Do companies prioritize and communicate their sustainability-related practices?

Let us investigate how S&P 500 companies disclose ESG in their 10-K filings!

1. Find the list of S&P 500 companies from Wikipedia
2. Scape companies' annual 10-K filings from SEC EDGAR website
3. Use natural language processing technique to count the occurrences of keywords from each filing
4. Conduct statistical analysis

The frequency of the words "environment", "social", and "governance" in the 10-K filings of S&P 500 companies has steadily increased over time, with a noticeable acceleration in the past few years.

Moving forward, we plan to use advanced natural language processing techniques, such as sentiment analysis and topic modeling, to more accurately assess the extent and quality of corporate disclosure of ESG-related issues, and help investors and other stakeholders make more informed decisions.

Environmental, Social, and Governance (ESG) provides a framework for investors to evaluate a company's long-term sustainability, potential risks, and opportunities.

ENVIRONMENTAL FACTORS
- Carbon emissions
- Waste management
- Resource depletion

SOCIAL FACTORS
- Employee
- Community
- Customers

GOVERNANCE FACTORS
- Transparency
- Board of directors
- Executive compensation

WHERE do companies disclose their ESG related information?

To evaluate companies' ESG performance, investors often turn to the 10-K filings - the comprehensive annual reports that publicly traded companies must file with the Securities and Exchange Commission (SEC).

The frequency of ESG-related language varies by industry. For example, utilities, energy, and materials exhibit a higher frequency of environmental-related terms.

Note: "Weight" is the component weight of S&P 500 index, determined by market capitalization, or the total market value of a company's outstanding shares. Log-transformation was used to reduce the skewness of weight.

Linear regression analysis shows that, in specific industries, larger firms prioritize more on disclosing ESG-related issues.

PUTTING SUSTAINABILITY UNDER SPOTLIGHT

An Analysis of ESG Disclosing Trends in SEC Filings