New England States GFOA: ESG Credit Factors for New England Issuers

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S&P Global Ratings
What is ESG in the Municipal Market? An Overview

How ESG factors affect an issuer's credit rating including disclosure requirements

Credit Analysis

Investing

$*

Sustainability

ESG investment mandates, dedicated exchange traded funds (ETFs) and indices, and Impact investing

Labeled bonds and general entity specific sustainability modifications (i.e. fleet updates to electric vehicles)
S&P Global Ratings
How We Consider ESG Risks and Opportunities?
ESG Risk and Opportunities: Within our Criteria Frameworks

Through the ESG Lens 2.0: A Deeper Dive into USPF Credit Factors

- Provided an overview of our primary criteria frameworks and where ESG risks and opportunities are considered most prevalent
- In some cases, ESG risks and opportunities are material based on the weight within the criteria framework and the overall analytical outcome
- ESG risks and opportunities may become material when crystalized through an event
ESG Credit Factors and Credit Risk

Examples Of Key ESG Credit Factors

**Environmental factors**
- Climate transition risks
- Physical risks
- Natural capital
- Waste and pollution
- Other environmental factors

**Social factors**
- Health and safety
- Social capital
- Human capital
- Other social factors

**Governance factors**
- Governance structure
- Risk management, culture, and oversight
- Transparency and reporting
- Other governance factors

The Intersection Of ESG And Credit

ESG—Environmental, Social, and Governance. Source: S&P Global Ratings. Copyright © 2021 by Standard & Poor’s Financial Services LLC. All rights reserved.
Where Is Climate Risk Evaluated in our Ratings Criteria?

1. Overall focus on management effectiveness and planning
2. Sectors have unique E-risks that apply to their assets or revenue sources that secure debt service obligations
3. Often a qualitative assessment although incorporating data to inform our analysis is on the horizon

<table>
<thead>
<tr>
<th>Municipal Sector</th>
<th>Sector Specific E-Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water/Sewer Utilities</td>
<td>Drought planning/water quality</td>
</tr>
<tr>
<td>Electric Utilities</td>
<td>Carbon fuel concentration and transition risks/supply diversity</td>
</tr>
<tr>
<td>State &amp; Local govt Transport/Education</td>
<td>Financial &amp; Capital planning for adaptation &amp; mitigation</td>
</tr>
<tr>
<td>Housing/Healthcare</td>
<td></td>
</tr>
<tr>
<td>All Sectors</td>
<td>Potential impacts to property values</td>
</tr>
</tbody>
</table>
Where Is Social Risk Evaluated in our Ratings Criteria?

1. Demographic factors underpin social risk for most sectors in USPF
2. S-risks typically will point to revenue raising flexibility or economic activity (strengths or weaknesses) that support or hinder an issuer’s ability to meet operational, infrastructure, and debt service obligations
3. Often a qualitative assessment although certain data helps inform our analysis

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<tr>
<td>Water/Sewer Utilities</td>
<td>Affordability of monthly utility bill when compared with county level income data</td>
</tr>
<tr>
<td>State &amp; Local Govt</td>
<td>Population trends, dependent population, GDP as % of the U.S.</td>
</tr>
<tr>
<td>Education/Higher Ed</td>
<td>Enrollment trends and underlying issues that might be factored into increases or declines (ex. Birthrates, state population trends)</td>
</tr>
<tr>
<td>Transportation</td>
<td>Service area economic fundamentals that underpin demand</td>
</tr>
</tbody>
</table>
Where Is Governance Risk Evaluated in our Ratings Criteria?

1. Overall focus on management effectiveness and planning

2. Good Governance can mitigate our view of other E and S risks

3. Most of our criteria frameworks include a management or management and governance assessment

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<td>Municipal Sector</td>
<td>Sector Specific G-Factors</td>
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<tr>
<td>Higher Education</td>
<td>Headline Risk, Board Effectiveness, Accreditation Issues</td>
</tr>
<tr>
<td>State Governments</td>
<td>Pension and OPEB plan governance (ex. Conservative vs Aggressive assumptions)</td>
</tr>
<tr>
<td>Local Governments</td>
<td>Long term Financial &amp; Capital planning (ex. Capital planning that includes infrastructure projects for mitigation &amp; resiliency)</td>
</tr>
<tr>
<td>Health Care</td>
<td>Broad Strategy and Execution of Mergers and Acquisitions</td>
</tr>
</tbody>
</table>
ESG Risks and Opportunities for New England Issuers

Environmental

Acute: Extreme Weather/Flooding
Chronic: Long-Term Sea Level Rise

Social

Demographics
Affordability

Governance

Risk management (Pensions and OPEB)
State oversight of distressed entities

S&P Global Ratings
S&P Global Ratings
Transparency Efforts

S&P Global Ratings
Summary:
Vermont; General Obligation; School State Program

Environmental, social, and governance factors
In our opinion, the state is also exposed to some social risk through its demographic profile. The U.S. Census Bureau reports Vermont ranks among the oldest populations in the nation. In S&P Global Ratings’ view, older-aged states reliant on older and higher-income households are more likely to experience revenue declines, in part the result of falling incomes at retirement. On the whole, S&P Global Ratings considers managing demographic trends a long-term factor affecting the credit quality of state governments and an important part of its holistic analysis of state credit quality.
ESG Paragraphs in Issuer-Level Research

RatingsDirect

Summary:
Scituate, Massachusetts; General Obligation

Environmental, social, and governance factors
Our rating incorporates our view regarding the indirect risks posed by the COVID-19 pandemic. Absent the implications of COVID-19, we consider the town's social risks in line with those of the sector. We view Scituate’s governance risks as being generally in line with those of peers, although pension funding discipline and assumption choices will likely lead to elevated costs for the town. Environmental risks are higher than average for the sector, in our opinion, due to the town's coastal location. To this end, Scituate has been proactive in formalizing governance and planning for its coastal sustainability and resilience, which we believe will enable it to partially mitigate potential associated financial pressures over the longer term.

E-Credit Factor:
Physical risks
Summary:
New Haven, Connecticut; General Obligation

Environmental, social, and governance factors
We view New Haven’s environmental risks as in line with the sector as a whole, as we believe management remains proactive in hardening community infrastructure and seeking state and federal grants to reduce its exposure to coastal flooding and rising sea levels along its coastline. However, we consider New Haven to have elevated social risks relative to the sector due to dual challenges of generally high service levels, and uneven growth in its economic base and a large amount of tax-exempt public and institutional properties. These factors partly contribute to the city’s historically high reliance on state aid support and constrains the affordability of tax increases for residents, which could pose long-term budgetary risks, although we believe the city has facilitated economic and tax base expansion opportunities to help manage these risks. Lastly, we view the city’s governance risks as above the sector given its challenges related to managing growth in fixed costs, including its low-funded pension and OPEB plans, which pose a long-term risk to its financial and debt profiles.
ESG Brief: Emerging Themes in U.S. Public Finance

What We’re Watching

Analytical Considerations – Social Justice

State and local governments
Our analytical approach reviews management’s long-term planning strategies for a variety of social issues, including policing policies and affordable housing programs. In addition, if the government is experiencing an upturn in social unrest, we analyze budgets for the inclusion of higher public safety costs or if reserves or insurance coverage are sufficient to offset potential legal settlements.

Water and sewer utilities
Our analysis includes a review of the rate structure within the context of community demographics to determine potential affordability constraints that could pressure an entity’s rate-making flexibility.

Kindergarten to 12th-grade schools
Our discussions with management teams will often focus on what program and curriculum changes may be required to address vulnerable populations. In addition, operational risks may include state statutory changes prohibiting certain curriculum instruction with funding tied to a school’s compliance.

Not-for-profit health care
We often analyze necessary costs to address demographics from changing demographics. We also review how state and federal funding sources help support a hospital’s core mission of providing quality health care to the entire community including vulnerable populations that may be exposed to certain communicable diseases.

Housing
We may consider how potential federal legislation may affect an entity’s credit profiles as well as how entities are planning for the phase-out of eviction moratoriums and forbearances implemented during the pandemic to protect vulnerable populations.

Analytical Considerations – Acute Physical Risks

Electric cooperatives and municipal-owned public utilities
Our analysis considers fuel redundancy in the event of demand spikes during extreme hot or cold weather and whether dedicated reserves or other hedging practices are in place to cover higher fuel costs following an event.

Water and sewer utilities
Within our OMA, we consider the utility’s drought planning efforts and whether it has identified alternate water supply in the face of limited sources.

State and local governments
A comprehensive risk management strategy through mitigation efforts should be included in long-term financial and capital planning. In addition, a discussion about modified development codes to require certain materials that are more resilient against a severe weather event may also inform our analysis.

Not-for-profit health care and higher education
In our analysis, we consider geographic diversity of assets and procedures to ensure the safety of patients or students in the event of power loss or other facility disruption. For entities in certain regions, we also analyze the efforts undertaken to harden infrastructure assets in anticipation of extreme weather events or earthquakes.

Transportation
Capital infrastructure investments planned to protect assets from extreme weather events and flooding are part of our management and governance assessment. In addition, we may ask if the airport has prepared a sustainability plan that addresses changing environmental conditions and how these assumptions are incorporated into long-term asset management and operational planning.

Housing
Our analysis evaluates the exposure of real estate assets to extreme weather and seismic events and the extent to which those risks are mitigated.
ESG Brief: Cyber Risk Management in U.S. Public Finance

What We’re Watching

Prepare
- Identify areas of risk
- Protect assets and data

Respond
- Detect and respond to an attack

Recover
- Recover data
- Maintain sufficient liquidity
- Disclose attacks

Analytical Considerations – Issuer Preparedness

All USPF sectors
Issuers unable to properly identify cyber-event risks could encounter significant delays in stopping or recovering from an attack, leading to service disruption, additional liabilities such as ransomware payouts or legal issues from data breaches, or other negative effects that could cause rating pressure. Certain sectors face additional heightened risk if they fail to thoroughly assess their risks and create an action plan to follow should an attack occur.

Electric cooperatives and municipal-owned public power utilities
Given the interconnected nature of the electric grid in the U.S. and its status as both critical infrastructure and highly vulnerable to a sovereign-backed cyberattack, we expect a robust understanding of digitized systems that could be targeted and the downstream impacts an attack could have on operations. This includes understanding if smart grids are vulnerable to shared risks with state or local governments, or if assets operate on separate networks.

Water and sewer utilities
Water and sewer utilities are at risk on two fronts: infiltration of operations and potential hijacking of customer account information or municipal financial records. With the precedent set for cyberattacks that can threaten the safety of water supply, we expect water utility operators to understand the risks presented by digitalization of services and operations, with sufficient protective measures in place to prevent life and safety risks following an attack. Failure to do so could lead to significant operational and legal costs, pressuring ratings. Furthermore, industry best practices generally specify that utility operations not be connected to the outside world to limit the risk of an intrusion.

Not-for-profit health care
With significant amounts of personally identifiable information and medical information subject to HIPAA privacy laws, we expect issuers to have a thorough understanding of remote devices and a formidable cyber defense strategy. Failure to have a proper cyber defense strategy and data-management procedures in place is of particular concern for hospitals and health systems as this not only increases the risk of contingent liabilities stemming from data breaches but also jeopardizes the health and safety of patients.

Higher education
Due to the amount of personally identifiable information collected and retained through the admissions process, fundraising, and the conduct of sensitive research, cyber criminals often view higher education institutions as rich targets. In addition, the huge number of devices on college and university information technology networks creates an expectation that those issuers have processes in place to manage those assets in a secure manner as students and faculty join and leave the system frequently. We believe a well-defined threat matrix is crucial to the identification of information that could be at risk from a targeted attack.

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Management and forward-looking risk mitigation practices can help stabilize credit quality in the face of emerging risks or disruptions (like a pandemic).
S&P Global Ratings
RFC for ESG Principles Criteria
ESG Credit Factors and General Principles of Credit Ratings

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- Governance structure
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Principle One
Our long-term issuer credit ratings do not have a pre-determined time horizon.

Principle Two
The current and potential future influence of ESG credit factors on creditworthiness can differ by industry, geography, and entity.

Principle Three
The direction of and visibility into ESG credit factors may be uncertain and can change rapidly.

Principle Four
The influence of ESG credit factors may change over time, which is reflected in the dynamic nature of our credit ratings.

Principle Five
Strong creditworthiness does not necessarily correlate with strong ESG credentials and vice versa.

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Questions?
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