGRAMS TO RECRUIT TALENT

A concern for employers is providing appropriate time off for employees under the stressful working conditions exacerbated by the pandemic. Paid time-off can drive increased hiring of temporary employees. One system is helping staff manage potential burnout by promoting and enhancing employee assistance programs, including mental health benefits and healthy lifestyles, and offering new remote work and flexible hours options.

One health care system is taking several steps to enhance the pipeline of medical and technology candidates it needs by supporting graduate medical education programs, considering loan forgiveness and tuition support, and reviewing work/life balance options. It also reinstituted affiliation with a nursing school. Over the long-term, a challenge arising from nursing shortage is facilitation of patient care coordination, which is prompting one

system to manage the health of patient populations rather than responding only when someone is sick.

LOOKING THROUGH A WIDER LENS TO LEARN MORE ABOUT **INDUSTRY BEST PRACTICES.**

To gain added perspective on the labor/management issues that are affecting the health care sector, our analysts met with management of a staffing firm that connects nurses and health clinicians with hospitals and healthcare systems across U.S.

During this engagement meeting, we learned that needs vary among hospitals. Smaller hospitals recruit from smaller technical colleges and work to build nursing pipelines internally. Larger academic centers may be able to hire graduate nurses. Onboarding these employees differs from smaller markets.

Management at the staffing firm advised that the pandemic brought opportunities for innovation in healthcare staffing approaches. The health care sector may look to other industries for ideas. For example, management of the staffing agency recalled one hospital that looked to the aeronautics industry for ideas to improve the health and safety of its own employees.

Hospitals can build nursing pipelines by improving retention, supporting team members who support hospitals through challenges and change, and incentivizing nurses with advancement and clinical career pathways. Other innovations we discussed included flexible scheduling rather than traditional 12-hour shifts, partnering with universities for additional clinical time and paid clinical instructors, and working with high schools to offer dual enrollment with technical colleges to accelerate graduation.



Maximizing a Workforce's Value **Means Valuing Diversity, Equity, Inclusion, and Employee Development**

SECTORS:



During our 2023 engagement efforts, Breckinridge analysts addressed workforce diversity, equity, and inclusion (DEI) with companies in the Technology and Telecommunications sectors. As management at one Technology company explained, "There is a huge opportunity for collective action within human capital management."

That company develops current employees through internal training and employee resource groups, and recruits new talent, working closely with organizations to connect with women and underrepresented communities. For example, it partners with groups targeting Science, Technology, Engineering and Math (STEM) programs for girls in middle-school grades, as well as those focused on supporting women already in STEM.

Another Technology company explained its partnerships with Historically Black Colleges and Universities (HBCUs) and minority-serving institutions because it believes diversity, equity, and inclusion (DEI) is vital to achieve business and societal goals, as well as to attract and retain talented employees. That company also works with those interested in returning to the workforce through a career restart program for those returning to their careers.

A third Technology company focuses on early-in-career development strategies that include setting appropriate compensation and regular performance reviews. Responsibility for the program resides with the DEI team and objectives include creating belonging, engaging with employees, and providing learning and development opportunities.

Management explained that the effort seeks to foster a culture shift that has two key drivers: retaining talent and ensuring recruiting is more representative. The company also conducts a diverse veteran recruiting program, operates an equity plan intended to retain employees, sponsors mentorship opportunities, and surveys employees with the goal of driving engagement and nurturing collaboration.

Another Technology company, understanding people follow different paths to full-time employment, takes creative paths to find a more equitable workforce. The company sponsors an education initiative that prepares young people with academic, technical, and professional skills in selected technology fields. The initiative helps students avoid taking on debt a college journey might entail, while creating qualified candidates for new openings. The effort has been particularly beneficial in strengthening regional economies and addressing the educational needs of underserved populations, management believes. In total, roughly 90 percent of program graduates are now full time employees.

Our analysts also met with Telecommunications companies that conduct innovative initiatives to recruit, retain, and reward a more diverse workforce. One company expanded recruitment beyond tech-enabling universities to include HBCUs. Its talent management strategy includes proximity interviews, which encourage executives to meet with any employee who requests an interview to increase empathy, team building, and an open culture. In addition, the company is working with OneTen.org, which works to create one million jobs for Black talent.

Another Telecommunications company is assessing pay levels through annual compensation surveys conducted by a third-party human resource consultant. It also distributes annual employee engagement surveys managed by another third-party and incorporates third-party benchmarking.

Management at another Telecommunications company told our analysts that it established three primary DEI goals: representation, development, and inclusion. Each department develops more advanced goals based on these three strategic objectives. A global sustainability committee develops DEI-related social/governance goals and reports quarterly to the Board of Directors. Management also conducts comparability studies, once again using third-party vendors, on compensation and benefits packages, as well as values, ethics, leadership, culture, and teamwork.

DATA PRIVACY, SECURITY, AND REGULATORY TRENDS

EMPLOYER/EMPLOYEE RELATIONSHIPS





CONCLUSION

Our 2023 ESG Issuer Engagement Report summarizes more than 130 constructive dialogues held by Breckinridge analysts with security issuers and SMEs. We do this work because it explores real-world financial risks related to the environment, our society, and governance of corporate and municipal operations. From an investment and operational management perspective, engagement discussions also focus on tactics and efforts that can improve the way in which these risks are addressed. Finally, productive engagement efforts like these can strengthen relationships between issuers, investors, government agencies, industry organizations, and community groups as we collectively seek to address risks and opportunities to secure and enhance the sustainability of our world in the future.



APPENDIX

ENDNOTES:

- 1. Climate Action 100+ is the world's largest investor engagement initiative on climate change, involving 700 investors, responsible for over \$68 trillion in assets under 14. Renewable natural gas results from decomposition of organic matter under anaerobic conditions. management. The group focuses on ensuring 166 of the world's biggest corporate GHG emitters take actions to align business strategies with Paris Agreement 15. The Science Based Targets initiative (SBTi) works with private sector organizations to set science-based GHG emissions reduction targets. goals. The actions include improving corporate governance of climate change, reducing GHG emissions, and strengthening climate-related financial disclosures. 16. Climate Action 100+ is the world's largest investor engagement initiative on climate change, involving 700 investors, responsible for over \$68 trillion in assets under Launched in 2017, Climate Action 100+ is coordinated by five investor networks: Asia Investor Group on Climate Change (AIGCC); Ceres (Ceres); Investor Group management. The group focuses on ensuring 166 of the world's biggest corporate GHG emitters take actions to align business strategies with Paris Agreement on Climate Change (IGCC); Institutional Investors Group on Climate Change (IIGCC) and the United Nations Principles for Responsible Investment (PRI). Please goals. The actions include improving corporate governance of climate change, reducing GHG emissions, and strengthening climate-related financial disclosures. note, Climate Action 100+ does not require or seek collective decision-making or action with respect to acquiring, holding, disposing and/or voting of securities. Launched in 2017, Climate Action 100+ is coordinated by five investor networks: Asia Investor Group on Climate Change (AIGCC); Ceres (Ceres); Investor Group Signatories are independent fiduciaries responsible for their own investment and voting decisions and must always act completely independently to set their own on Climate Change (IGCC); Institutional Investors Group on Climate Change (IIGCC) and the United Nations Principles for Responsible Investment (PRI). Please strategies, policies and practices based on their own best interests. note, Climate Action 100+ does not require or seek collective decision-making or action with respect to acquiring, holding, disposing and/or voting of securities. 2. The Ceres Investor Network includes more than 220 institutional investors managing more than \$46 trillion in assets. Breckinridge is a member of the Network. Signatories are independent fiduciaries responsible for their own investment and voting decisions and must always act completely independently to set their own The Network's Banks Working Group supports investors engaging with banks on the financial risks stemming from the climate crisis. The Working Group engages strategies, policies and practices based on their own best interests.
- with U.S. and International banks to align banks' lending, financing, and investing to manage climate risks and finance the transition to a net zero economy.
- 3. To achieve B Corp certification, a company must complete the B Impact Assessment and Disclosure Questionnaire and then get verified by an analyst from B Lab Global. B Corps must be recertified every three years and pay an annual fee. <u>https://www.bcorporation.net/en-us/certification</u>
- 4. The Net Zero Asset Managers Initiative is a group of global asset managers that are committed to working toward the goal of net zero greenhouse gas emissions by no later than 2050. As part of their commitment to the initiative, asset manager participants agree to support investing aligned with net zero emissions by 2050 or sooner.
- 5. Financed emissions are the downstream carbon emissions that commercial lending finances. Lenders have, until recently, focused on Scope 1 and 2 emissions, meaning emissions directly related to their operations and processes, and energy purchases. Financed emissions are GHG emitted from organizations that they finance through credit products or investments, for example. This, along with other emissions, is known as Scope 3 emissions. Financed emissions are calculated by multiplying an attribution factor—an investment recipient's estimated share of emissions in relation to the loan or investment, or their outstanding amount divided by their total equity and debt combined—by the emissions created by the investment recipient.
- 6. Net zero refers to the balance between the amount of greenhouse gas (GHG) that's produced and the amount that's removed from the atmosphere. It can be achieved through a combination of emission reduction and emission removal
- 7. The long-term temperature goal of the Paris Climate Agreement is to keep the rise in mean global temperature to well below 2 degrees Celsius (C) (3.6 degrees Fahrenheit (F)) above pre-industrial levels, and preferably limit the increase to 1.5°C (2.7°F), recognizing that this would substantially reduce the effects of climate change. The intent is to reach net zero by the middle of the 21st century and acknowledging that to stay below 1.5°C of global warming, emissions need to be cut by roughly 50 percent by 2030.
- 8. Scope 1 are those direct emissions owned or controlled by a company, for example from burning fuel. Scope 2 and 3 are indirect emissions attributed to the company from sources it does not own or control. Scope 2 emissions are those caused by a company causes indirectly, such as emissions caused when generating electricity used in buildings, for example. Scope 3 emissions are not produced by the company itself nor due to activities from assets it owns or controls, but by those that it's indirectly responsible for up and down its value chain. For example, emissions due to the purchase, use, and disposal of products from suppliers, and includes all sources not within Scope 1 and Scope 2.
- 9. A power purchase agreement, or electricity power agreement, is a long-term contract between an electricity generator and a customer, usually a utility, government, or company. PPAs may last anywhere between 5 and 20 years, during which time the power purchaser buys energy at a pre-negotiated price.
- 10. A virtual PPA (VPPA), is a financial arrangement between a developer and the buyer which guarantees a cash flow for the renewable energy project based on output.
- 11. The Office of Energy Efficiency and Renewable Energy of the U.S. Energy Department describes sustainable aviation fuels (SAF) saying, "SAF made from renewable biomass and waste resources have the potential to deliver the performance of petroleum-based jet fuel but with a fraction of its carbon footprint, giving airlines solid footing for decoupling greenhouse gas (GHG) emissions from flight."
- 12. Financed emissions are the downstream carbon emissions that commercial lending finances.
- 13. The term greening the grid is associated with efforts to enhance energy grid infrastructure to support the seamless integration of renewable energy sources into the energy mix. Efforts can include grid modernization, investment opportunities, sustainable supply chains, and the formulation of regulatory frameworks to promote sustainable and resilient grids.



- 17. The Ceres Investor Network includes more than 220 institutional investors managing more than \$46 trillion in assets. Breckinridge is a member of the Network. The Network's Banks Working Group supports investors engaging with banks on the financial risks stemming from the climate crisis. The Working Group engages with U.S. and International banks to align banks' lending, financing, and investing to manage climate risks and finance the transition to a net zero economy.
- 18. Just Transition is a set of principles, processes, and practices, which, broadly defined, seeks to ensure that 1) no one is left behind or pushed behind in the transition to low-carbon and environmentally sustainable economies and societies, 2) can enable more ambitious climate action and 3) provide an impetus to attaining the United Nations' Sustainable Development Goals.
- 19. In 2017, the TCFD released climate-related financial disclosure recommendations designed to help companies provide better information to support market transparency and more informed capital allocation. Concurrent with the release of its 2023 status report on October 12, 2023, the TCFD announced it had fulfilled its remit and disbanded. The Financial Standards Board asked the International Financial Reporting Standards (IFRS) Foundation to monitor the progress of companies' climate-related disclosures.
- 20. The discussion of carbon credits, also known as carbon offsets, is related to the voluntary carbon market (VCM). The VCM is a marketplace where entities that emit carbon dioxide can, at their discretion, counterbalance their emissions with entities that have avoided or removed them. The exchange is made with the purchase or sale of a carbon credit, which is equivalent to one metric ton of CO2. Sellers of carbon credits include developers of forestry or technology-based carbon removal projects such as a direct air capture (DAC) facilities. Buyers are generally companies seeking to demonstrate their commitment to managing their carbon footprint.
- 21. Both issuance and retirements are monitored to judge the health of the VCM. Issuance is representative of the supply generated by a carbon avoidance or removal project that has been verified by a global, independent standard. Retirements are an indication of demand, as they represent credits that have been purchased and retired, with documentation of the retirement in a registry. A carbon credit is retired by the purchaser to officially offset one ton of emissions. For readers interested in more information, refer to "A blueprint for scaling voluntary carbon markets to meet the climate challenge https://www.mckinsey.com/capabilities/sustainability/ our-insights/a-blueprint-for-scaling-voluntary-carbon-markets-to-meet-the-climate-challenge," at Mckinsey.com and . Long-Term Carbon Offsets Outlook for 2024, BloombergNEF, February 6, 2024.
- 22. LEED (Leadership in Energy and Environmental Design) is a green building rating system. LEED certification intends to provide a framework for healthy, efficient, and cost-saving green buildings.
- 23. Energy Star is a program run by the U.S. Environmental Protection Agency and U.S. Department of Energy that promotes energy efficiency. The program provides information on the energy consumption of products and devices using different standardized methods.
- 24. Founded in 1990, BREEAM is a method of assessing, rating, and certifying building sustainability. BREEAM measures environmental performance across resource usage (water and energy), transportation, waste management, overall health and wellbeing, and ecology. BREEAM's parent company, Building Research Establishment (BRE), doles out accreditation based on adherence to these standards.
- 25. Embodied carbon refers to the GHG emissions arising from manufacturing, transportation, installation, maintenance, and disposal of building materials.
- 26. Life cycle assessment, also known as life cycle analysis, is a methodology for assessing environmental impacts associated with all the stages of the life cycle of a commercial product, process, or service.
 - 27. "Aviation Decarbonization Awaits Engineering Solutions," FactSet, November 9, 2023.



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