Investment Decision Making is not just about making financial returns but also needs to look at sustenance of the generated financial returns. ESG parameters when included in Investment decision making aids to evaluate the sustenance of financial return. This paper aims to provide the readers an introduction to ESG and challenges faced in integrating these factors. We will discuss on the ESG integration strategy by publishing a separate paper on that subject.

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1. INTRODUCTION
An investment is made to generate income and capital appreciation. After understanding the investment objectives of the investor, the Investment manager identifies investment avenues based on detailed analysis of assets available, stock selection by way of financial statement analysis, macro-economic outlook and other idiosyncratic risks of the selected investment avenues.

While this approach continues to be the basis for investment decision making, investment managers are being confronted with new challenges in this millennium on account of the following

- Extreme weather events are becoming more frequent. As per Aon, a leading global professional services firm in its 2018 Annual report on Weather, Climate and Catastrophe says that from intense tropical cyclone landfalls, record-breaking wildfires, severe drought, and widespread seasonal flooding - natural disaster events in 2018 led to economic damage of $225 billion”. In November 2018, report published by 13 US Government agencies too have warned that without significant steps to address Global warming, the losses to sectors can be hundreds of billions of dollars.

- With the digital explosion, there are more concerns on data privacy culminating in EU General Data Protection Regulation (GDPR) which reshapes the way the data is collected and managed by businesses. Any non-compliance to the directive can result in huge penalties that threaten the profitability of the companies and thus the investments.

- Complaints of corruption, fraud, deception, insider trading and self-dealing at major corporations reported inflicted serious damage to investors confidence and resulted in erosion of billions of dollars in investor wealth.

While the investment managers are bound by their fiduciary responsibilities of generating adequate return as required by the investment objectives of the investor, the above-mentioned challenges coupled with raising investor awareness and changing geo-political scenario, require them to look at additional data points for investment evaluation beyond the traditional methods. These parameters aid investment managers to ensure sustenance of the investment return, since frequent churning of portfolio results in lag on investment returns on account of transactional / exit costs.

These additional data inputs since are determined by the Socio, Environmental and Governance factors, are broadly termed as ESG parameters.

2. DEFINING ESG
ESG stands for Environment, Social and Governance - factors that play a role in sustainable and responsible business practice, which should be considered alongside financial factors in the investment decision making process.

Understanding the ESG factors of a company helps understand corporate purpose, strategy, and general management quality. It’s a practice that value companies based on various ESG factors like active management of carbon footprints, labor laws compliance etc.

3. HOW ESG EVOLVED OVER YEARS
Arguably, it can be said that responsible investing started when investment as a concept started and flourished. We can track the genesis of Responsible Investment back to Methodists investment practices and Islamic Sharia investing practices. The Methodist movement avoided investing with those who earned their money through alcohol, tobacco, weapons, or gambling – essentially establishing social investment screens.

In modern day markets, responsible investment became more formalized in the 1960s, when Civil Rights and racial equality gained prominence. As the fund management industry started growing, the first event that defined Socially Responsible investing happened when Ralph Nader, a consumer advocate, environmentalist, and later independent candidate for president of the United States, succeeded in adding two socially based resolutions on the proxy ballot of General Motors in its Annual meeting. Although both votes failed, it was the first time that the federal Securities Exchange Commission permitted social-responsibility issues to appear on a proxy ballot.
In the early 1980’s, several mutual funds were started with the moto of Socially Responsible investing catering to the needs of SRI investors. The funds included Calvert Social Investment Fund Balanced Portfolio and the Parnassus Fund. With the start of SRI funds, it will be of little surprise that Fund managers through the 80’s were facing pressure to avoid investing in companies having operations in South Africa, where the government of the day practiced Apartheid.

In the 1990’s, “The Domini Social Index” was launched which is constituted with 400 primarily large-capitalization U.S. corporations and is comparable to the S&P500. The selection criteria were based on Environment and Social responsibilities exhibited by these companies. The launch of this index enabled investor to compare the performance of those companies that are deemed more responsible to the environment and society to those who are not able to exhibit the same measure.

Post the birth of the new millennium, former UN Secretary General Kofi Annan wrote to over 50 CEOs of major financial institutions, inviting them to participate in a joint initiative under the auspices of the UN Global Compact and with the support of the International Finance Corporation (IFC) and the Swiss Government. The goal of the initiative was to find ways to integrate ESG into capital markets. A 20-person investor group drawn from institutions in 12 countries was supported by a 70-person group of experts from the investment industry, intergovernmental organizations and civil society. The Principles were launched in April 2006 at the New York Stock Exchange. Since then the number of signatories has grown from 100 to over 2,300 signatories, with approximately US$ 80 trillion assets under management.

In 2008, UNCTAD and the Principles for Responsible Investment (PRI) collaborated with investors, stock exchanges and public policy officials, for promoting responsible investment in emerging markets and examine the corresponding policy context. At the end of 2008, the Chief Executive of Aviva Investors called on all the listing authorities of Global Stock Exchanges to consider whether their listing rules should include a provision promoting disclosure by companies on their sustainability performance and strategy. This call to action and the groundwork laid out by the Global Compact, UNCTAD and PRI helped inspire a significant United Nations Initiative: The Sustainable Stock Exchanges (SSE) initiative.

The financial crisis of 2008 that caused a huge meltdown on investor’s asset had once again reinforced the requirement for considerations of ESG principles, since investors as long-term owners required to ensure the investment they made are at good hands.

![Chart Reference: Global Investor Study by Schroders on “Short History of Responsible investing](image-url)
The chart above shows the sharp increase in recent years of news coverage of sustainable investing (the grey line), the growth of responsible investment assets (the blue line) and the number of signatories to the Principles for Responsible Investment (PRI) (the black line), supported by the United Nations.

4. **SIGNIFICANCE OF ESG IN INVESTING**

ESG in investment decision making becomes more important as there is a need to pick companies which are responsible to Environment, Society and has good Corporate Governance in the portfolio so that the investment return can be sustained on a long run.

To drive the importance of ESG for investment screening, we have narrated a few cases where investors suffered huge losses on account of ESG issues.

4.1 **Volkswagen and the Emission Story**

In September 2015, German car manufacturer Volkswagen came under fire after admitting defective devices were installed on 11 million vehicles to cheat on emissions tests in clear violation of the U.S. Clean Air Act. The repercussions of the scandal involved recall and refitting costs for 11 million vehicles, compensation to owners, penalties and a tremendous loss of sales & reputation.

The scandal underlines the potential benefits of assessing companies with alternative data sets that highlight environmental, social, and governance (ESG) signals, flagging risks that are not identified by traditional analytical tools.

Though the emissions scandal took many environmental investors by surprise and is considered to have impacted ‘E’ - Environment factor of ESG, it also raised a number of questions about the company’s product management practices impacting ‘G’ – Governance factor. Good ‘governance’ was the key part of the ESG formula that would have provided an early warning to the scandal.

4.2 **Cambridge Analytica and the Society Story**

Cambridge Analytica is an advertising company which went defunct in 2018. The company specialized in using predictive analytics, behavioral science and innovative methods and used technology in running political campaigns. Cambridge Analytica’s goal was to show messages to the targeted user segment that will most likely to influence his/her behavior to vote for their client.

If Cambridge Analytica has to show messages that resonates with the user, then it requires information about the targeted users. To achieve this, Cambridge Analytica created a survey asking respondents about their personality by paying few dollars. It also took a consent from respondents to access their Facebook data including the pages they liked. Crucially the Facebook API’s allowed to extract data of their respondent friends as long as they are friends to the respondents and their privacy security setting are not turned off. The company mined data of around 30 Million users’ behavioral actions in Facebook and then used models to create a persona of the user with behavior predictions.

Even though the above is not a data breach, Facebook could have communicated to their users in a better way on availability of these privacy settings. When the information came out on public domain, Facebook lost $35 billion in market value. The Federal Trade Commission penalized $5 billion as fines for mishandling users' personal information.

4.3 **Enron and the Governance Story**

The spectacular rise of Enron in the 1990s and its subsequent debacle has been one of the biggest scams in corporate history. Enron, which began as an energy company made inroads into several other businesses. While the company reported huge profits year on year and the stock price skyrocketed, the complex nature of its business dealings and financial statements were not fully understood by investors as well as analysts.
The company’s leadership used Special Purpose Vehicles (SPVs) to move debts out of its balance sheet and used complex financial structures and techniques like mark-to-market to report inflated cashflows and earnings. The board of directors laid undue trust in the management and failed to contain conflicts of interest by allowing the top leaders to create private partnerships to do business with the company. The fraudulent practices of the top management and failure of the auditor Arthur Andersen in reviewing revenue recognition and other accounting practices resulted in a misrepresented balance sheet. All these issues eventually led to the bankruptcy of the company.

The case of Enron strongly highlights the need for investors and analysts to go beyond the financials and form a deeper understanding of a company’s business dealings and corporate governance. Factors like presence of a strong board of directors to safeguard the interest of shareholders, an ethical top management, independence and integrity of auditors, role of an independent audit committee, controls over conflict of interest and executive compensation policies, all of which form the ‘G’ of ESG analysis can certainly help identify red flags and lead to better investment decisions.

5. COMPONENTS OF ESG

The three components or pillars of ESG are:

Environmental: Environmental factors relate to how a company is committed toward environmental conservation and sustainability.

Social: Social factors deal with a company’s relationship with its employees and vendors.

Governance: Corporate governance covers the area of investigation into the rights and responsibilities of the management of a company – its board, shareholders and the various stakeholders.

These broad components are just a starting point for an in-depth ESG risk assessment. However multiple data points are required to measure the company’s performance against ESG. This requirement resulted in multiple data vendors viz., traditional market data vendors like Bloomberg, Reuters and MSCI who started including ESG data and specialized vendors like Sensefolio, Sustainalytics, Arabesque, ISS Governance etc.

These ESG data providers developed their own criteria for scoring companies under each of these broad components by including further sub-components & assigning weightages.

The table below was created to show the various measurement parameters used by ESG data providers. This is a super set of attributes across major ESG rating providers Sensefolio, MSCI, Thomson Reuters-Refinitiv & Bloomberg. and collated using publicly available information.

<table>
<thead>
<tr>
<th>Environment Factor</th>
<th>Measurement Parameters</th>
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</thead>
<tbody>
<tr>
<td>Climate Change</td>
<td>Carbon/GHG Emissions</td>
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<tr>
<td></td>
<td>Pollution</td>
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<tr>
<td></td>
<td>Energy/Fuel Management</td>
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<td></td>
<td>Complience with Environement Regulations</td>
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<tr>
<td></td>
<td>Environmental impact of assets and operations</td>
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<tr>
<td>Sustainability</td>
<td>Renewable energy</td>
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<tr>
<td></td>
<td>Biodiversity and land use impact</td>
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<tr>
<td></td>
<td>Raw materials and product packaging</td>
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<tr>
<td></td>
<td>Hazardous Materials Management</td>
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<td></td>
<td>Waste Disposal</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Social Factor</th>
<th>Measurement Parameters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workforce/Employee Standards</td>
<td>Health &amp; safety</td>
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<tr>
<td></td>
<td>Fair Labor Practices</td>
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<tr>
<td></td>
<td>Labor/Management Relations</td>
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<td></td>
<td>Training &amp; Education</td>
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<tr>
<td></td>
<td>Diversity &amp; Equal Opportunity</td>
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<tr>
<td></td>
<td>Compensation &amp; Benefits</td>
</tr>
</tbody>
</table>
### Community Responsibility
Commitment towards being a good citizen, protecting public health and respecting business ethics

- Customer Health & Safety
- Customer Privacy
- Fair Disclosure & Labelling
- Fair Marketing & Advertising
- Communities Relations
- Social Impacts on Assets & Operations

### Human Rights
Effectiveness towards respecting the fundamental human rights conventions

- Child Labor
- Freedom of Association & Collective Bargaining
- Non-Discrimination
- Rights of Indigenous Peoples

### Consumer/Product Responsibility
Capacity to produce quality goods and services integrating the customer's health and safety, integrity and data privacy

- Product Safety & Quality
- Chemical Safety
- Financial Product Safety
- Privacy & Data Security
- Responsible Investment
- Health & Demographic Risk

### Animal Welfare
Commitment and record of ethical treatment of animals

- Testing of products on animals
- Welfare of animal’s bread for food market

### Governance

<table>
<thead>
<tr>
<th>Factor</th>
<th>Measurement Parameters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leadership &amp; Management Structure</td>
<td>Audit Integrity &amp; Internal Control Risks</td>
</tr>
<tr>
<td>Commitment and effectiveness towards following best practice corporate governance principles.</td>
<td>Board Leadership</td>
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<td></td>
<td>Protection of Shareholder Rights</td>
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<tr>
<td></td>
<td>Systemic Risk Management</td>
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<tr>
<td></td>
<td>Executive compensation</td>
</tr>
<tr>
<td>Business Ethics</td>
<td>Anti-Corruption Policies</td>
</tr>
<tr>
<td>Upholding high standards of ethics &amp; values in business operations</td>
<td>Anti-Competitive Practices</td>
</tr>
<tr>
<td></td>
<td>Tax &amp; Payments Transparency</td>
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<tr>
<td></td>
<td>Regulatory Compliance</td>
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<tr>
<td></td>
<td>Political Influence</td>
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<tr>
<td>Outside Activities</td>
<td>CSR Strategy</td>
</tr>
<tr>
<td>Practices that integrate the economic, social and environmental dimensions into its day-to-day decision-making processes</td>
<td>Indirect Economic Impacts</td>
</tr>
<tr>
<td></td>
<td>Partnerships</td>
</tr>
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</table>

The reports coming out of companies on ESG information does not have a defined reporting standard and hence companies may report only information that are positive to their business or under report information that may be perceived negative. Hence to capture the un-reported or under reported information, service providers track various news services and identify news that can be significant from an ESG perspective. The identified news then analyzed and scored for impact.

**Controversy score**: Companies are rated or flagged for controversies which identifies companies involved in incidents that may negatively impact stakeholders, the environment or the company’s operations.

1 – Indicative attributes and not an exhaustive list of measurement criteria
6. STEPS FOR SUCCESSFUL ESG TRANSITION

Strategy
- Work with clients to understand their ESG preferences and the variety of options available to incorporate Client's ESG preferences into the investment screening process
- A due diligence process should be set up to draw the list of ESG factors for consideration. This should be accompanied with a periodic review of ESG factors
- Institutionalize process of providing guidance and support to managers lacking in ESG skills with feedback mechanism
- Analyze Red flags arising out of inclusion of ESG factors in investment screening and plan for resolution
- ESG metrics development to support the quantitative processes of Risk and Return and measure effectiveness of ESG strategy

Technology
- Identify ESG data vendors who provide coverage for the selected ESG factors and the investment universe. It should be bear in mind that it may be necessary to deal with multiple ESG data vendors to get the desired data coverage
- Define hierarchy and weights to ESG factors in ESG vendor feeds to arrive at golden copy of ESG metric consolidated at enterprise level
- Define Data Quality and Scrubbing rules for processing ESG vendor feeds
- Automate the workflow of hierarchy rules and DQ rules so that operations do not spend too much time to produce desired ESG metrics
- ESG is in its early evolution and hence ESG frameworks will also mature with time. Hence technology should be agile to changing needs of ESG framework

Process
- Define clear ESG Objectives
- Set clear KPA's and KPI's for the internal investment staff
- Train the internal investment staff on ESG factors
- Engage with beneficiaries to ensure alignment
- Measure and monitor impact of ESG on investment performance
- Feedback mechanism to review and finetune ESG strategy

7. CHALLENGES IN IMPLEMENTATION OF ESG IN INVESTING

With a lot being said about the increasing importance assigned to responsible investing and the evolution of responsible investing from pure exclusionary screening to integrating ESG factors alongside financial considerations in investment analysis, it is evident now that the question has moved from the ‘why’ to the ‘how’. While most investment managers are in some way incorporating ESG principles in their investment practice, there are still many practical challenges in the same.

1. Quality of consistent and comparable ESG Information
   Any analysis is only as good as the data it is based on, and the same holds true for ESG information too. There are no mandatory reporting standards on ESG information that companies are required to report on, hence every company uses its own discretion on reporting ESG information. The reporting may cover only their own operations or entire supply chain or general policies. This results in lack of consistency and comparability in the ESG information available for analysis across companies.

2. Materiality
   Out of the large amount of ESG information available on different companies, an important aspect is identifying what is material to a company’s financial performance. The ESG initiatives of a firm may not be linked with underlying Financial metrics, it will be difficult to directly assess the resultant financial performance achieved.
Hence it becomes difficult to identify the material factors which are relevant for the given company’s performance.

3. **Standardization of ESG Data and Ratings**
   
   There are several third-party data providers (more than 150), who provide data and ratings on companies considering a host of ESG factors from various sources. Incorporating the ESG ratings from service providers requires good understanding on the data sources, criteria used, data weightage for various indicators in the final score. It should be noted that the no. of indicators may differ for different service providers. Each of these providers uses proprietary methodology for gathering and quantifying the information to arrive at ratings. The rating models may vary from computer driven algorithmic models to an analyst driven estimations or a hybrid approach. This leads to cases where the rating for a single company varies widely across different providers.

4. **Coverage**
   
   Number of companies covered, Analytics provided and ESG factors coverage vary from service provider to service provider. There are specialized service providers who may focus only on Environment or Society and Governance. It requires significant effort to select a service provider who provides data that matches your needs. More often, investors may have to rely on more than one service provider to get the information universe required for their decision making.

5. **ESG in Fixed income**
   
   The inherent complexity and low liquidity of the Bond markets makes it difficult to incorporate ESG factors in the credit analysis on the one hand and makes it difficult to buy and sell bonds based on ESG information on the other. The inability of bondholders to vote also makes it difficult for them to engage with the management on ESG matters. A survey published by the CFA Institute along with the UN PRI in 2018 shows that the adoption of ESG in investment decisions is higher in Equity analysis as compared to Fixed Income.

8. **CONCLUSION**
   
   It should be understood that responsible investment neither preaches exclusivity to any sector or company, nor does it recommend sacrificing financial returns to meet moral or ethical considerations. It simply aims to include ESG information in investment decision-making, to ensure that all relevant factors are accounted for when assessing risk and return. It supports the idea that responsible investment should be pursued even by the investor whose sole purpose is financial return, because ignoring ESG factors means ignoring risks and opportunities that can significantly affect investment returns.

   Several initiatives are underway by various bodies such as the Global Reporting Initiative (GRI), CDP, formerly the Carbon Disclosure Project, Sustainability Accounting Standards Board (SASB), FSB Task Force on Climate-related Financial Disclosures (TCFD) which are providing guidelines on disclosures related to ESG factors to enable data standardization. The Sustainability Accounting Standards Board (SASB) has in November 2018 issued industry specific standards designed to assist companies in disclosing financially material, decision-useful sustainability information to investors.

   While regulations are striving to improve data disclosures by companies it should be ensured that reporting requirements are made easy without compromising the required data integrity. Similarly, there should be more clarity available to investors for understanding the ratings and rankings published by service providers and able to understand the differences in ratings while maintaining the veil on the proprietary logic. This should enable more investors to integrate the ESG factors into their decision-making process.

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