Corporate ESG Performance and Financial Market Performance - Feasibility Study

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Introduction & Motivation

ESG performance has become an important factor in corporate strategy and financial markets. Meta-analyses show that a majority of studies find a positive relationship between ESG scores. However, there is also a non-negligible share of research reports that report neutral or even negative effects. (Friede et al., 2015; Whelan et al., 2021) Our project focuses on Swiss companies to examine whether ESG scores are positively linked to financial performance.

Research Questions

- Is there a positive correlation between ESG scores and financial performance for Swiss listed companies?
- Is there a difference across industries (focusing on Top 5 industries in Switzerland)?
- Which dimensions (E, S, G) are the most important drivers?
- How does the relationship between financial performance and ESG scores behave of Swiss companies compared to peers worldwide?

Data

Sources

- **Swiss listed companies**: Swiss Performance Index - approx. 230 companies (Financial and ESG data fetched via Yahoo Finance API [1][2])
- **Global benchmark companies**: S&P 500 Index - 500 leading companies listed on stock exchanges in the US (Financial and ESG data fetched via Yahoo Finance API)

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[1] https://ranaroussi.github.io/yfinance/reference/index.html
[2] https://algotrading101.com/learn/yahoo-finance-api-guide/

Variables

- **Company information**: Company name, Currency, Industry and Sector, Country
- **Financial and market data**: Stock Price, Profitability Metrics (e.g. Revenue, Profit, ROE, etc.), Valuation Metrics (e.g. Market Cap, Price-to-Earnings ratio), Risk / Stability Metrics (e.g. Debt-to-Equity ratio, Cash Flow),Growth Metrics (e.g. Revenue Growth).
- **ESG Scores**: Scores (Total and per dimension), Controversy score (0-5), ESG performance (average/lagging/leading i.e.categorical), Risk (Negligible - Severe i.e. qualitative)

Analysis Methods

- **Correlation analysis**: Financial key figures vs. ESG total and subscores (e.g. ROE, Net Income, Annual Return) (Details to be defined)
- **Stability analysis**: Financial key figures (e.g. Volatility, Beta) vs ESG score (Details tbd.)

Risks & Backup Options

- **Data availability & reliability:** Initial tests confirm that our APIs and methods return the required fields, but sporadic gaps may occur.
  Backup: Add fallbacks (alternative endpoints, company filings for critical firms), log missing fields, and document any imputation rules.
- **Wikipedia sourcing:** We retrieve company tickers from Wikipedia to use them as identifiers for fetching financial and ESG data via the API. However, due to the open-edit nature of Wikipedia, ticker information may contain typos, outdated entries, or omissions.
  Backup: Implement alerts for ticker errors and validate the entire ticker list against a second reliable source before running the API queries.
- **Scope creep:** The research question may become too broad relative to time and resources.
  Backup: Narrow the scope to a focused universe (e.g., top five Swiss industries) and prioritize a core metric set.
- **Comparability issues:** Differences in ESG definitions, reporting periods, and currencies can reduce cross-firm comparability.
  Backup: Standardize currencies (e.g., CHF → EUR/USD), align all data to a single snapshot date (e.g., 2024-12-31), and predefine harmonization rules.

References

Friede, G., Busch, T., & Bassen, A. (2015). ESG and financial performance: Aggregated evidence from more than 2000 empirical studies. *Journal of Sustainable Finance & Investment*, *5*(4), 210–233. https://doi.org/10.1080/20430795.2015.1118917

Whelan, T., Atz, U., & Clark, C. (2021). *ESG and financial performance. Uncovering the relationship by aggregating evidence from 1,000 plus studies published between 2015–2020.* https://www.stern.nyu.edu/sites/default/files/assets/documents/NYU-RAM__ESG-Paper_2021%20Rev_0.pdf

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