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Breckinridge
CAPITAL ADVISORS

Case Study: Lessons from Breckinridge Capital Advisors

Methods for Integrating Water Risk into Corporate and Municipal Bond Analysis

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Institutional Investor Bottom Line

For the past several years, the World Economic Forum (WEF) has ranked water as a top global risk due to competition for dwindling resources, poor drinking water quality and weak governance. Furthermore, climate change is exacerbating many water-related challenges. In the western U.S., where the availability of water supply varies widely and dramatically, “precipitation whiplash” creates infrastructure planning challenges and will become increasingly common over the next few decades as climate change’s effects intensify.¹ Precipitation whiplash is characterized by cycles of severe drought followed by periods of intense precipitation that can strain dams, bridges and transportation networks.

Another area of concern is the overuse of water to meet agricultural demand. In certain regions, such as the Central Valley of California, farmers pump water from aquifers to irrigate crops. A substantial decline in water stored in an aquifer can lead to land subsidence, during which the ground surface gradually sinks - in some cases by multiple feet.² Subsidence can reduce property values and is harmful to economic growth, creating credit pressures for both corporate and local government borrowers. Furthermore, public infrastructure such as roads and aqueducts damaged by subsidence must be rebuilt, requiring substantial allocations of taxpayer dollars that could otherwise be invested in climate adaptation projects or essential public services such as schools or health care.

How Breckinridge Approaches ESG Investing

Breckinridge Capital Advisors incorporates environmental, social and governance (ESG) factors into investment decisions and the research process to discover potential risks that may not be obvious from bond issuer financial statements. We believe this approach to ESG investing is more comprehensive than traditional financial analysis and puts additional rigor in our credit assessments.

The investment team embeds ESG criteria into bottom-up research for corporate and municipal bond issuers being considered for purchase. For each bond issuer analyzed, analysts aggregate metrics from ESG research providers and other third-party sources, along with qualitative ESG research conducted by the Breckinridge research team. The resulting analysis offers an overall view of an issuer’s ESG performance, which could ultimately alter the analyst’s overall credit opinion of the issuer and affect a trader’s decision on whether to purchase the bond.

Breckinridge also offers a range of sustainable strategies that emphasize ESG factors. For sustainable municipal portfolios, investments are limited to municipalities with above-average ESG profiles based

¹ Report: *Climate Change is Driving Precipitation “Whiplash” in California*; Lohan, Tara; Water Deeply; April 23, 2018. Available here:

<https://www.newsdeeply.com/water/articles/2018/04/23/report-climate-change-is-driving-precipitation-whiplash-in-california>

² By 1970, significant land subsidence (more than one foot) had occurred in about half of the San Joaquin Valley, or about 5,200 square miles (Poland and others, 1975), and locally, some areas had subsided by as much as 28 feet. As noted here:

https://www.usgs.gov/centers/ca-water-ls/science/land-subsidence-san-joaquin-valley?qt-science_center_objects=0#qt-science_center_objects

on the assessment of the research team. For sustainable taxable portfolios, investments are made in corporate and taxable municipal bonds with above-average or improving ESG profiles, as well as in bonds issued to finance sustainable projects.

How Breckinridge Integrates Water Risks Today

As an ESG-focused investment manager, Breckinridge is attentive to water risk and the implications for the creditworthiness of municipal and corporate borrowers.

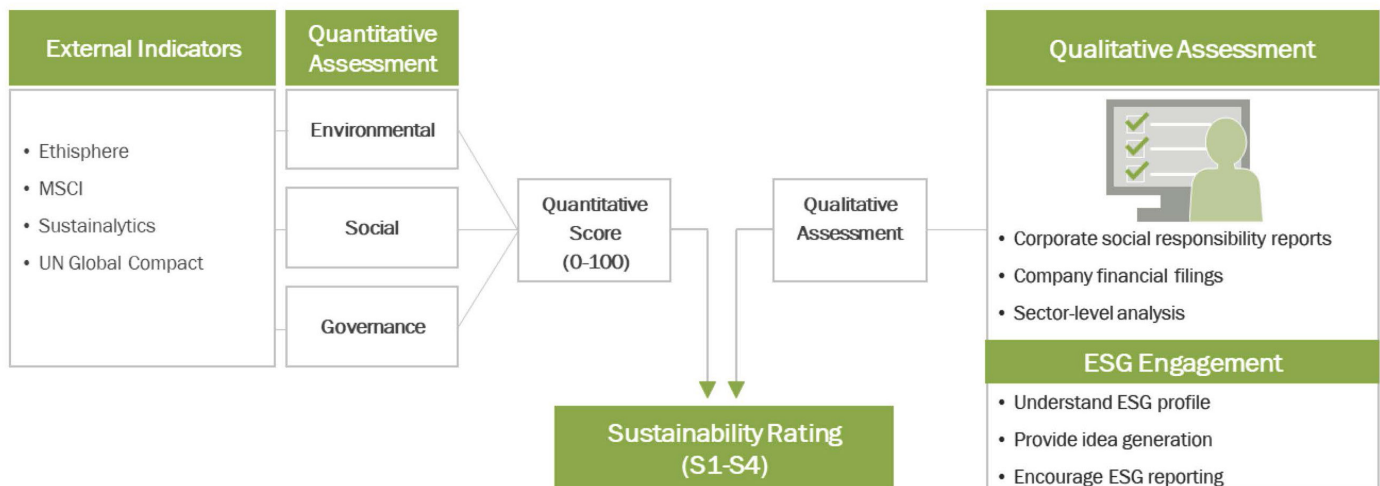
Corporate & Municipal Bond Issuers

For corporations, analysts examine criteria identified by the Sustainability Accounting Standards Board (SASB) to determine whether water risk is material to a specific company or industry. For example, water use is considered a material ESG issue for the oil and gas exploration and production sector. Once materiality is determined, analysts closely monitor a company’s performance on material ESG issues and review its corporate sustainability reporting to ascertain a company’s water consumption. Analysts also consider whether a goal has been set to reduce water use and/or develop supply through reclamation initiatives. In addition, analysts will assess a company’s performance in comparison to its peers if data is available. An overview of the Breckinridge corporate ESG approach is provided in Figure 1.

Figure 1

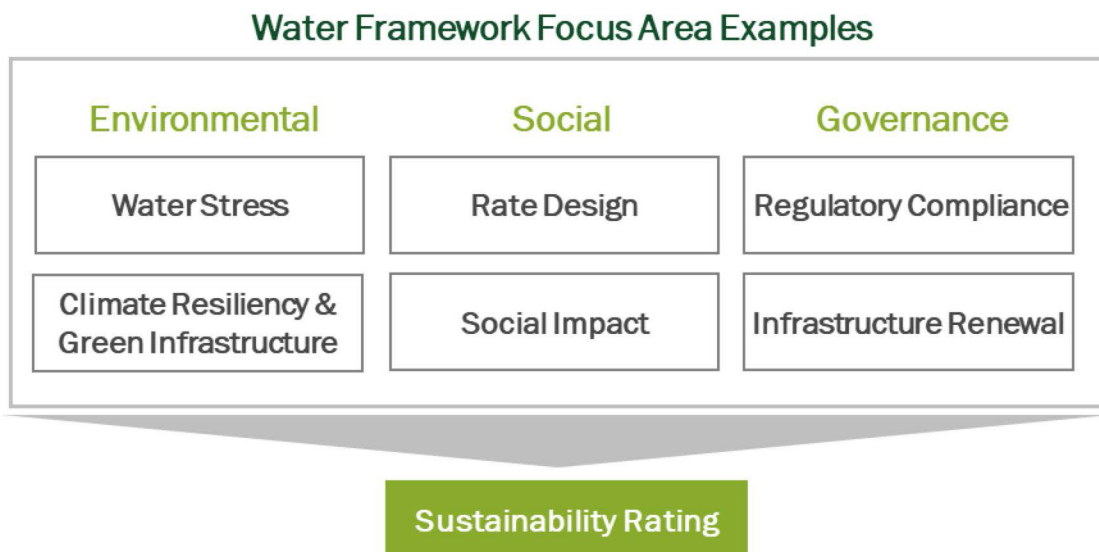
Corporate ESG Research Approach

Our ESG integration methodology combines a quantitative assessment of ESG factors alongside a rigorous review of qualitative ESG considerations to derive a composite sustainability rating



For municipal issuers, water risk criteria are incorporated into our proprietary, sector-specific ESG frameworks, where material. When reviewing local governments, Breckinridge seeks to evaluate a community's vulnerability to water-related hazards such as extreme rainfall and rising sea levels. For municipal water utilities, Breckinridge evaluates the issuer's susceptibility to drought and flood, as well as investments in climate resilient infrastructure. We also consider customer rate design to gauge how well a utility is managing rate affordability and incentivizing sustainable water use. Please see Figure 2 for an overview of our framework for evaluating ESG risks for municipal water utilities.

Figure 2



Water risk factors, along with other ESG indicators, are aggregated to generate a sustainability score for all corporate and municipal bond issuers. When assigning a sustainability rating for each issuer, Breckinridge analysts consider the sustainability score as well as other relevant qualitative considerations, including important and material takeaways from engagement discussions. The sustainability rating may influence the internal credit risk evaluation for the issuer and is used to determine eligibility for Breckinridge's sustainable bond portfolios.

Engagement

Breckinridge engages with corporate and municipal bond issuers for three primary reasons:

- (1) To supplement our qualitative ESG research;
- (2) To provide an investment idea generation platform for our analysts; and
- (3) To advocate for better disclosure of material issues, including the adoption of SASB standards for corporations.

The takeaways from these engagement discussions are summarized in reports that are accessible to investment team members.

In 2018, Breckinridge's municipal research team spoke with 28 U.S. cities about their sustainability initiatives. Our analysts inquired about water-related issues when they were identified as a material credit factor. From our engagement with the city of Milwaukee, we learned that the city strives to become a global leader in sustainable water management in part due to its desire to protect its access to valuable fresh water from Lake Michigan. Discussions with other cities revealed that the business community is increasingly attuned to water risks. For example, the city of Las Vegas mentioned that companies considering relocation to the area frequently inquire about the reliability of long-term water supplies. This suggests that cities in arid regions that fail to take proactive steps to address water scarcity concerns may have difficulty expanding or retaining a strong local employment base. In recognition of this and other risks, Las Vegas cut water use over an eight-year time period through 2016.^{3 4}

Future Ideas and Directions

The ESG landscape has evolved tremendously since 2011, when Breckinridge first integrated ESG issues into its investment process and launched its sustainable bond strategies. ESG integration has spread widely throughout the investment community, while companies and municipalities are increasingly building sustainability concepts into their long-term planning. A lot of progress has been made, but there is certainly more work to be done.

For corporations, we look forward to broader adoption of the SASB reporting framework. If all companies across an industry were to provide the same SASB-recommended water disclosures, investors would be much better prepared to perform comparative ESG analysis.

Municipal analysts are increasingly incorporating sustainability considerations to better gauge the risks facing local governments and water utilities. To that end, the National Federation of Municipal Analysts' **Recommended Best Practices in Disclosure for Water and Sewer Bonds** was updated in April 2018 to include sustainability-related indicators. As with our hope for growing corporate adoption of SASB recommended sustainability topics, we are hopeful that municipal water utilities will include newly endorsed measures such as water loss rates (amount leaking from pipes) and strategies for watershed protection in their bond offering documents.

Moody's Investors Service, S&P Global Ratings and Fitch Ratings are increasingly integrating ESG factors, including water risk, into credit ratings. Importantly, all three bond rating agencies have become more transparent about their approaches and have published work describing how and when ESG factors are material to credit risk. We believe rating agencies' heightened focus on these issues will encourage corporations, local governments and utilities to be more proactive in planning for water-related ESG risks.

³ For more information about Breckinridge's municipal engagement work, please see our white paper available here: <https://www.breckinridge.com/insights/details/municipal-engagement-yields-additional-insights/>

⁴ Las Vegas water conservation efforts are articulated on the city's website here: <https://www.lasvegasnevada.gov/Government/Initiatives/Sustainability/Sustainability-Resources?tab=0>

Considerations for Investors Just Starting to Look at Water Risks

As ESG adoption continues to grow, water issues are becoming increasingly important factors for the investment community to consider. Whether you are an investment advisor just getting interested in ESG issues, or a large institutional investor with an established ESG policy, water risk should be viewed as not only an environmental concern, but also as a financial imperative.

It is helpful to think locally. While water is a macro issue that impacts communities across the globe, localities face unique sets of challenges. For example, agricultural communities in the U.S. Midwest must consider water intensity in crop selection, while also addressing heightened flood vulnerability. At the same time, coastal communities in Florida are grappling with toxic algae blooms and rising ocean levels. To mitigate investment risk, it is important for investors to remember that solutions to water-related challenges will vary, as will the local community capacity to apply them.

For More Information

To learn more about how investors navigate and engage on water and climate risks in municipal bonds, visit the **Investor Water Toolkit** and **U.S. Municipal Bond Water Risk Cheat Sheet**.

To better understand where water risks are relevant for corporate issuers, visit Ceres' analysis of **SASB water materiality indicators** and **SASB's Materiality Map**.

To listen to a recent webinar featuring the city of Milwaukee's approach to water management, visit **Protecting Our Great Lakes: The Great Water Challenge & Opportunity for Investors and Policymakers**.



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Ceres is a sustainability nonprofit organization working with the most influential investors and companies to build leadership and drive solutions throughout the economy. Through our powerful networks and advocacy, we tackle the world's biggest sustainability challenges, including climate change, water scarcity and pollution, and human rights abuses.