ESG Research

ESG Materiality Map

Technology Software And Services

Oct. 19, 2022

Social factors such as privacy protection and employment practices tend to be more material in this industry. Climate transition and physical climate risks are the most material environmental factors although more so for stakeholders than credit.

This report does not constitute a rating action

Sustainable Finance

Henrik Cotran
San Francisco
henrik.cotran
@spglobal.com

Bruno Bastit
Madrid
bruno.bastit
@spglobal.com

Credit Ratings

David Tsui
San Francisco
david.tui
@spglobal.com

Contributors

Lai Ly
Paris
lai.ly
@spglobal.com

Nicole Delz Lynch
New York
nicole.lynch
@spglobal.com

S&P Global
Ratings

ESG Materiality Map
Technology Software And Services

In line with the research report "Materiality Mapping: Providing Insights Into The Relative Materiality Of ESG Factors," published on May 18, 2022, S&P Global Ratings is publishing research on the ESG materiality map for the technology software and services sector. We provide an illustration of our current view of the relative materiality of certain environmental and social (E&S) factors, from both the stakeholder and credit perspectives, for the sector. The materiality map does not represent any new analytical approach to the treatment of E&S factors in our credit ratings. See our ESG criteria for more information on how we incorporate the impact of ESG credit factors into our credit ratings analysis.

Technology Software And Services Sector

The technology software and services sector includes companies involved in the development and sales of software and related services including infrastructure and application software, cloud computing, software as a service (SaaS), virtualization, big data analysis, and machine learning, in addition to information technology (IT) services companies serving enterprise and consumer customers.

Key Takeaways

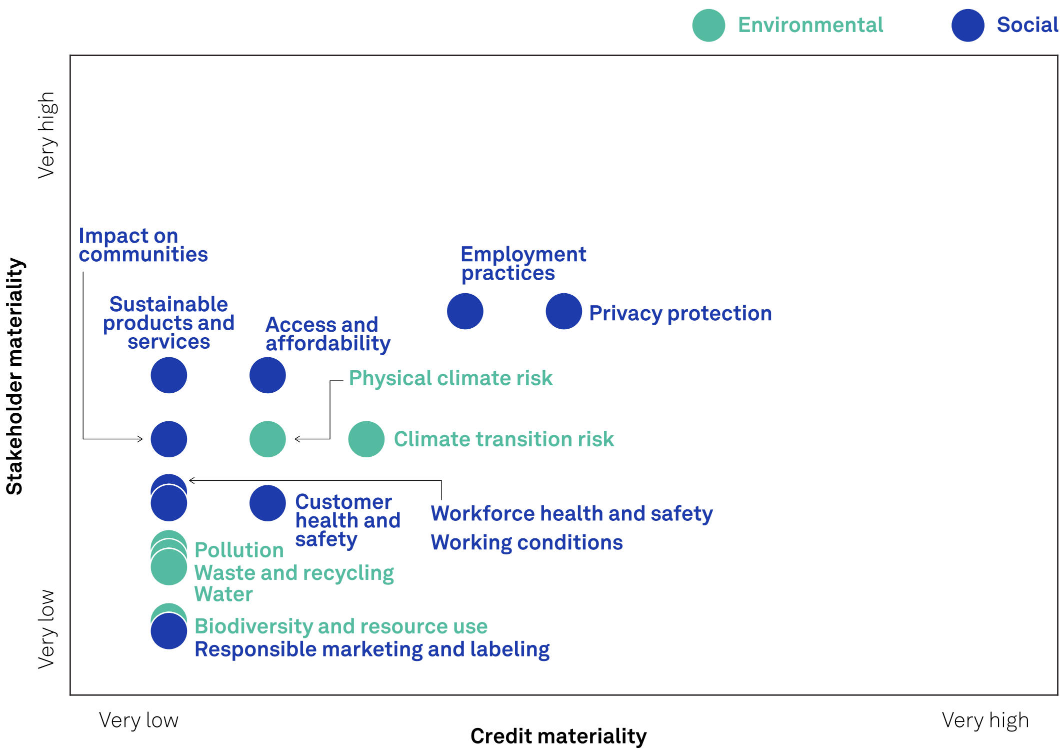
– Privacy protection is material from stakeholder and credit perspectives since software and services companies often collect and manage sensitive information for corporations and individuals. The increasing risk of sophisticated cyberattacks will likely exacerbate this risk over time.

– Employment practices and access and affordability are material to stakeholders because of low diversity in the sector and increasing social inequity between those with and without access to digital technology. These factors have had limited impact on credit to date but may become more material.

– Climate transition risk is increasingly material for both stakeholders and credit because of rising energy use, driven by exponential data traffic and computing requirements.

See materiality map on the following page.

ESG Materiality Map For The Technology Software And Services Sector



The materiality map provides an illustration at a point in time, of our findings on the relative materiality of certain environmental and social (E&S) factors, from both the stakeholder and credit perspectives, for the sector. It does not represent any new analytical approach to the treatment of E&S factors in our credit ratings. See our ESG Criteria for more information on how we incorporate the impact of ESG credit factors into our credit ratings analysis. Source: S&P Global Ratings.

How To Read The ESG Materiality Map

The stakeholder materiality (Y axis) reflects our assessment of the relative level of impacts and dependencies of the sector on the environment, society, and economy.

The credit materiality (X axis) reflects our assessment of the relative level of potential and actual credit impact for the sector. The credit implications for the factors positioned on the left side to the middle of the X-axis would be more limited and absorbable. On the right side, there is higher potential for these implications to be more disruptive. We assess credit implications for an entity based on its individual characteristics.

Assessing E&S factors' materiality: We consider both the likelihood of the impact from a given factor, as well as the magnitude of the impact. The materiality of the factors varies depending on the perspective (stakeholder or credit) as well as the evolving and dynamic interactions between these two dimensions.

The main areas of the map:

- The upper-right quadrant displays the most material, on a relative basis, E&S factors identified for the sector from both a stakeholder and credit perspective.
- The upper-left quadrant presents factors that are more material from a stakeholder than credit perspective. These factors have the potential to become more material from a credit perspective.
- The bottom-left quadrant shows factors that are less material for both stakeholders and credit. Their materiality may evolve over time and this dynamic may not be linear.

Examples Of Material Factors

Below we provide the rationale of some of the material factors to illustrate the above findings.

Privacy protection

Privacy protection, including data privacy and security, is the most material social factor in the software and IT services sector for stakeholders and credit, especially for companies that collect and manage sensitive information for corporations and individuals. Increasingly sophisticated cyber crime and rising data transmission will likely exacerbate this risk over the medium term, underscoring the importance of maintaining strong internal data security systems and protocols to prevent the loss of personally identifiable, financial, or other sensitive information. From a credit perspective, costs associated with reputational harm, security protection, and legal settlements are key considerations. To date, some high-profile cyber security breaches led to temporary impacts on company profitability due to higher costs allocated to IT security spending and legal fees. While these costs did not materially affect credit quality, we continue to monitor this topic given the high likelihood of future data breaches and the potential for material credit impacts.

Employment practices

Employment practices are highly material for stakeholders, while relatively less material for credit. Issues such as gender diversity and wage equality as well as attracting and retaining talent are material matters for stakeholders because the sector relies on skilled workforce in a highly competitive environment. Jobs in the tech sector are highly sought after because of their high salaries and longer-term incentives, as well as the myriad and attractive career opportunities. Given the competitive talent market, workers in this sector will be particularly sensitive to incentives, benefits, work-life balance (including remote work), and access to opportunities for innovation and skills development. From the credit materiality standpoint, mismanaging talent could result in lower service quality and high turnover, which can increase operating costs, limit innovation, and affect customer experience. Thus far, tech companies' ability to provide products and services that customers are willing to pay more for has offset higher costs; but in the longer term, the ability to attract and retain skilled talent is central to developing innovative solutions that are key to continued competitiveness. Further, we believe diversity and inclusion, while not an immediate credit risk, could become more prominent and material over time, recognizing that many tech companies are setting aggressive targets and implementing employment and hiring programs to narrow gaps in the near term.

Access and affordability

Access to software and services is material to stakeholders as it is tied to socioeconomic wellbeing in the modern economy, but has low materiality from a credit perspective. Gaining digital access and skills is a prerequisite for attaining higher education and employment in many sectors, while social issues such as equal opportunities in education and health are increasingly tied to digital inclusion. Increased digitalization and penetration of services has lowered barriers of entry for many, while there is a risk of greater inequality for underserved populations. Increased access and affordability have allowed more people to access data centers, lowered start-up costs to create tech products and services, and intensified competition for tech sector participants. However, from a credit perspective, we believe impacts from this factor are still relatively low due to our view of current limited regulatory risk and low impacts to costs or cash flows.

Climate transition risk

The climate change impact stemming from high energy use in owned and operated or third-party data centers used in data processing and hosting is material for stakeholders but somewhat less material from a credit perspective. Increasing data traffic and rising computing needs will continue to drive higher energy use in the industry, leading to higher greenhouse gas emissions and pollution, which affects stakeholders globally. At the same time, we believe the industry's shift to public cloud computing and SaaS that aggregate data processing will allow for higher capacity utilization and productivity and lower energy use. Additionally, artificial intelligence and digital transformation initiatives would have similar effects. These trends, in our view, would translate to lower operating costs and better credit profiles for participants.

Sustainable products and services

From a stakeholder perspective, user interaction with some software products may, under certain circumstances, have negative consequences for society, while credit impacts are likely low. Adverse impacts could occur if companies design app stores or other software services such that consumers' choice or ability to switch to other products declines. On the other hand, through innovation that improves service delivery, access, and outcomes (including but not limited to health care and education) and better security features, the sector can mitigate harm on users and the broader community. To date, credit risks stemming from a software providers' management of sustainable products and services has been limited, as we have not observed material negative stakeholder impact that influenced revenues or costs. However, regarding specific issues such as app stores and the associated disputes with developers that limit customer choice, public and regulatory attention on this issue may grow, possibly leading to concrete regulatory action and efforts by companies to reduce perceived harm of their services. Additionally, this could also affect a company's marketing positioning, prompting a fundamental change in business or revenue model. With that said, we believe these issues are currently limited to a small number of companies in the overall tech sector.

What is our approach to research on the ESG materiality map?

Referring to the research report "Materiality Mapping: Providing Insights Into The Relative Materiality Of ESG Factors," published on May 18, 2022, this research is built on the ESG materiality concept that considers ESG issues as material when they could affect stakeholders, potentially leading to material direct or indirect credit impact on entities. It considers that all businesses, through their activities and interactions, impact and depend, directly or indirectly, on stakeholders such as the environment (natural capital), society (human and social capital), and economy (financial capital). Using this ESG materiality concept, S&P Global Ratings has worked toward identifying a common, global, cross-sector set of E&S factors that we believe are material to stakeholders, and either are already, or have the potential to become, credit material for entities. The materiality map we propose provides an illustration at a point in time, of our findings on the relative materiality of those factors, from both the stakeholder and credit perspectives.

How does the sector ESG materiality map relate to credit ratings or ESG evaluations?

The sector materiality map is a visual representation of the factors that we consider impactful to the sector from a stakeholder and credit perspective for the purposes of this research. It does not represent any new analytical approach to the E&S factors in our credit ratings.

The relative materiality of the factors indicated on the materiality maps may inform the E&S Risk Atlas scores and the weights of the E&S factors used in ESG evaluations.

They may also inform our discussions with issuers on those factors' existing or potential credit materiality.

Related Research

- Materiality Mapping: Providing Insights Into The Relative Materiality Of ESG Factors, May 18, 2022
- Environmental, Social, And Governance Principles In Credit Ratings, Oct. 10, 2021
- ESG Evaluation Analytical Approach, Dec. 15, 2020