Through The ESG Lens 3.0: The Intersection Of ESG Credit Factors And U.S. Public Finance Credit Factors

March 2, 2022

Key Takeaways

- S&P Global Ratings incorporates environmental, social, and governance (ESG) risks and opportunities into the credit rating analysis of U.S. public finance (USPF) entities based on factors embedded in our sector-specific criteria.
- ESG credit factors can materially influence the creditworthiness of a rated entity or issue when we have sufficient visibility and certainty to include in our credit rating analysis.
- Our long-term credit ratings do not have a pre-determined time horizon and ESG credit factors incorporate qualitative and quantitative analysis to determine materiality within our credit rating analysis.
- Even as additional data become available, reflecting ESG risks and opportunities within our credit rating analysis will require a qualitative view of an entity's capacity to anticipate and plan for a variety of emerging risks that could disrupt its credit fundamentals.
- We have updated this sector-by-sector analysis originally published in April 2020 to provide additional insight on how ESG credit factors intersect with aspects of our criteria frameworks shown throughout this article. The examples are not exhaustive and represent where the risks could be most material to our credit rating analysis.

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S&P Global Ratings has a long record of incorporating ESG factors into its credit rating analysis of entities. To provide additional transparency highlighting how the most relevant ESG factors affect an entity's creditworthiness, we added dedicated ESG paragraphs to our issuer-level credit reports beginning in April 2020 and published our criteria "Environmental, Social, And Governance Principles In Credit Ratings," on Oct. 10, 2021. We also regularly update our views regarding how ESG risks and opportunities affect our credit ratings analysis in commentaries (see "ESG In U.S. Public Finance Credit Ratings: 2022 Outlook And 2021 Recap," published Nov. 29, 2021, on RatingsDirect).

ESG Credit Factors Intersect With USPF Credit Factors

We believe public entities and not-for-profit enterprises possess unique considerations in regard to ESG credit factors, given their role as providers of safety-net social services and essential public goods, often with multilayered governance and institutional frameworks, as well as political accountability. However, having a social mission and strong ESG characteristics does not necessarily correlate with strong creditworthiness and vice versa. For example, spending by governments or not-for-profit enterprises intended to enhance social programs, increase educational offerings, expand affordable housing, improve pension funding levels, or build resilient infrastructure, can achieve an organization's public mission or mandate, enhance its long-term sustainability, and be viewed as a positive ESG characteristic. However, allocating resources to these purposes could also result in negative implications for operations and pressure financial performance that could lead to a credit rating our outlook change.

Charts 1 through 3 illustrate examples of ESG credit factors identified in our ESG Principles criteria and detailed in "ESG Credit Factors: A Deeper Dive," published Nov. 17, 2021. We have included situations that could be applicable to USPF entities and where they would be captured under ESG credit factors. Furthermore, while slight variations exist between each of our sector-specific criteria, overall, these frameworks enable S&P Global Ratings to incorporate ESG credit factors that we view as material and influential in evaluating the obligor's ability to operate and pay debt on time and in full. We identify ESG credit factors as:

Environmental

- Climate transition risks
- Physical risks
- Natural capital
- Waste and pollution

Social

- Health and safety
- Social capital
- Human capital

Governance

- Governance structure
- Risk management, culture, and oversight
- Transparency and reporting

Chart 1

Environmental ESG Credit Factors

Climate transition risks

- Costs or benefits from transitioning to net-zero away from carbon-based energy supply
- Policy or regulatory changes related to managing carbon and curtail greenhouse gas emissions

Physical risks

- Acute (i.e., increased severity of extreme weather events such as hurricanes, flooding, wildfires, and drought and their impact on water supply, economic or service areas, and facilities and/or infrastructure)
- Chronic (i.e., longer-term shifts in climate patterns including precipitation and temperature that may result in chronic heat and cold waves and their impact on water supply, economic or service areas, and facilities and/or infrastructure, as well as sea level rise)
- Natural disasters (e.g., earthquakes, tornados)

Natural capital

- Water scarcity or supply limitations that affect operations or an entity's economic base or service area
- Biodiversity and land use related to development patterns in protected or preserved areas

Waste and pollution

- Environmental considerations relative to sewer overflows; consent decrees stemming from pollution issues
- Impact of environmental regulations related to water or wastewater

Source: S&P Global Ratings.

Chart 2

Social ESG Credit Factors

Health and safety

- Demand, revenue, or expense driven changes related to health and safety events that alter social behaviors
- Emerging contaminants in water supply as well as lead and copper pipes that could affect residents in the enterprise's service area

Social capital

- Demographic and population trends that affect a government's services or demand for a not-for-profit enterprise's product or infrastructure
- Income levels, income inequality, disparity in access to services by vulnerable groups
- Affordability of services provided by an enterprise
- Political unrest stemming from community or social issues

Human capital

- Operational pressures related to renumeration, recruitment or retention of an entity's workforce
- Exposure to labor unrest or challenges and costs related to union negotiations and settlements
- Diversity and succession planning when it broadly affects a government or not-for-profit enterprise

Source: S&P Global Ratings.

Chart 3

Governance ESG Credit Factors

Governance structure

- Elected or appointed board relationship with management
- Federal/state regulatory framework
- Key person succession planning
- State government support (or lack of support) for distressed entities, typically considered as part of the Institutional Framework score for municipalities and counties

Risk management, culture, and oversight

- Vulnerable financial management assessments when it stems from pervasive budgetary imbalances or missed debt service payments
- Cyber security protocols or lack of preparation when results in operational or financial impacts
- Pension/OPEB plan governance related to legal flexibility to modify benefits, adherence to a control framework that controls the liability funding schedule
- Headline risk: self-inflicted corruption and mis-dealings, adverse publicity that results in reputation risk or operational pressure

Transparency and reporting

- Adherence to reporting standards as identified in policies and practices
- Transparency of information provided to stakeholders related to key decision making
- Lack of statutory requirements for certain types of accounting standards that results in credit weakness or transparency concerns

Source: S&P Global Ratings.

Governance: integral to our analysis

Although governance is an integral component of our analysis, not all management decisions are considered within the scope of the "G" in our view of ESG in credit ratings. For example, while management decisions can positively or negatively influence credit quality and financial performance, the positive or negative outcomes of day-to-day decision-making is typically not considered a governance risk across USPF. Ultimately, our assessment of management's decision-making will be guided by its ability to avert financial deterioration to ensure the payment of debt service in full and on time while facing other environmental and social risks.

ESG credit factors are incorporated into all elements of our criteria frameworks and analysis; below, we more explicitly identify where they could most likely affect the credit rating outcome. Although not highlighted below, these and other ESG credit factors can also influence our credit rating cap and override decisions, particularly if one is applied as an outlier within the sector.

States And Local Governments

ESG credit factors can influence a government's capacity to serve its population, respond to service demands, or ensure physical resilience from the acute and chronic effects of climate change. These, in turn, can affect long-term fiscal sustainability, economic development efforts, and the ability or inability to implement revenue enhancements when necessary. Because public finance issuers provide essential services and infrastructure, many ESG credit factors are fundamental to and embedded into our credit rating analysis and are often key credit determinants in our credit rating outcomes. As a result, we incorporate ESG credit factors in nearly all aspects of the criteria frameworks. Certain elements within each criteria framework may be more heavily influenced by ESG credit factors, particularly when considering the difference in size between a state and local government's economy, budget framework, and nominal level of reserves. For example, although a state and a local government may each issue a significant amount of debt to rebuild roads, facilities, or other assets following a severe weather event, a local government's debt profile may deteriorate more significantly resulting from the localization of damage and lead S&P Global Ratings to reconsider the credit rating or outlook. Furthermore, in some cases a local government's economy may be more negatively affected by its location and exposure to climate transition risk or physical risks like forest fires or coastal flooding, whereas a state's economic diversity and large physical boundary may allow it to better absorb a ESG risk without an impact on its credit rating. Therefore, the ESG factors represented in charts 4 and 5 differ slightly from each other when considering the impact the risks have on our rating outcomes.

Environmental

Bound by geography, public entities are on the front lines of responding to extreme weather events, natural phenomena, rising sea levels, and other environmental and climate-related physical risks. Our opinion of management's long-term planning and preparation, risk assessments, and insurance coverage are primarily represented in our management, budgetary performance, and debt and liability assessments. All aspects could be constrained by environmental risks or we may view very strong management and planning activities as mitigating these risks. For example, given the size and scope of a state's budget and relative autonomy to manage expenditures while maintaining substantial financial flexibility, it is generally well positioned to absorb costs associated with acute and chronic environmental risks.

Social

S&P Global Ratings incorporates social capital factors to inform its economic and demographic analysis, a key rating input, as well as the service needs of a given dependent population. We evaluate per capita income, household income, and other measures of wealth and income equality that affect changes in demand for services and economic activity which, in turn, influences financial performance. The interplay between income levels and affordability of tax rates influences the ability of the government to support operations and meet capital needs. Exposure to political unrest and crime rates is also a consideration in our evaluations of economic drivers to financial metrics and are typically captured under social capital related to a government's relationship with its community.

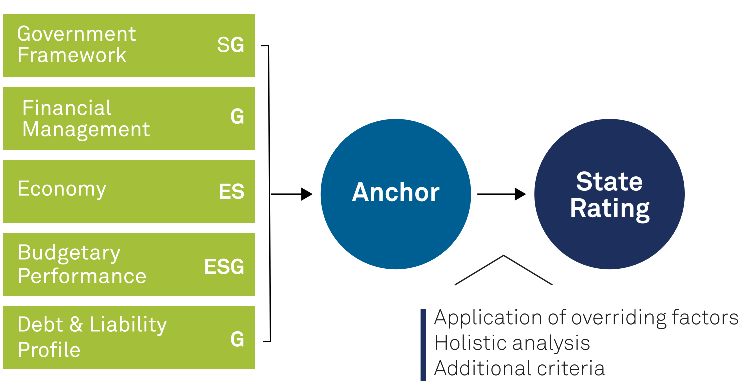
Demographic trends have also led to human capital challenges for governments related to retirements and the ability to recruit and retain employees in the face of competition with the private sector. Labor shortages, whether they are acute or long-term, could lead to higher renumeration costs that could require management teams to implement additional strategies to maintain budgetary balance.

Governance

Beyond the policy setting, a key factor we examine with governments is how management teams balance sometimes competing interests between achieving the government's mission and prudently using public resources. For example, we include governance of pension liabilities and other postemployment benefits as a primary risk for governments in public finance, particularly because escalating contribution costs can crowd out other financial resources available to support ongoing operations or debt obligations. We believe management's inability to contain the liability or balance increasing contributions is a long-term credit risk and illustrates poor risk management and failure to develop a strategy to support long-term budgetary balance. Conversely, management's proactive approach to funding or modification of plan assumptions can support our view of strong governance.

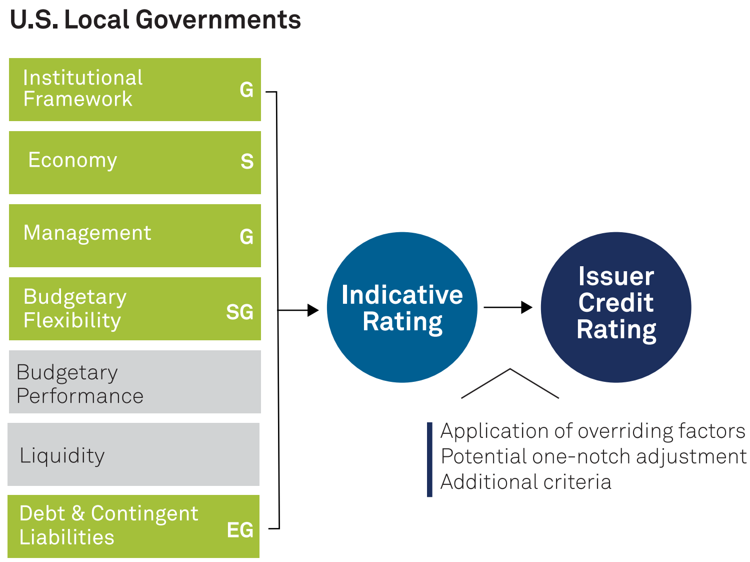
Chart 4

U.S. States



Criteria: U.S. State Ratings Methodology

Chart 5



Criteria: U.S. Local Governments General Obligation Ratings: Methodology and Assumptions

Water And Sewer, Solid Waste, Public Power And Electric Cooperative Utilities

For municipal water and sewer utilities, ESG risks influence the core business operations. Considerations related to environmental risks, social capital affordability pressures, and adaptation to changing governance and regulatory demands are explicitly referenced in our criteria. The urgency to harden infrastructure to meet the rising pressures associated with climate change and other emerging risks may pressure affordability and balancing these objectives will be key to maintaining financial performance.

When viewing public power and electric cooperative utilities through the ESG lens, we focus on the emissions and byproducts of generation resources, which can negatively affect an entity's long-term operational viability and its ability to support debt obligations. Similar to governments, we reflect ESG factors in the economic fundamentals of the service area, market position, and operational and financial management assessment as well as coverage and liquidity financial metrics.

Environmental

Municipal water and sewer utilities as well as public power electric, wholesale, and cooperative utilities criteria have long evaluated exposure to environmental regulations. For electric utilities in particular, we assess the extent of a utility's reliance on carbon-intensive production and its transition to different energy resources. In addition, resource adequacy and supply diversity are environmental risks captured in our operational management assessment. Moreover, severe weather can result in damage to critical utility infrastructure.

Furthermore, natural capital risks such as water scarcity and physical risks such as wildfires and severe weather can affect the availability of or the quality of supply. These dynamics also affect wastewater facilities, increasing the likelihood of overflows, watershed issues, and operational challenges.

Social

Utilities assess the relative burden of the utility bill to household disposable income as a way of gauging the capacity to raise user rates. Within market position, we evaluate the affordability of rate increases relative to the service area economic fundamentals to determine if management has sufficient rate-setting flexibility. In addition, health and safety social risk can stem from the presence of pollutants in the water supply such as "forever chemicals." Exposure to lead and copper pipes also can create outsized health and safety risks that pressure a water utility's financial capacity should it require additional debt or expenditures to remediate the exposures. We believe safety concerns can result in a loss of confidence in its ability to effectively serve its population, which can hinder ratemaking flexibility and is a substantial risk to its operations.

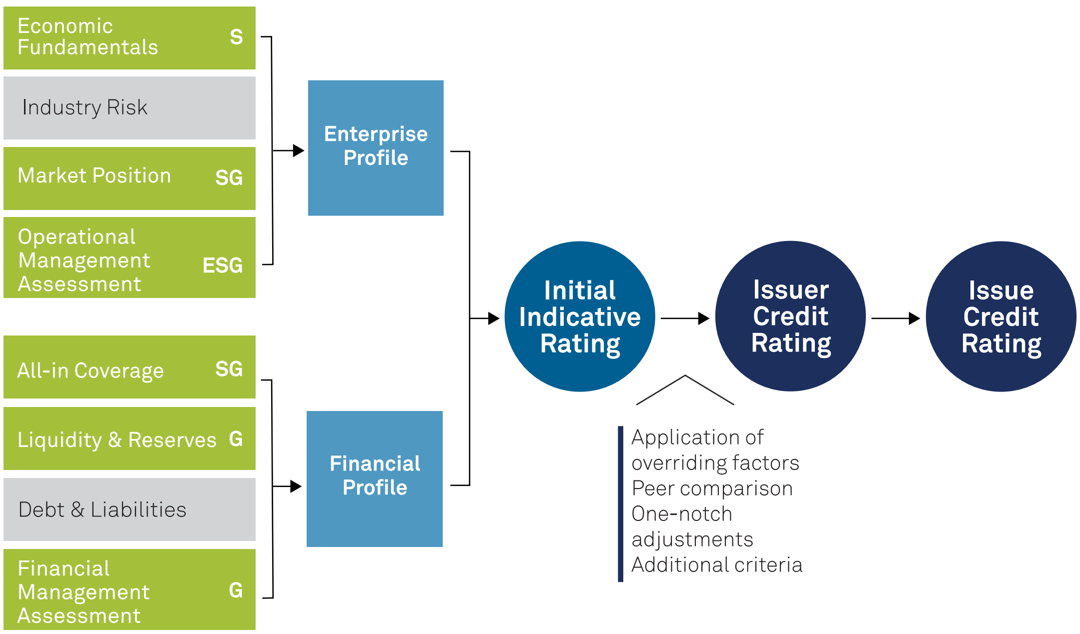
For public power and electric cooperative utilities, transitioning from conventional resources to renewable resources can impose both costs and operational challenges that create additional financial pressure for utilities and, in turn, their customers, thus further affecting affordability. Similarly, climate change could expose some power utilities and cooperatives to near and long term risks related to the safe and reliable distribution of electricity.

Governance

Given the highly regulated environment in which utilities operate, governance structure risks are prevalent within a utility's market position, operational management assessment, and various aspects of the financial profile. Evaluating asset stewardship, disaster mitigation, regulatory compliance and foresight, health and safety (quality of water supply), sufficiency of water supply (drought management planning), cyber security planning (both financial and operational), and power supply diversity can all affect a utility's ability operate efficiently and economically. In addition, transparency and reporting is a critical attribute of a utility's governance as it underscores management's credibility and can result in stronger relationships with stakeholders. Furthermore, particularly with electric utilities, reliance on coal for power supply and generation can negatively expose operations to changing regulations designed to reduce reliance on a fuel with meaningfully negative environmental attributes. In addition, because utilities generally operate as a component of a related government, we view the related government's decision to transfer cash out of the utility to support the primary government's operations as a key governance structure and risk management concern as it can deplete the utility's ability to reinvest in the system and reduces budgetary certainty.

Chart 6

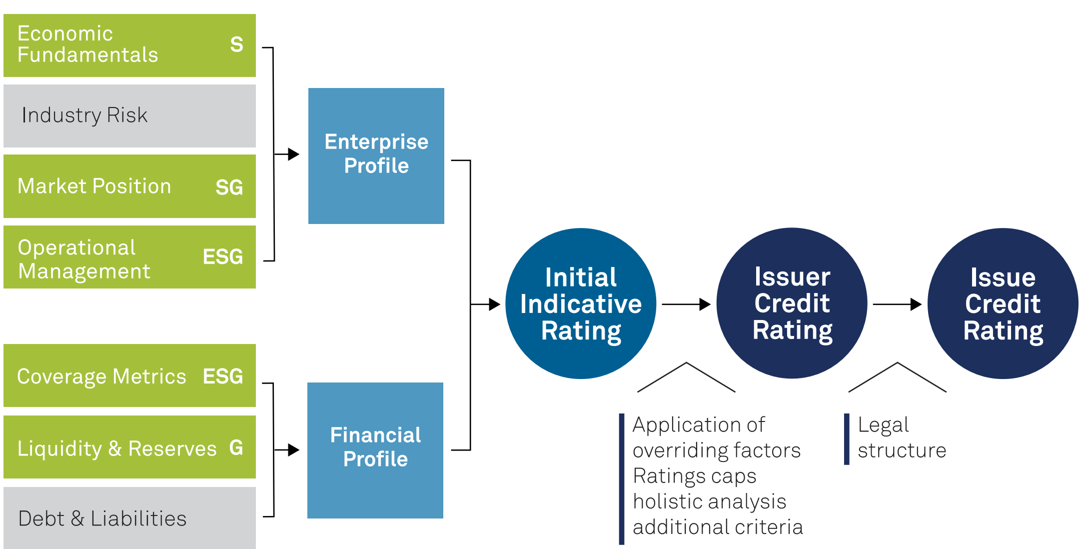
U.S. Public Finance Waterworks, Sanitary Sewer, And Drainage Systems
U.S. Solid Waste System Financings



Criteria: U.S. Public Finance Waterworks, Sanitary Sewer, and Drainage Utility Systems: Rating Methodology and Assumptions; Solid Waste System Financings

Chart 7

U.S. Municipal Retail Electric And Gas Utilities Framework



Criteria: U.S. Municipal Retail Electric and Gas Utilities: Methodology and Assumptions

Health Care

Hospital care systems and standalone facilities provide a fundamental service to U.S. residents through access to health care that is beneficial to the population as a whole. However, similar to municipal utilities, the system's or facility's economic fundamentals and market position can be positively or negatively affected by ESG credit factors, which ultimately could constrain or support its operations and financial profile.

Environmental

Generally we view concentration of facilities in an area prone to physical climate risks as exposing a facility's financial and operational performance to short- and long-term environmental risks. The lack of facility or geographic diversity can more adversely disrupt operations when acute or chronic events occur.

Social

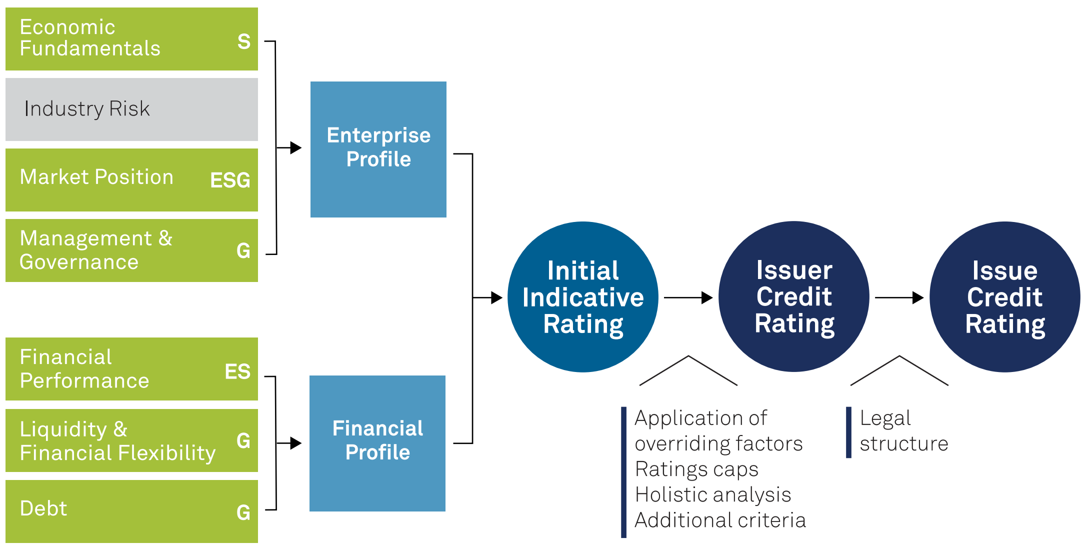
Our analysis of payor mix and service area demographics are key social factors we evaluate within market position that can affect the credit quality of not-for-profit health care enterprises. Within the sector, revenue and profitability can be constrained by an outsized reliance on government-sponsored programs, such as Medicare and Medicaid, which typically offer reimbursement rates that do not fully cover the hospital or system's cost of providing services. Aging demographics and weakness in the economy can further accentuate reliance on Medicare and Medicaid, respectively. In addition to payer mix, human capital social factors, such as the ability to recruit and retain qualified clinicians and doctors, could affect the facility's or system's ability to generate sufficient revenue to cover operations and debt obligations. For those health care entities with labor union exposure, labor strikes could impact a provider's short-term and medium-term finances if relationships between unions and management are challenged. Finally, a pandemic, such as COVID-19, can pressure a hospital's operational resources and financial performance when pivoting to serve affected patients where expenditures associated with the event crowd out other necessary or elective services. Furthermore, it can result in increased stress to the workforce, resulting in additional pressure to a hospital's overall salary and benefit expenses and weakening the overall provision of patient care.

Governance

Changes in care delivery, reimbursement models, and consumer expectations have caused hospitals and systems to reassess their strategies in order to ensure their long-term competitiveness. As a result, certain strategic initiatives and alliances and mergers can be viewed as a governance structure risk, particularly if credit quality is affected by what we view are riskier strategies. Strategies that result in exposure to a more challenged payor mix or weaker demographics without appropriate mitigants could be viewed negatively in our credit rating analysis. In addition, governance structure can affect the health care sector resulting from its highly regulated operating environment and heightened legislative attention, requiring management teams to adeptly comply with complex rules and manage their organizations in an evolving regulatory and legislative landscape. In addition, health care providers must factor cyber security risk management into their operations given the sensitive nature and the patient information they collect. Cyberattacks could expose health care providers to financial and reputational risks and will require management teams and boards to devote additional time and resources to bolster the protection of their information technology systems.

Chart 8

Not-For-Profit Health Care Systems And Standalone Facilities



Criteria: U.S. And Canadian Not-For-Profit Acute Care Health Care Organizations

Charter Schools

Charter schools face unique governance challenges given their reliance on charter standing to ensure continued operations. In addition, state-specific statutory frameworks may lead to a charter school's ability to operate effectively being either enhanced or limited. For these reasons, we view governance and social factors as higher risks than environmental for U.S. charter schools. Similar to health care and higher education institutions, charter schools face short and long-term risks associated with the location of their facilities.

Environmental

Environmental risks for charter schools are primarily captured in the location of the school's facilities. Because charter schools have boundary-based locations, we think some schools could be more susceptible to impacts from hurricanes, wildfires, or flooding, and have higher physical climate risks compared to schools not located in specific areas. Acute environmental risks associated with severe weather events can cause damage to facilities, which are usually the school's largest asset and can disrupt the day-to-day operations of a school.

Social

One of the key rating factors for charter schools is the strength of a school's demand profile. Changing demographic and population trends can represent a social capital risk or opportunity, depending on the resulting impact for school aged children that could correspond with enrollment trends. Indicators of changing enrollment and demand trends include enrollment levels, the school's reputation, retention, and waitlist as a percent of enrollment, and academic quality as evidenced by a school's statewide ranking and graduation rates.

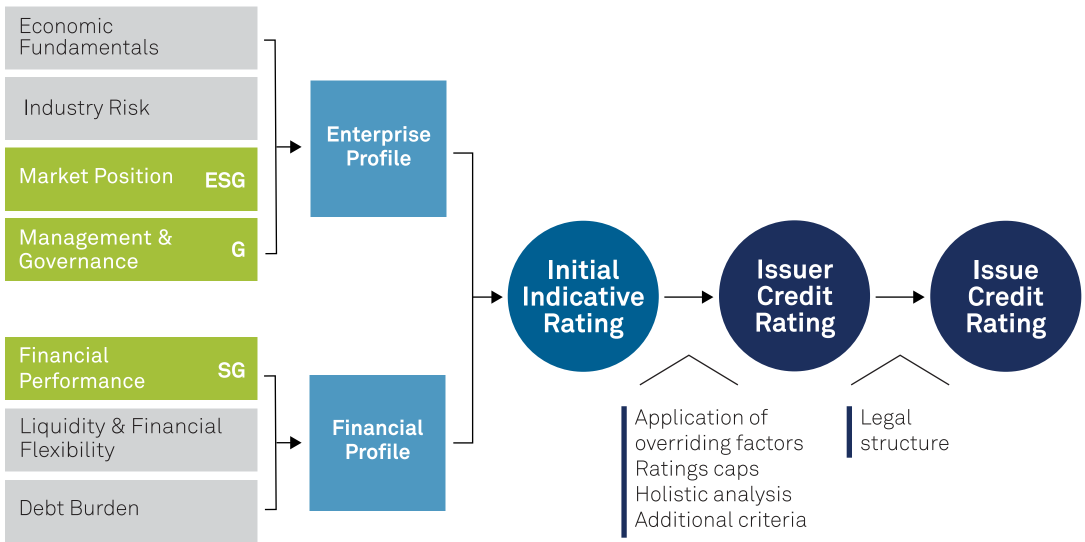
The pandemic, which we view as a health and safety social factor, has had varying impacts to our rated universe, and has led to changing educational preferences, with some charter school enrollment and demand profiles strengthening given their ability to educate in person. Other pandemic related financial considerations include increased expenses to operate safely during the pandemic as well as varying changes with per pupil funding across the country. So far, charter schools within our rated universe have not experienced human capital risks related to teacher shortages, but some schools are struggling to fill other positions such as bus drivers. If this risk accelerates, schools could face higher personnel expenses or be required to implement programmatic changes to address the shortages.

Governance

Within a charter school's market position, key charter risks can be identified through governance factors such as governance structure, risk management, culture, and oversight and transparency and reporting. We believe a school's strategic positioning, financial management, organizational effectiveness, and charter standing (as measured by charter term, charter review findings, and authorizer support) are important rating considerations. Because charter schools are required to have and to maintain a charter contract in order to operate, we believe this is a fundamental governance structure consideration. Most frequently, risks that can jeopardize a school's charter contract are deficiencies in the school's academic performance, financial management, or issues regarding reporting and disclosure. Charter non-renewal or revocation can result in a school or campus closure and cause a cessation of operations if the school is unable to secure authorization under a different authorizing institution. Furthermore, any potential reputational risk to the charter could negatively affect demand, the key social risk for charter schools.

Chart 9

U.S. Charter Schools



Criteria:

U.S. Public Finance Charter Schools: Methodology And Assumptions

Higher Education

The U.S. higher education sector provides a very important service while playing a key economic and social role by meeting national and global demand for post-secondary education and critical research. These institutions participate in a competitive and increasingly international marketplace for students with predominately social and governance factors influencing their risks and opportunities and driving credit quality.

Environmental

Similar to other boundary-based or specific asset locations, environmental risks for higher education entities are primarily captured in the location of the school's facilities. Depending on location, we think some colleges and universities are more susceptible to impacts from hurricanes, wildfires, or flooding, and have higher physical climate risks compared to schools not located in specific areas. One-time environmental risks associated with severe weather events can cause damage to facilities, which are usually an important asset and damage to these facilities can also disrupt the day-to-day operations.

While environmental risks are generally not a material ESG credit factor, we believe the sector is becoming more energy efficient, and reducing energy consumption when upgrading facilities, which can produce operational savings. While important from a climate transition risk perspective in reducing an institution's carbon footprint, these actions might not necessarily correspond with a higher credit rating. Exposure to extreme weather events or natural disasters is a physical risk for higher education globally, most damage costs are usually covered by insurance or some type of mitigation plan and are unlikely to negatively affect institutions over the long term.

Social

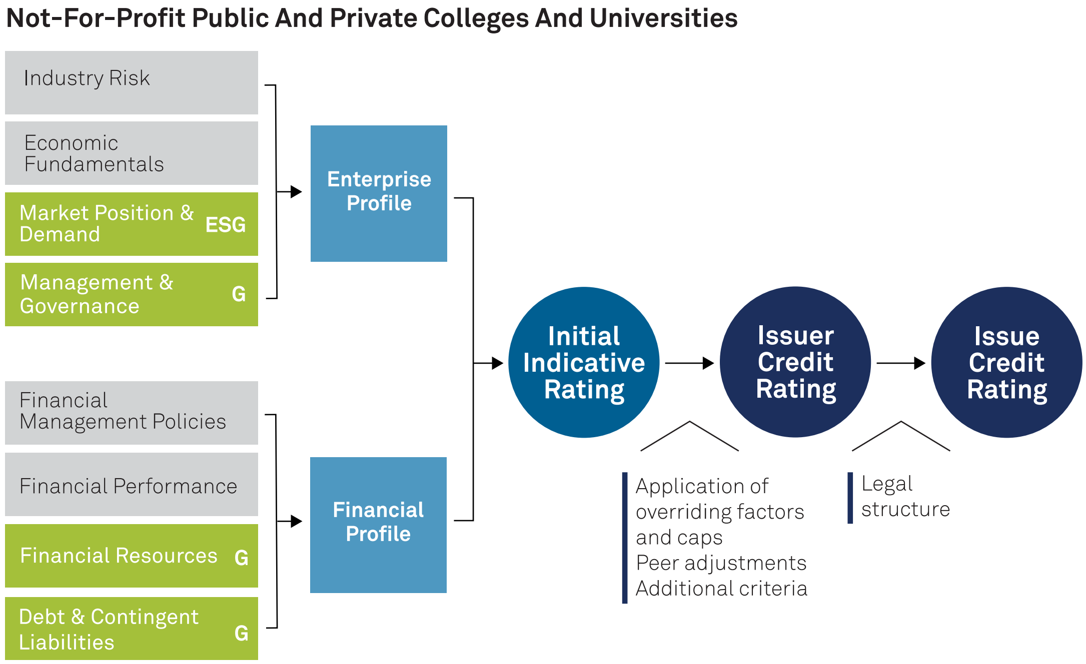
Higher education institutions are established to provide education services which we view as essential and key contributors to community cohesion, which strengthens the resilience of social opportunities for global communities. These traits often result in legislative and other forms of governmental as well as philanthropic support. Higher education institutions are also affected by social capital changes in demand and enrollment trends. Furthermore, demographic changes, affordability, policy changes, and an institution's reputation can all contribute to long-term demand and retention, matriculation, and graduation rates--all captured in an institution's market position. The education sector also faces moderate risk exposure to human capital risks given the need for skilled personnel being key in determining the education quality, sponsored research activities, and depth and breadth of academic offerings.

The higher education sector was disproportionately exposed to health and safety social risks stemming from the pandemic. The sector experienced credit rating pressure from implementation of flexible modes of instruction as well as financial impacts from lost revenue from limited campus activities or refunds driven by campus closures at the onset in 2020. Favorably, much of this financial impact has been offset with material allocations of federal funding. Finally, institutions face health and safety risks by keeping its study body safe from high impact events, that could also result in governance weaknesses if risk management practices were viewed as inadequate.

Governance

We believe an institution's market position is fundamentally affected by governance decisions or risks. For example, accreditation, fundraising capacity, and an institution's reputation that drives demand, matriculation, and retention rates, are all key aspects of the sector's ability to operate effectively and meet its debt service obligations. Furthermore, we reflect one-time scandals that have occurred in the industry typically as a risk management, culture, and oversight governance factor. While these scandals may be a low probability event, they potentially have a high and negative impact on enrollment trends that could exacerbate social risks.

Chart 10



Criteria: Not-For-Profit Public And Private Colleges And Universities

Transportation

Transportation infrastructure enterprises are public owners and operators of asset classes including mass transit agencies, airports, toll facilities, ports, and parking facilities that play a very important role in facilitating economic and social activities as part of local, regional, and often global networks. As providers or facilitators of mobility, these operators generally possess strong or monopolistic business positions within their service area, can be significant employers in their own right and benefit from strong political support but also have political accountability or oversight.

Environmental

The environmental profile of transportation infrastructure assets reflect their direct exposure to growing intensity and severity of extreme weather events as well as the indirect exposure to emissions and pollution associated with their users which collectively account for 14% of global greenhouse gas emissions. In addition, given their large footprints, transportation infrastructure providers are uniquely exposed to environmental regulations, particularly related to water, wastewater, air quality, and noise. Physical risk is a growing consideration in our analysis of infrastructure assets as a result of transportation assets' fixed locations. While airports, ports, and transit systems are likely more exposed to physical risks than other asset classes, the credit impact on airports has so far been moderate and limited as operators have taken steps to implement mitigation plans against these events.

Additionally, the implications of physical risk from extreme weather events can extend beyond the infrastructure assets and can consider the impact of the event on the region or service area. For example, when we lowered the rating on New Orleans Aviation Board by two notches on Aug. 29, 2005, following the damage from Hurricane Katrina, the rating action reflected concerns regarding the pace of recovery in the regional economy, including employment and tourism that could impact air travel demand. The airport's credit quality recovered several years later as demographic trends stabilized and financial performance improved.

Climate transition risks are important for the transport sector, but generally have a benign credit influence on infrastructure operators because emissions are mainly indirect (scope 3 under the GHG Protocol) among its users (airlines, cars, trucks, and shipping). We view exposure to scope 3 emissions from airlines as a longer-term risk for the aviation sector and will likely have the effect of reducing long-term growth rates. While this may be relevant when analyzing major capacity additions to existing airports or construction of new ones, the risk of secular change to replace the provision of services is low in our view, despite the transition to a low-carbon economy. However, mass transit entities play a crucial role in regional decarbonization efforts of their respective service areas, and the amount of general tax support provided to cover such investments underscores this importance.

Social

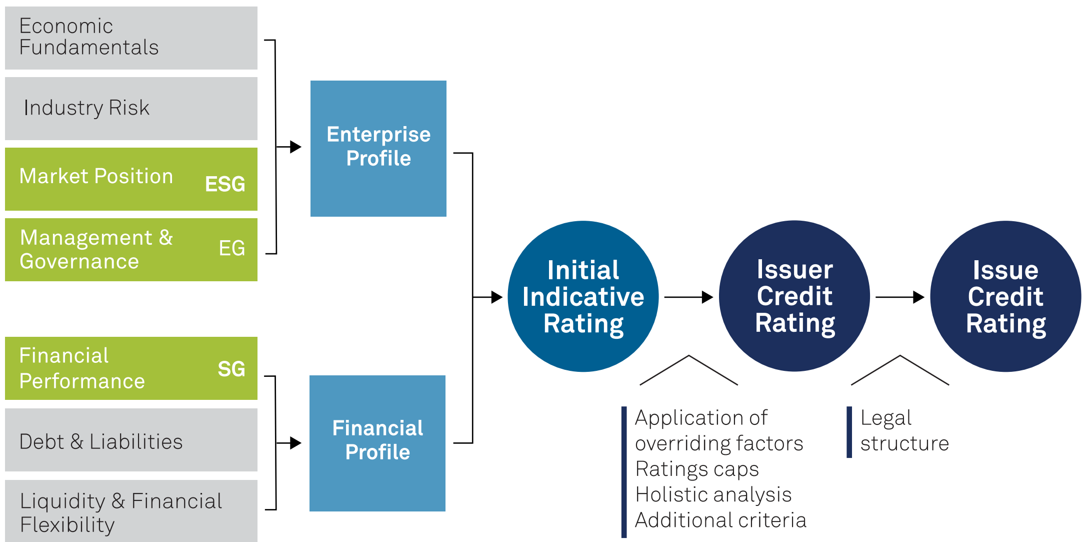
Transportation infrastructure is a heterogeneous industry that includes various subsectors with different exposures to social factors, such as health and safety, and social capital, given the impact on--and relations with--adjacent communities. Airports and transit systems face higher exposure to health and safety factors compared to other asset classes, stemming from events such as the COVID-19 pandemic, which caused many negative rating changes since the onset in early 2020. Ensuring the safety and security of employees, users and the population at-large is critical to the long-term existence of transportation infrastructure operators. They must also be responsive to user/consumer preferences, technical disruption and innovation, and broad demographic factors that affect future mobility and transportation mode choices. The acceptability and affordability of tolls, user fees, and transit fares is an increasingly important social factor, particularly when considering affordability within the context of the service area's underlying demographics. Labor relations and human capital risks including safety for employees are of critical importance, particularly for labor-intensive asset classes such as mass transit. Finally, transportation infrastructure is often a target of various shocks across the ESG spectrum including cyberattacks (governance), physical disruptions (environmental), and low probability but high severity accidents or acts of terrorism (social).

Governance

We view the regulatory framework and political environment that transportation enterprises operate within, as well as federal policy actions as governance structure risks. Airports and transit operators receive significant grant funding to support operations. Changes in these state and federal programs could substantially affect how transportation enterprises fund operations and infrastructure investment. Furthermore, management's rate-setting autonomy and ability to implement timely rate adjustments is a governance factor we evaluate within the context of an enterprise's market position and financial performance. Finally, given the operational risks inherent with transportation enterprises, we believe management's technical expertise, tenure, sophistication, and succession planning efforts are instrumental to ensure the long-term viability of the enterprise.

Chart 11

Not-For-Profit Transportation Infrastructure Enterprises



Criteria: U.S. And Canadian Not-For-Profit Transportation Infrastructure Enterprises: Methodologies And Assumptions

Housing Finance Agencies And Social Enterprise Lending Organizations, Social Housing Providers, Federally Enhanced Housing Bonds, Single-Family Whole Loan Bonds, And Rental Housing Bonds

The housing sector includes a range of both organizations and asset backed securities that provide a key economic and social need for the U.S, providing stable housing options by financing or operating affordable housing. Like many other sectors, we reflect ESG credit factors in our assessment of economic fundamentals, market position, operational risk, program management, management and governance, as well as our evaluation of the quality of the assets, coverage, and liquidity. In addition, in cases where our sector-specific criteria allows, we may reflect ESG credit factors in a holistic adjustment to the initial anchor.

Environmental

Across our housing criteria, the main environmental risk is a concentration of loan portfolios and pools or projects in an area or community where known environmental or climate-related risks exist (e.g. extreme weather events, sea level rise, forest fires). The potential lack of asset diversity exposes the portfolios or projects to credit and liquidity deterioration should an event occur. Furthermore, for rental housing bonds, unmitigated environmental risks could affect the long-term viability of the projects. Finally, for single-family whole loans, environmental risks could affect the quality of assets reviewed and assumptions that could negatively affect S&P Global Ratings' cash flow analysis and rating outcome.

Social

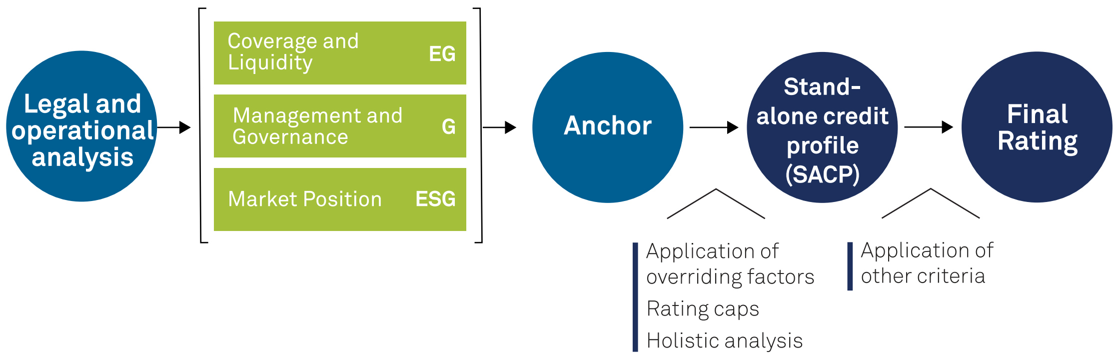
Housing finance agencies (HFAs), social enterprise lending organizations (SELOs), and social housing providers (SHPs), including public housing authorities (PHAs), generally operate with a deep social mission that underpins the loan portfolios and properties maintained by these organizations. For nearly all housing credits, payment performance related to a service area's exposure to real estate market volatility, unemployment levels, or economic concentration might affect asset quality or delinquencies, thereby enhancing or hindering a portfolio's or project's cash flow analysis or coverage and liquidity analysis. Our evaluation of bonds backed by single-family and multifamily loans consider the impact of demographic and income factors on the supply and demand dynamics in the relevant housing market which may affect our credit quality analysis. Additionally, for rental housing bonds, our market position assessment includes how curb appeal of a project affects occupancy and demand, and whether demand is affected by the affordability of the project's required rent. For PHAs and SHPs, organizations that offer lower rents compared to market rents score better within our economic fundamentals and market dependencies assessment to reflect their competitive advantage. Finally, although unexpected, we consider whether a social risk related to health and safety, for example, could disrupt the timing of the guarantee or insurance by a government entity or government sponsored enterprise for federally enhanced housing bonds.

Governance

Governance has proven to be a key rating driver across the sector--as a strength for many rated organizations and as a weakness for certain stand-alone rental housing bond credits. For HFAs, SELOs and PHAs, we consider the effectiveness of an organization's strategic plan and the level of support afforded to the organization from federal, state and local governments; this support also considers whether any legislative action could affect management's autonomy in operating its loan portfolio or projects. We also consider whether there exists a mismatch between management's experience and its responsibilities including for mission driven lenders, its program administration, and the risk profile of the portfolio, which could be factored into our analysis of operational risk, program management or assessment of management and governance. Furthermore, across the range of organizations, a history of delayed or inaccurate filing of regulatory reports, or lack of regular cash flow monitoring, may affect our program management and operational risk analysis.

Chart 12

U.S. Public Finance Rental Housing Bonds



Criteria: Methodology For Rating U.S. Public Finance Rental Housing Bonds

Related Research

- Key Trends That Will Drive The ESG Agenda In 2022, Jan. 31, 2022
- Credit Outlook For U.S. Public Finance: Positive Momentum Continues, Jan. 26, 2022
- ESG In U.S. Public Finance Credit Ratings: 2022 Outlook And 2021 Recap, Nov. 29, 2021
- Environmental, Social, And Governance Principles In Credit Ratings, Oct. 10, 2021
- The Top 10 Management Characteristics Of Highly Rated State And Local Borrowers: Through The ESG Lens, June 29, 2021

This report does not constitute a rating action.

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