ESG Measurement

ESG scores: Publicly listed firms

- MSCI ESG Research
 - Mostly used;
 - · Grading system Rule based



- how well companies manage risk compared with their peers, not across industries. It gives only overview on each industry,
- Rating Framework



- Research Tools: Check the individual firm providing the research info in firm base
- Sustainalytics

Tesla, Inc.

Industry Group: Automobiles Country/Region: United States of America

Identifier: NAS:TSLA

Founded in 2003 and based in Palo Alto, California, Tesla is a vertically integrated sustainable energy company that also aims to transition the world to electric mobility by making electric vehicles. The company sells solar panels and solar roofs for energy generation plus batteries for...

+ Show More

Full time employees: 140,473



COMPREHENSIVE ? Ranking

25.3 Medium Risk

Industry Group (1st = lowest risk) **Automobiles 49** out of 89

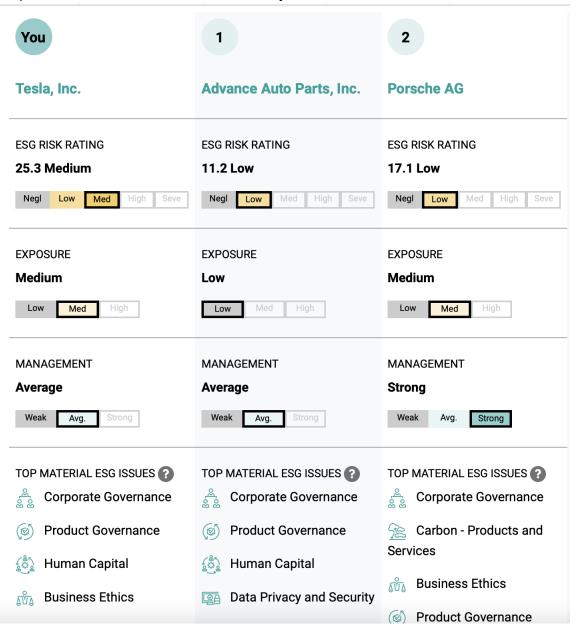
Universe

Global Universe

8133 out of 15974

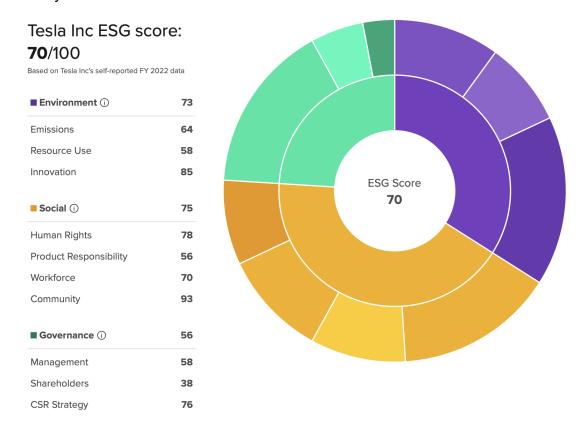


Last Full Update: Jul 14, 2023 ? Last Update: Jan 10, 2024 ? Compare 4 firms at the same time but only basic info

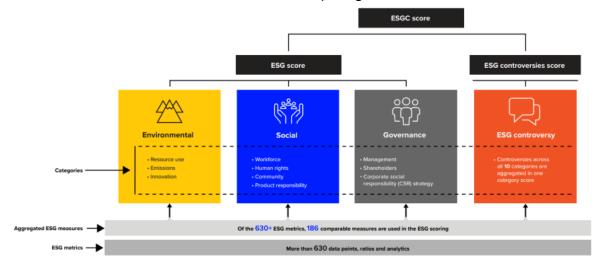


- Ad: Total transparency on development (more detailed sectors and variables considered) and information
- Disad: You need to submit your personal info every time you want to check info further
- LSEG ESG Scores

Score System



- Only showing the results raw data and data processing not released
- The disclosure of the data consideration is quite general



ISS

• for-profit enterprise - paid access only, not public



ESG MUNI QUALITYSCORE

Assessing ESG performance at the municipal issuer level has gained momentum, as investors increasingly seek to manage ESG risks in fixed income investments. In addition, municipal bonds can play a large role in shifting capital flows to investments that address societal issues and have a tangible impact on local communities. The ISS ESG Muni QualityScore provides ESG scoring for the U.S. municipal market at the GEO.id level¹, as well as at the CUSIP92 level for issuers.

LARGEST COVERAGE IN THE MARKET

The ESG Muni QualityScore offers fixed income investors an unmatched level of transparency by providing ESG rankings, scores, and underlying data for municipal bonds in all 50 states.

50M+ DATA POINTS

50 States 3.100 Counties 29,000 Cities/Towns 13.500

8,700 Opportunity Zones

School Districts *Figures as of January 2023. All figures are approximate.

Municipal bonds are assessed on their performance across a wide range of ESG issues, including:



CLIMATE CHANGE RISK

- Water
- Air
- Heat index
- Sea level

ENVIRONMENTAL RISKS

- Superfund sites
- Coal ash impoundments
- Air quality

ဂ္ဂ်ီ SOCIAL

HEALTH RISK

- Cancer incidents
- Diabetes prevalence
- Obesity rates
- Opioid prescriptions

CENSUS

- Population
- Unemployment
- Poverty
- Racial employment parity
- Gender employment parity

GOVERNANCE

PERSONAL INFRASTRUCTURE

- Police per resident
- Firefighters per resident
- Dentists per resident
- Doctors per resident

FINANCIAL

- Debt per resident
- Debt per student

• Bloomberg

- School Access
- Dataset & Firm Score & Carbon Emission

Common Tools and Framework (more specific)

- SASB
 - Company's ESG disclosure

Census provided identifier for every city, county, school district, and state

² Committee on Uniform Security Identification Procedures

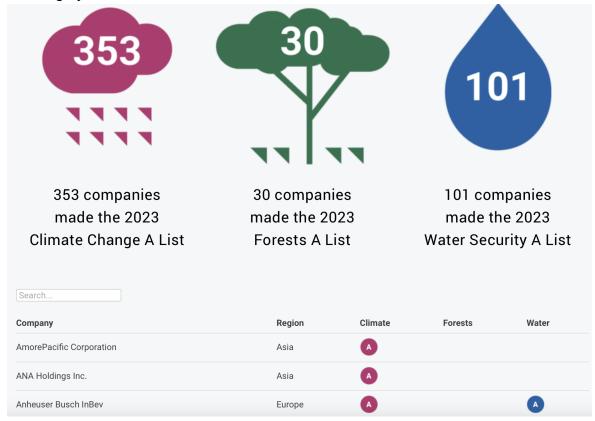
- Industry ESG standard
- Free Access
- GRI
 - Industry standard

Other measurement

 More detailed, each measurement only gives one specific assessment, but not taking ESG as a whole

Carbon Emission

- Bloomburg Carbon Emission
- CDP (Carbon Disclosure Project)
 - Grading system



- Data from firm's own disclosure
- Raw data accessible but need their approval

Social and Human Rights

- KnowTheChain: address forced labor risks within their global supply chains
 - · Limited Number of firms
 - Score system
 - Transparency on score development
- **Corporate Human Rights Benchmark (CHRB):** Measures companies' human rights performance

- Limited Number of firms: focusing on high-risk industries
- Score system
- Transparency on score development
- Much much more detailed
 - · publishing the report
 - Scores in different sectors

Corporate Governance

 ISS Governance QualityScore: governance issues, including board structure, shareholder rights, audit practices, and executive compensation (but no public access)

Gender Equality

Bloomberg Gender-Equality Index (GEI): across internal company statistics (self-disclosure), employee policies, external community support and engagement, and gender-conscious product offerings.

General Overview to the Market

- FTSE4Good Index Series by LSEG
- DJSI Index Family
- S&P ESG Index Family