

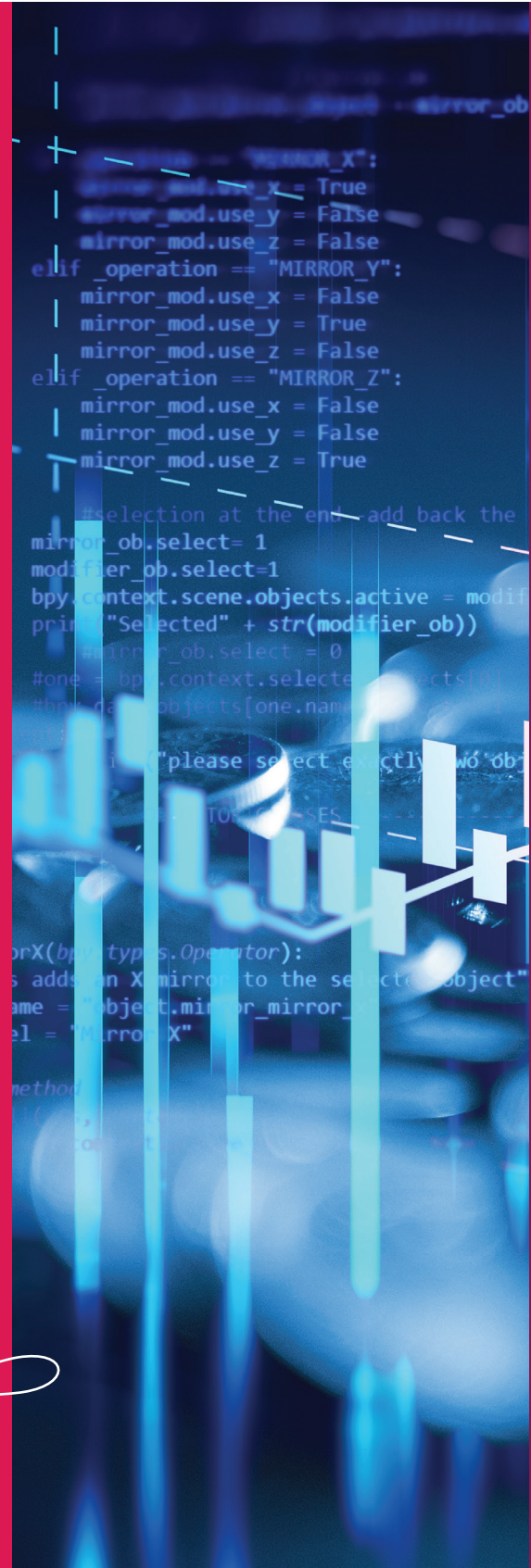


Mindtree

A Larsen & Toubro Group Company

ESG Investing Analytics

- A sustainable
investment approach
for an asset manager



Introduction

There are new global risks in the capital market that are impacting traditional investment approaches and investment managers' decision-making capabilities. While extreme weather changes like floods and wildfires are becoming frequent, privacy, data security and regulatory pressures are accelerating new risks for investors. Investor perception towards investment has changed; they are increasingly thinking about methods to avoid investments that are harmful to the environment or contribute to societal problems; instead they are focusing on investments that are beneficial for all the members of investment stakeholder community.

Investors are becoming more and more conscious about non-financial factors such as **-Environmental, Social, and Governance (ESG)** as part of their investment analysis process. ESG factors are starting to play a significant role in identifying material risks, long-term investment and growth opportunities. The below picture represents the different criteria affiliated with ESG.



Trends in ESG investing

- According to Celent **ESG assets are** expected to grow **around \$53 trillion by 2022** from \$40.5 trillion in 2020
- New generation of investors **millennials will direct up to \$20 trillion** into US ESG investments
- The market for **ESG data could reach \$1 billion by 2021** as per Opimas research report
- Biggest buyers of ESG data are set managers- 59%**, sell-side institutions -19%, asset owners - 12%, consulting firms and investment advisers - 6%, and corporates - 4%
- ESG data spending** in response to regulatory pressure **in Europe is 60%**, followed by **33% in North America** and **7% in Asia**
- European asset managers will be required to accommodate ESG considerations as part of their fiduciary duties by 2021



Essentials of ESG investing

ESG investing is accelerating demand across the investment management landscape. Several key trends ranging from the climate, the pandemic situation, and social unrest are gaining momentum, thus substantiating the need for ESG investing.

- **Climate changes:** Investors are keen on investing in companies that are solving the climate crisis, leveraging innovative technology and propelling humankind's lead towards the carbon-free economy
- **Capital investment in sustainable projects:** Banks are stepping away from financing controversial business activities, such as - weapons productions, tobacco products producers, unconventional oil and gas productions, etc., whereas investors/asset managers/private equity investments are showing interest in channeling their capital towards green projects. These ESG changes are ensuring that CFOs of companies are inculcating ESG criteria in their reports to gain the attention of financiers, corporate borrowers, and investors
- **Treating sustainability risk in risk management:** Risks related to legal, economics, capital and credit have a large impact on the business performance of a company, especially with respect to profit making. Similarly, ESG risks emanating from environmental disasters, data protection, cybersecurity and ethical standards will have a greater impact
- **Engagement & transparency in investments** – Investment firms should actively get involved with companies/issuers and collate their ESG risk strategies. Firms can also identify ESG risks and propose opportunities to their board of directors by voting for ESG related decisions. The new generation of millennial investors are also calling for greater transparency in investments



Guiding principle for ESG investments

UN's (United Nations) PRI (Principles for Responsible Investment) is the leading proponent of sustainable investments across the world. They encourage asset managers to consider environmental, social, and corporate governance facts and data sets in their investment and portfolio management.

Signatories' commitment

PRI has over 2300 participating financial institutions and they adhere to PRI's six key principles. PRI defines sustainable investment as the primary strategy for asset managers and urges them to consider ESG factors in investment decision-making. The key factors of sustainable investment are:

- Asset managers should consider the ESG factors while building Investment portfolios that yield good returns for investors in the long term
- Performance of investment portfolios, such as - issuers, equities, fixed income, sectors, regions can be impacted by ESG issues
- Applying 6 PRI principles in their investment decisions
- The investor can encourage companies to improve ESG risks

PRI defines responsible investment strategies for asset managers on climate changes and investment asset classes like listed equity, fixed income, private equity and real estate. Below are snapshots of investment strategies under various asset classes.

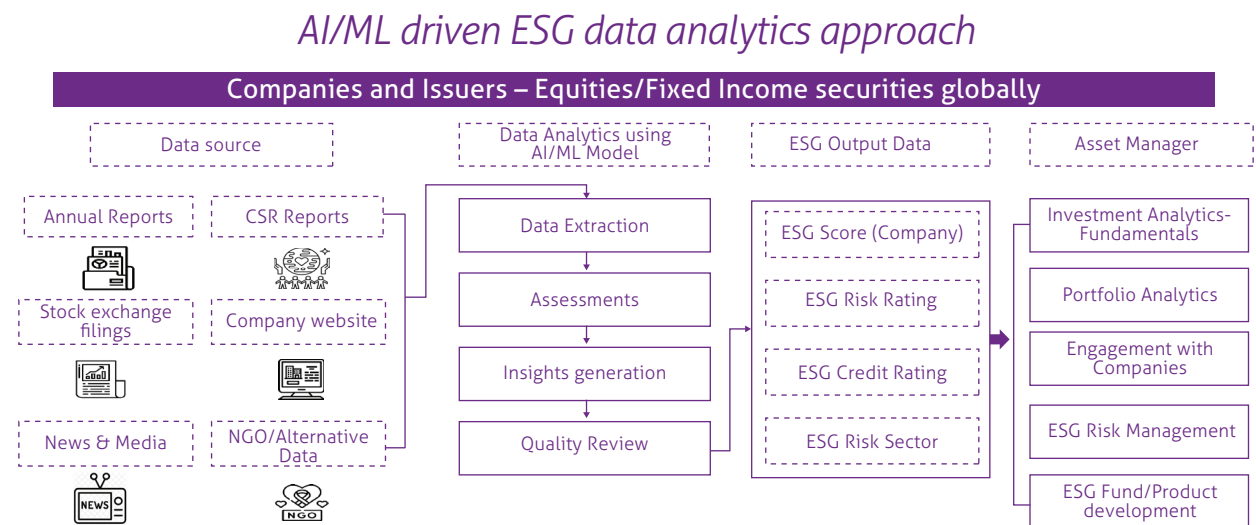
Climate Change for Asset Owners	Listed Equity	Fixed Income	Private Equity/Real Estate
<ul style="list-style-type: none">▪ Climate change is a systemic issue which affects all asset types and sectors▪ New Investment opportunities - public and private investment in energy will grow to around \$2.4 trillion annually by 2035▪ Investing in climate solutions -Renewable energy projects, low-carbon indices, thematic funds, climate aligned bonds, green infrastructure real assets	<ul style="list-style-type: none">▪ Performing fundamental analysis of companies based on ESG norms▪ Security research - Identifying material ESG issues that impact equity valuations▪ Portfolio management - Including the ESG analysis in decisions about portfolio construction▪ Security research - Identifying material ESG issues	<ul style="list-style-type: none">▪ Investing in bonds (Corporate, Sovereign) that address sustainability projects. Ex- green , thematic bonds▪ Integrating materials ESG factors into bonds credit assessments▪ Interacting with issuers on ESG issues (active ownership or stewardship)▪ Activities issuers engaged in projects & operation	<ul style="list-style-type: none">▪ PE is naturally suited for responsible investment with close contact with GP and LP▪ Deal sourcing - Identifying material ESG issues during due diligence▪ Investment decision - Including material issues in the investment memorandum and negotiation on agreement▪ Ownership - Managing ESG issue during the onboarding, engagement and monitoring of portfolio company

Mindtree's SMEs from the capital market Center of Excellence (CoE) have thoroughly analyzed and understood the six PRI principles and help buy-side firms in defining the sustainable business rules in ESG integration and investment strategies.

Our data & analytics approach in ESG investing

Data and artificial intelligence/machine learning are powering responsible investing. For instance, actionable investment insights for ESG integration into asset & wealth management can be provided by AI-based data analytics solutions. Similarly, advanced natural language processing/ML models and quantitative methods can be applied to derive the company/issuers/security ESG score, rating and risk attributes that help asset managers to consider ESG issues while building the investment portfolio

The below infographic depicts the AI/ML-driven ESG data analytics approach



▪ Qualitative data analysis leveraging AI/ML models

AI-driven data analytics can extract, classify, assess, and validate the right set of ESG factors, from an appropriate set of direct and alternative ESG data from different sources (annual reports, sustainability reports, exchange filings, news, company statements, online, and social media search data). ESG material factors/scores on issuers and companies sector-wise, with respect to investment management and the ESG portfolio strategy

▪ Quantitative analysis for investment portfolio

An AI-based ESG quantitative analysis will analyze and interpret the ESG factors with various financial data (fundamental and technical analysis) and derive the ESG-themed investment portfolio. An AI-based ESG valuation model helps portfolio managers to view financial and ESG variables aligned with the investors' goals

▪ Investment decisions

Data derived from the ESG valuation model for creating the portfolio will assist in asset managers' investment decisions – invest, disinvest, don't invest - in securities that generate alpha. These decision-making capabilities help managers in constructing complex ESG portfolios



- **Assess and learning model**

An AI-based ESG model will automatically assess, learn and improve the performance of qualitative analysis, quantitative investment analysis and valuation model, which helps in various scenarios to assist asset managers. This model will result in generating insights into future portfolio analysis, thus leading to better investment decisions

Mindtree data & cognitive pitch in ESG investing

Mindtree helps buy-side firms (asset & wealth managers, hedge funds, private equity firms) in ESG integration to their core investment operating model and create value added opportunities in their ESG transformation journey by following:

Domain-led ESG data consulting

- Analyzing the side firm's core investment model and comparing with the PRI investing principles
- Predicting ESG benchmarks and identifying the levers for integrating ESG factors into the investment model
- Existing data management landscape assessment to derive the ESG data analytics approach for firms
- Roadmap for ESG investment analytics - AI/ML-led data-based qualitative and quantitative solution implementation

ESG – Enterprise data hub

- Designing and building reference data architecture by leveraging 'Markit ESG EDM ESG solution' to master ESG data sets
- Data management/hub creation in cloud for analytics
- ESG reporting repository development – Taskforce on climate-related financial disclosures - Carbon footprint reporting, EU non-financial reporting initiatives, global reporting initiatives and sustainability accounting standards board reports



ESG data analytics

- Actionable investment insights for ESG integration into asset management are being provided by AI-based data analytics solutions
- Qualitative analysis leveraging AI/ML model for creating ESG factors - SG scores/ratings/risk scores, sector scores
- Quantitative analysis for ESG investment portfolio
- Designing data-driven real-time ESG portfolio analytics model that generates alpha

ESG data visualization

- Providing ESG intelligence/insights in the hands of asset managers for better investment decisions
- Self-service ESG investment analytics for investors/HNIs (High Net-worth Individuals)

EU sustainable regulatory reporting

- Implementation of EU sustainable finance framework for buy side firms
 - Disclosure regulation
 - Taxonomy regulation

Testing/AMS services

- Data management and analytics, regulatory reporting testing services, and maintenance and support services

Conclusion

Mindtree's deep expertise in investment management and ESG investing can help buy-side firms to integrate the ESG model into their investment strategies. Our AI-based data analytics framework provides actionable investment insights to asset managers and assists in creating an ESG-specific portfolio analytics model that generates alpha. We can collaborate as trusted partners to understand the sustainability norms in the investment management landscape, and develop and implement ESG strategies using AI-driven cognitive models incorporated in the core investment process.

References

<https://www.investmentnews.com/esg-assets-2022-celent-197155>

<https://www.msci.com/www/blog-posts/esg-investing-is-here-to-stay/01251377498>

<https://www.pionline.com/esg/esg-data-market-poised-hit-1-billion-2021-report>

<https://www.msci.com/esg-ratings>

<https://www.unpri.org/investment-tools/an-introduction-to-responsible-investment>

<https://www.cfainstitute.org/en/research/esg-investing>



Veerabasappa Jayanna

Senior Consultant

Veerabasappa Jayanna, is a Senior Consultant with Mindtree's BFS vertical and a subject matter expert in Capital Market domain. He is responsible for delivering innovative solutions to our customers while leading domain consulting, alliance management, and domain competence building.

About Mindtree

Mindtree [NSE: MINDTREE] is a global technology consulting and services company, helping enterprises marry scale with agility to achieve competitive advantage. "Born digital," in 1999 and now a Larsen & Toubro Group Company, Mindtree applies its deep domain knowledge to 280+ enterprise client engagements to break down silos, make sense of digital complexity and bring new initiatives to market faster. We enable IT to move at the speed of business, leveraging emerging technologies and the efficiencies of Continuous Delivery to spur business innovation. Operating in more than 15 countries across the world, we're consistently regarded as one of the best places to work, embodied every day by our winning culture made up of over 21,800 entrepreneurial, collaborative and dedicated "Mindtree Minds".