Materiality of ESG Factors in Financial Markets and Financial Statistics

Patrick Slovik and Farah Azman

Abstract

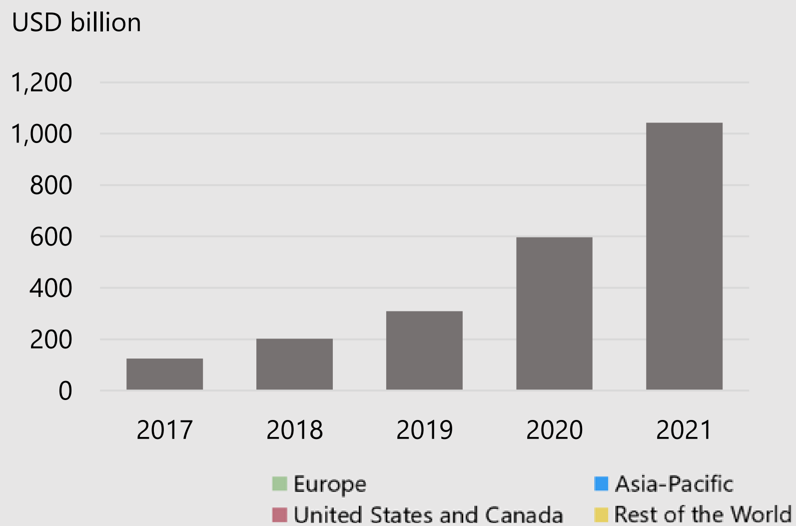
The study assesses the materiality of Environmental, Social and Governance (ESG) factors in financial markets and financial statistics. The stocks of and flows in ESG-linked financial assets have reached a systemically-relevant share in the overall financial system. The study explores the implications of materiality for ESG-linked financial statistics while acknowledging that data gaps need to be addressed amid considerable uncertainty. It outlines the necessity to differentiate between single-materiality and double-materiality approaches and defines the concept of financial uncertainty in contrast to financial risk and its implications for materiality.

ESG Factors in Financial Markets: Debt Securities Market

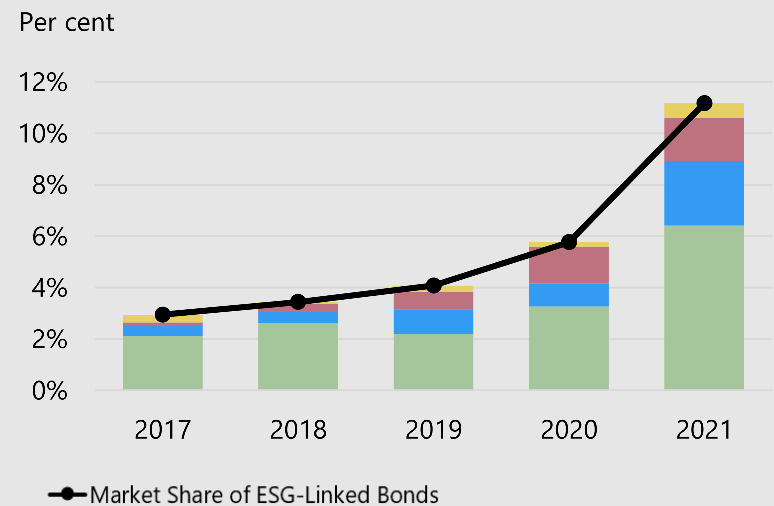
- Sustainable finance evolved rapidly in terms of asset size and diversity of financial products. ESG-linked financial assets reached a systemically-relevant share across most key markets and asset classes.
- ESG-linked debt securities issued during 2021 alone amounted to more than USD 1 trillion. The market share of sustainable-finance debt securities in the overall global bond market increased to 11%.

Global ESG-Linked Bonds

Annual Global ESG-Linked Bond Issuance



Market Share of ESG-Linked Bonds

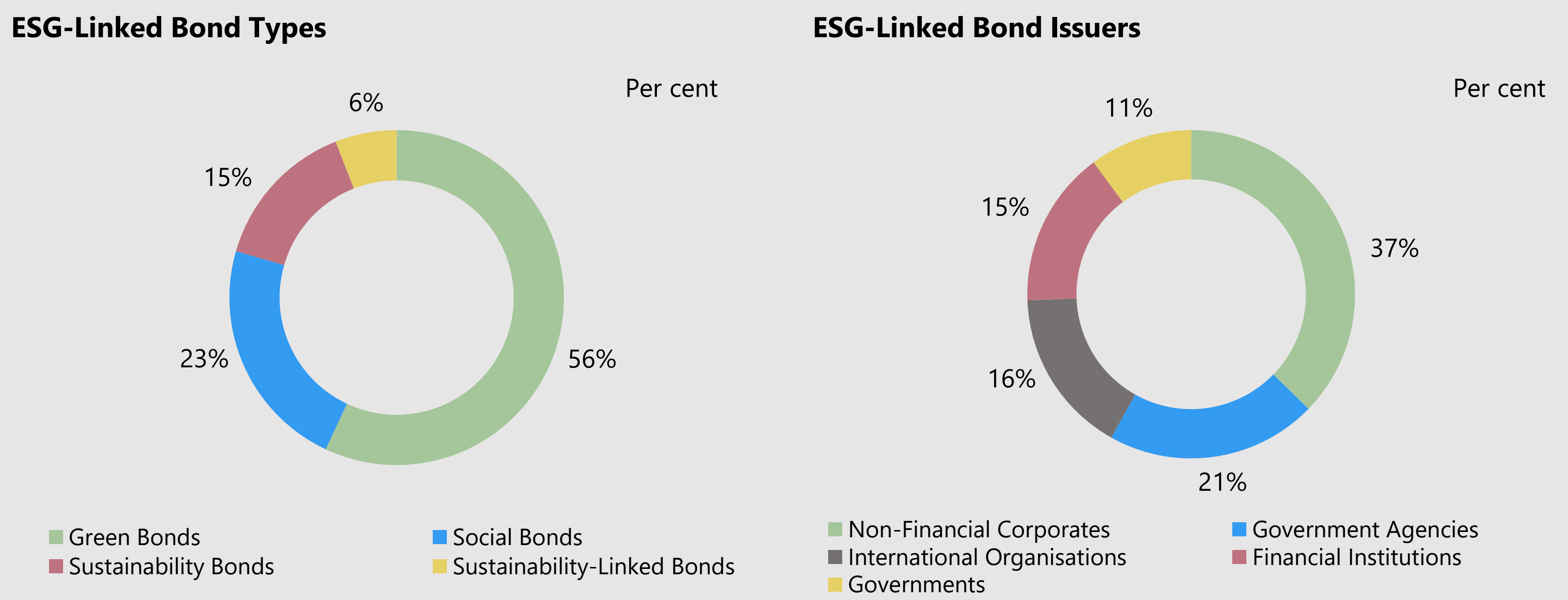


Sources: S&P CIQ; Authors' calculations.

ESG Factors in Financial Markets: Types of Financial Instruments

- ESG-linked financial instruments evolved into several key categories, reflecting the growing diversity of sustainable-finance instruments.
- Green bonds had a market share of 56%, followed by social bonds at 23%, sustainability bonds at 15%, and sustainability-linked bonds at 6%.

Global ESG-Linked Bonds Breakdown in 2021



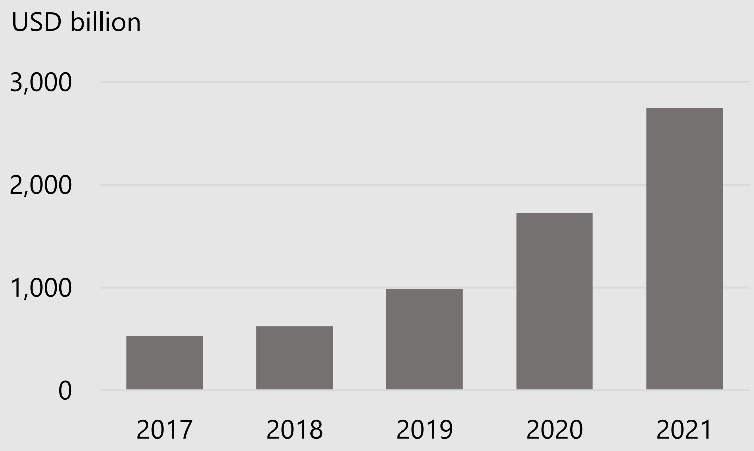
Sources: S&P CIQ; Authors' calculations.

ESG Factors in Financial Markets: Mutual Funds and Exchange-Traded Funds

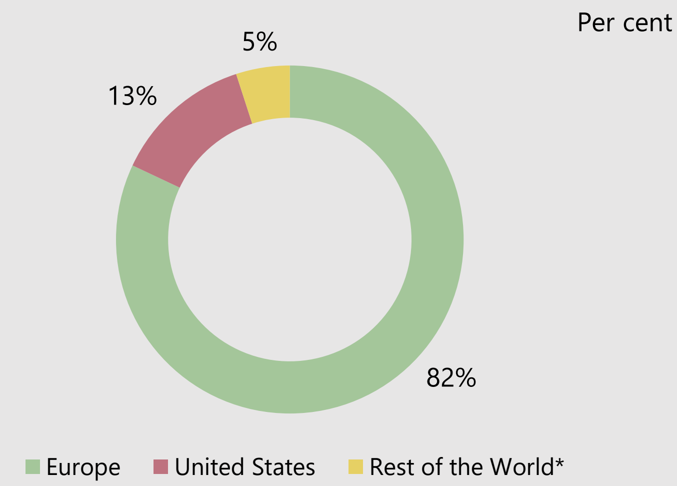
- Sustainable-finance funds represent mutual funds and exchange-traded funds that integrated ESG criteria into their investment strategies and portfolio selection processes.
- Assets under management of global sustainable-finance funds increased to over USD 2.7 trillion, representing about 7% of the total global mutual funds and ETFs.

ESG-Linked Mutual Funds and Exchange-Traded Funds (ETFs)

Global ESG-Linked Mutual Funds and ETFs



Regional Distribution of ESG-Linked Mutual Funds and ETFs



*Rest of the World category comprised funds domiciled in Asia, Japan, Australia, New Zealand, and Canada
Sources: Morningstar; Authors' calculations.

ESG Factors in Financial Markets: Equity Markets and Investment Principles

ESG Factors in Equity Markets

- Publicly listed companies have increasingly considered ESG criteria, as reflected in their sustainability reports and disclosures.
- Out of the 500 largest listed companies in the United States, represented in the S&P 500, more than 90% issued sustainability reports.

ESG Factors in Investment Principles

- The signatories of the Principles for Responsible Investment committed to incorporating ESG issues into investment analyses and decision-making.
- Assets under management of the signatories amounted to over USD 100 trillion, a further illustration of the ESG integration into financial markets.

Materiality of ESG Factors

- Materiality of ESG factors arises from two divergent approaches. The first approach to materiality reflects the impact of ESG factors on the entities' financial performance and risk profile.
- The second approach to materiality reflects the external impact of the entities' business activities on the ESG factors. The blend of both approaches is referred to as double materiality.

Different Terminologies of Materiality of ESG Factors

Impact of ESG Factors on Entity	**Impact of Entity on ESG Factors**
Financial Materiality	Non-Financial Materiality
Business Materiality	Stakeholder Materiality
Outside-in Materiality	Inside-out Materiality
Impact on Business	Impact on Stakeholders
Impact on Entity	Impact on Environment and Society
Double Materiality	

Sources: Authors' review based on ESG frameworks and sustainability reports.

Materiality of ESG Factors in Financial Statistics

- The duality of materiality of ESG factors necessitates separate sets of methodologies for developing sustainable-finance statistics, differentiating between single materiality and double materiality.

Measuring Sustainability Factors of Financial Exposures

- The first approach focuses on the impact of sustainability factors on financial institutions (outside-in approach), requiring data to evaluate financial risks and performance of financial institutions.

Measuring Sustainability Factors of Business Transition

- The second approach focuses on the impact of financial institutions on sustainability factors (inside-out approach), requiring data on sustainability transformation and impact of financial institutions.

Materiality of ESG Factors in Financial Ratings

- The dichotomy of materiality was also evident in the approaches of rating agencies. Credit ratings reflect material ESG factors on the default likelihood. ESG ratings reflect wider materiality spectrums.

Uncertainty of ESG Factors

- Estimating financial implications of sustainability vulnerabilities remains subject to considerable uncertainty. As a result, reliance on financial materiality alone might not be sufficient.
- In view of considerable financial uncertainty of sustainability vulnerabilities, a double-materiality approach might offer preferred policy options in lieu of a single-materiality approach.

Financial Risk and Financial Uncertainty

Financial Risk	Financial Uncertainty
Potential for adverse outcomes with a determinate likelihoods of occurrence.	Potential for adverse outcomes with indeterminate likelihoods of occurrence.
Determinate due to available information, knowledge, and experience at the time.	Indeterminate due to unavailable information, knowledge, and experience at the time.
Predictable through conventional risk management approaches.	Not predictable through conventional risk management approaches.

Sources: Authors' review based on Knight (1921), Keynes (1937), Lawson (1985), and Slovik (2010).