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Uplifting ESG Data Management
Capabilities for Investment
Management





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Background

In the last decade, Environmental, Social, and Governance (ESG) investing has gained tremendous traction. According to a research published by Bloomberg Intelligence, ESG assets are on track to exceed USD 53 trillion by 2025, representing more than a third of the projected global AUM¹. The principal external catalyst driving the global ESG investing momentum is the millennial investors' growing interest and demand for sustainable investment products that align with their core values. Internally, asset managers and asset owners have also recognised ESG as a new lens for managing risk. From the boardroom to the shopping cart, a wide array of stakeholders are looking to each of the Environmental, Social and Governance based performance criteria to support their purchase and investment behaviour. At the same time, the stakes with ESG investing have become high, with buy-side firms needing to tread their ESG investing journeys carefully to avoid potential risks, such as "greenwashing" allegations in the future.



Greenwashing 101

In the current investment climate, any conversation on the ESG investing megatrend is incomplete without greenwashing. An effective ESG data management capability can be construed as a strategic solution to combat greenwashing by buy-side firms. But before taking a deep dive into this problem statement, it is important to frame a basic understanding of this term.



So, what is Greenwashing?

Greenwashing is the act of making false or misleading claims about the environmental or social benefits of using a product, service or solution offered by a company. Although this is an industry-agnostic phenomenon; in our paper, we have touched upon this topic from an investment management perspective. Greenwashing comes in various shades and forms, and it is worth distinguishing between the two types:



Intentional Greenwashing:

This happens when buy-side firms knowingly and deliberately mislead its investors by making false or exaggerated claims about their ESG credentials like target for transitioning to net zero, ESG integration, exclusionary screening, inclusionary screening or any other ESG pledges in their investment products. This type of greenwashing inculcates a moral hazard to the global investment community and erodes long-term trust and credibility between asset managers and investors.



Unintentional Greenwashing:

This happens when asset managers and asset owners themselves get blindsided by the underlying data supporting ESG perplexities and taxonomies, leading to misrepresentation of ESG compliance for investment products.



The key difference between those two types of greenwashing lies in the intent. While both can result in misleading claims, intentional greenwashing involves deliberate attempts to mislead investors and sponsors, whereas unintentional greenwashing stems from a lack of understanding or oversight.

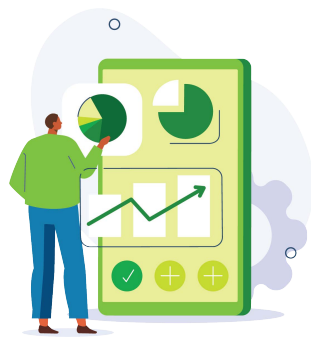


Intentional greenwashing can be primarily addressed through appropriate disclosures and SFDR classifications under articles 6, 8 & 9 funds. However, the other form of greenwashing can only be addressed through a series of ongoing measures like research, due diligence, data analytics, ongoing reporting and active engagement. All actions except for active engagement require buy-side firms to turn ESG data into material insights that can be embedded in their investment workflows across the front and middle office functions. For more information on Greenwashing, please refer to our previously published paper [here](#).



What makes ESG datasets different from traditional financial datasets?

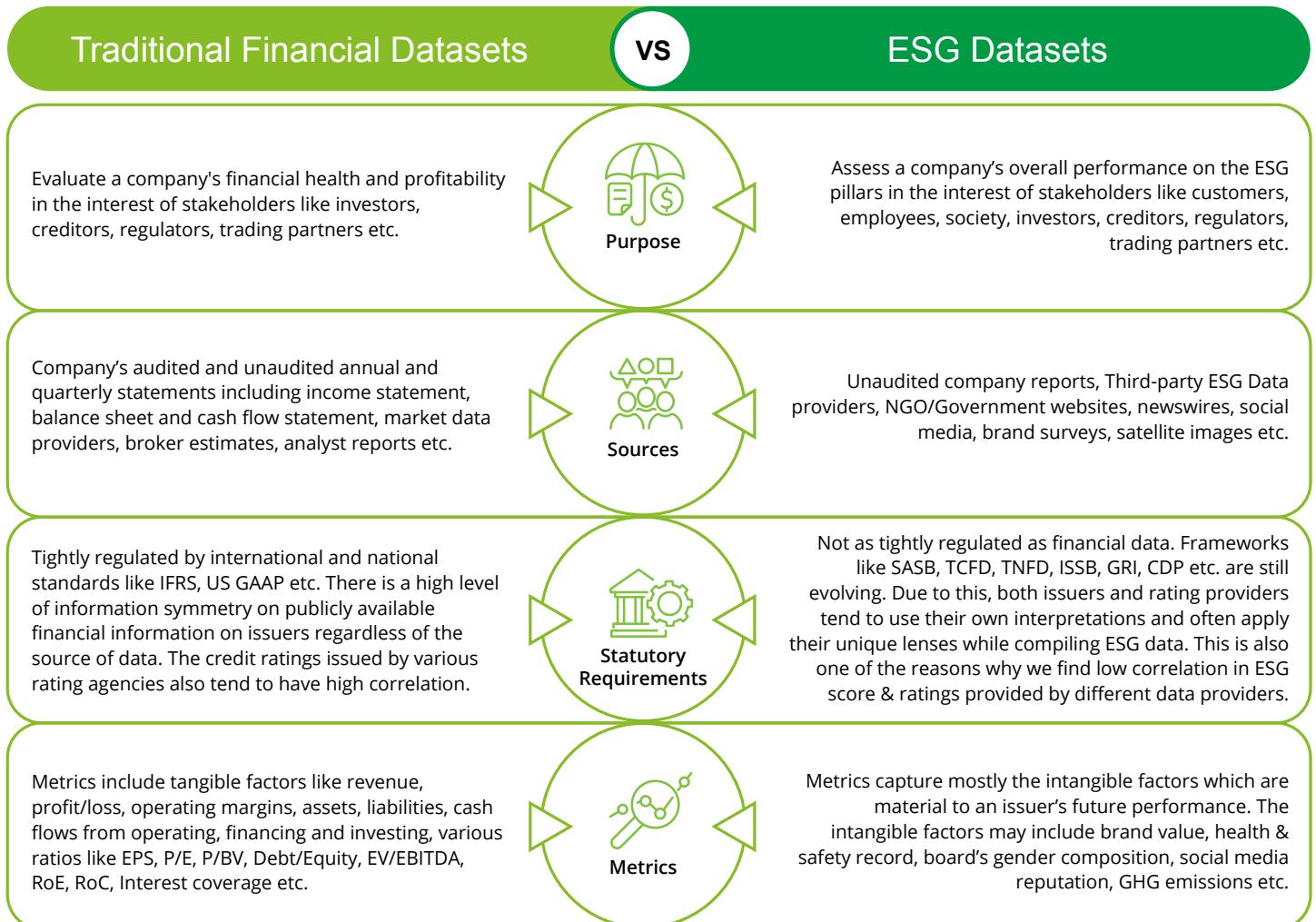
In order to comprehend the whole confusion around ESG data, it is also important to observe the distinctions it holds from conventional financial datasets.



So, how are they different?

ESG data is a type of non-financial dataset - a unique dataset with different taxonomy. The differences between ESG and traditional financial data can be summarised into four major categories. These are purpose, sources, statutory requirements and metrics. At a high level, traditional financial datasets tend to capture the tangible factors driving the direct performance of a company, like its revenue growth, margin growth, profitability, assets, liabilities etc. In contrast, ESG datasets tend to capture the softer intangible factors which could be material to an issuer's future performance. These may include brand value, health & safety record, board's gender composition, social media reputation, GHG emissions etc. Please see the exhibit below for reference.

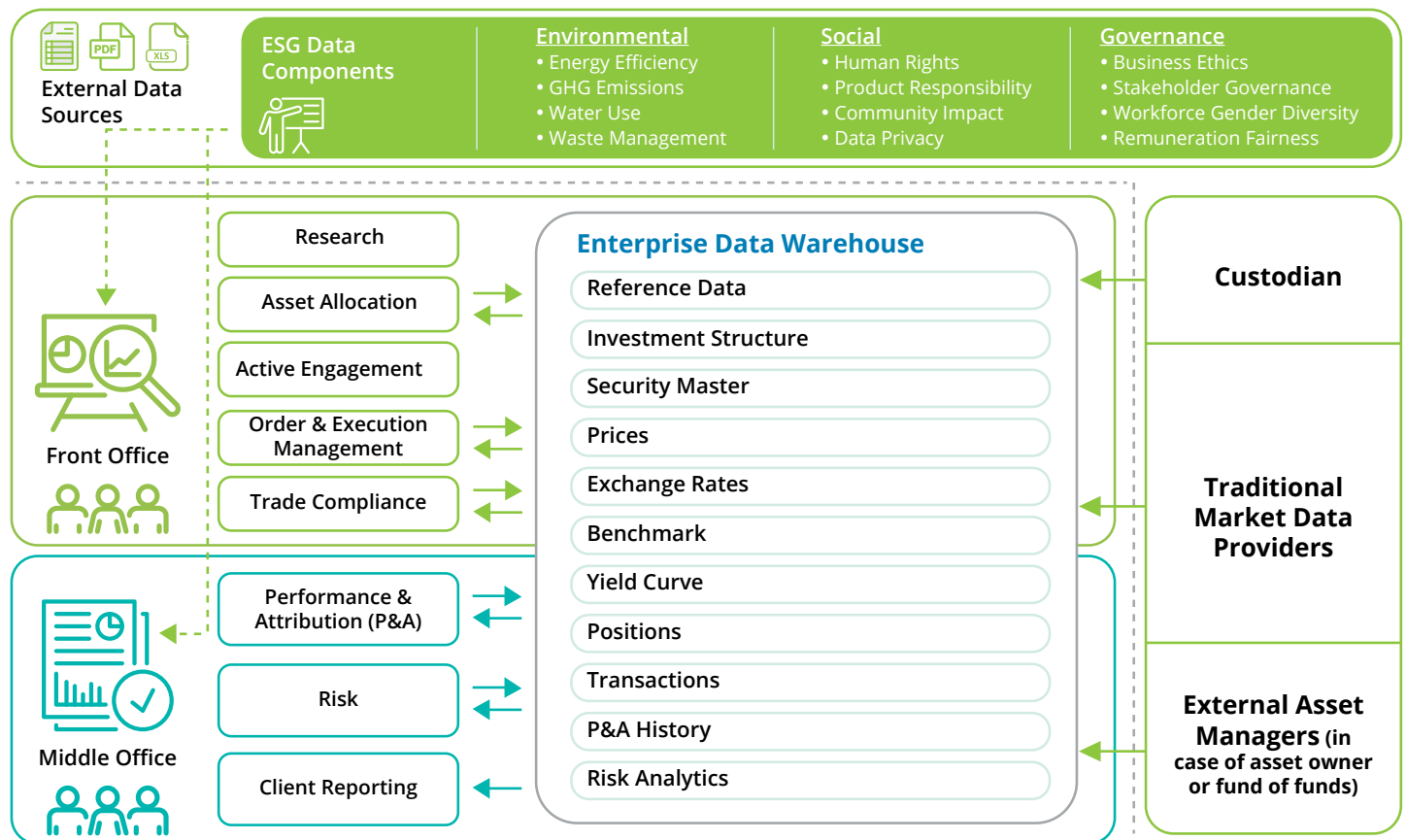
Exhibit 1: Key Differences between Traditional Financial Datasets and ESG Datasets



How does the integration of ESG factors into the front and middle office functions look in the current state for many investment firms?

Buy-side firms with a decentralised team for ESG domain typically interact with ESG data under multiple layers across their front and middle office functions.

Exhibit 2: A Common Example of Current State ESG Data Integration



1) Front Office



Research: Investment Research is one of the core competencies of any buy-side firm. The front office research teams typically use Research Management Systems (RMS) to make their research process efficient and streamlined. These RMS platforms enable swift collaboration of thematic ideas across various research desks, including Growth, Defensive, Income, Factors, Quantitative strategies etc. Some of the leading vendors in the buy-side technology space offer these RMS platforms. In the last few years, these RMS platform providers have also started uplifting their research workflows capabilities to support the cross-referencing of ESG and Sustainability specific metrics with fundamental data. This helps research desks expand their investment hypothesis and overlay their internal ESG guidance on securities in their coverage universe.

Through these ESG research capabilities, Investment Research teams can:

- Grade their Securities of Interest (SOI) on various ESG parameters
- View ESG scores at both aggregate and granular levels
- Publish internal memo and comments on the sustainability status of their SOI and outline any overweight/underweight recommendations
- Maintain a complete and auditable history of the investment selection process for reporting to internal and external stakeholders
- Integrate their preferred third-party ESG ratings data and analytics sources in their research hub

Asset Allocation: Asset allocation involves spreading an investment portfolio over a range of asset classes to optimise investor's returns and risk trade-offs. It is the most dominant factor which determines a portfolio's return variability. For asset owners, the asset allocation function is also connected to the manager selection process since a vast majority of asset owners give investment mandates to external asset managers to manage portfolios on their behalf.

Of late, Asset Owners, High Net worth Investors (HNIs) and Retail investors have started demanding ESG factor integration in their portfolios from Investment Managers. The use and application of ESG data on asset allocation and manager selection function can vary significantly based on the ESG investment process.

The Impact & Responsible Investing themes are mainly based on negative or positive screening techniques and leverage various ESG-related qualitative and quantitative filters to exclude or include some asset types, sectors and securities in their investment process. The underlying data points to support these screening processes may consist of

GHG emissions, forest cover impact, agricultural land impact, terrestrial and marine wildlife impact, fossil fuel energy consumption, child labour participation, mortality rate impact, corruption impact, gender balance, violence impact, political stability etc. Research analysts monitor these screenings periodically or based on some corporate actions or events since any significant deviation in the data attribute may warrant a buy/sell call.

The other approach, i.e. **ESG Integrated** approach, has more complex ESG data requirements since it does not believe in a simple exclusion and inclusion technique. It involves holistic investment analysis encompassing all material factors, including financial and non-financial (ESG) data points. Due to this nature, it is common to find fossil fuel stocks in an ESG-integrated portfolio. However, to overlay ESG factors on top of a fundamental style investment process, Portfolio Managers must build a continuous noise distillation process with these ESG datasets before using it in conjunction with traditional financial parameters in choosing the investment mix of a portfolio.

Active Engagement: For active asset owners, engagement is a crucial part of their investment process. It presents an appropriate forum to raise any relevant ESG concerns in front of the boards and senior leaders of the investee companies. Through active engagement steps like participation in the Annual General Meetings

(AGMs), direct dialogue with the C-suite leaders, proxy-voting etc., buy-side firms like to develop an ESG strategy that is aligned with the overarching corporate strategy with material issues and having underlying targets and metrics that are both aspirational yet achievable. Then, they monitor progress against the agreed goals.

The world's leading asset owners and asset managers are a signatory to Climate Action 100+, an investor-led initiative to ensure the world's largest corporate greenhouse gas emitters take necessary action on climate change.

This committee had praised the shareholder vote for a famous north america based oil and gas firm in May 2021 to replace two of their board of directors with candidates experienced in clean energy and energy transitions. The chairman of this committee, Anne Simpson said, 'Investors are no longer standing on the sidelines. This is a day of reckoning. The votes for change by Climate Action 100+ signatories show the sense of urgency across the capital markets.'



Order, Execution and Compliance Management:

Along with Portfolio Managers, buy-side firms also rely on traders and dealers to buy and sell securities in their investment portfolios. There are some prominent technology platforms in the market that facilitate trade order and execution management for the front office teams. While vendors like Charles River, Bloomberg, FactSet etc. can offer an integrated interface to support both Order and Execution Management System (OEMS) capabilities, others like BRS Aladdin and SimCorp primarily offer Order Management capabilities and rely on their preferred partner network to offer Execution Management functionality to their buy-side clients. Traders can create new orders, perform Transaction Cost Analysis (TCA), run compliance checks, seek best prices, monitor market data and security updates for active orders etc., within the same investment workflow.

Some OEMS vendors offer their front office clients a direct access to headline ESG scores and underlying metrics like GHG emissions, Water Usage Efficiency, Renewable Energy Use Ratio, Employee Satisfaction, Gender Pay Gap Percentage, Diversity Equity & Inclusion (DEI), Employee Turnover Ratio, Injuries to Million Hours, Audit Committee Independence,

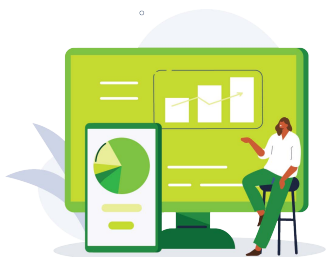
Board Gender Diversity Percent etc. from some industry-leading ESG data providers to support investment decision-making based on ESG criteria using those datasets.

On these platforms, the end users can access ESG data directly on the interface to run positive/negative screening and build powerful insights and dashboards to support their ESG hypothesis further.

To build ESG-compliant portfolios, some OEMS platform providers have started offering:

- Full monitoring and control of specified ESG scores and thresholds
- Application of restrictions using ESG rating data, sectors, and/or specified issuers
- Execution of real-time, what-if compliance for proposed orders
- Rules creation and modification based on vendor-specific ESG datasets and categories

2) Middle Office



Performance & Attribution (P&A): Most asset managers and asset owners turn to their Performance & Attribution department (whether in-house or partially outsourced) to offer a true reflection on their investment decision-making process based on Accounting Book of Record (ABOR) data. These teams compute various standard and bespoke flavours of performance and analytics metrics like Time & Money weighted Returns at security, sector & portfolio level, Attribution effects of Asset Allocation, Stock Selection, Duration, Convexity & Yield Curve positioning decisions etc., Ex-post statistics like Sharpe, Information, Treynor, Alpha, Beta, Value at Risk etc. for various time periods. The nature of these data-intensive computations requires the P&A function to drive the heavy lifting on investment data management. Consequently, they often end up spending a significant proportion of their time wrestling with data exceptions.

For ESG-integrated portfolios which are pitted against ESG factor benchmarks, the P&A teams can decompose the effect of Portfolio Manager's active ESG bets into ESG Allocation and ESG Selection effects using the traditional Brinson-Fachler model. Likewise, using Greenhouse Gas (GHG) emissions data, they can also quantify the carbon intensity of a portfolio with respect

Risk: The role of an investment risk team in buy-side firms is to identify, measure, monitor, and manage the risks associated with the firm's investment portfolio. This includes evaluating the potential return and risk of different assets, designing and implementing risk management strategies, and monitoring portfolio performance to ensure it aligns with the firm's investment objectives and risk tolerance. Depending upon the nature of underlying assets, the risk team manages portfolio's exposure to several types of risks such as Market Risk, Credit Risk, Liquidity Risk, Counterparty Risk, Climate Risk, Reputational Risk, Modern Slavery Risk or any other Idiosyncratic Risk. Since Risk teams have a strong voice in investment decisions, some firms also like to classify Risk under their Front office function. While its positioning under the Front or Middle office can be an operating model decision, buy-side firms should always ensure that Risk Management is treated as a fully independent function.

For ESG, the Risk Management teams provide a holistic oversight of the ESG investing principles committed by the Portfolio Managers. They can validate the parameters used for positive and negative screening models and offer any internal guidance on the re-rating

to a benchmark. Asset owners and asset managers who are part of the Net-Zero Paris agreement can use this analysis to discover which portfolio segment (individual securities, asset classes, sectors, industry, region etc.) poses higher climate risk relative to the benchmark.

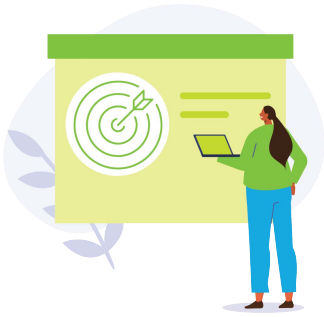
of securities in the wake of any material events. They are responsible for substantiating the ongoing alignment of investment portfolios with any relevant United Nation's Sustainable Development Goals (SDG). They can also run Climate Scenario Analysis independently on the firm's Net-Zero roadmap on an ongoing basis.

Client Reporting: Client Reporting can be an independent function for a majority of the buy-side firms. However, for some players, it can also be an extension of their P&A function. The Client Reporting teams are expected to publish a variety of reports reflecting the exposure summary, fee, performance, attribution, risk, portfolio manager's outlook etc., to cater to clients and regulatory requirements on a timely and ad hoc basis. These reports are usually delivered in either pre-canned (.xlsx, .docx, .pptx, or .pdf) formats and via self-service dashboards configured on top of some data visualisation platforms like Tableau, PowerBI, QlikView etc.

The onus of reporting ESG metrics of the portfolio also sometimes falls on the shoulders of the client reporting team. They publish insights with a holistic view of the ESG profile of a portfolio, measuring key ESG statistics at the portfolio, sector, industry and issuer level.

So, what are the significant challenges with ESG data for asset managers and asset owners?

While data is pivotal to the success of any ESG investment process for any investment firm, till date, data quality remains an unsolved piece in the puzzle when it comes to ESG integration. The challenges with ESG data quality can be further expanded into the below four themes:



Lack of reliability and completeness in the raw data: The raw ESG datasets are primarily sourced from publicly available information like a company's self-reported CSR reports, annual reports, company websites, some NGO publications etc. However, these datasets are often unaudited and are not comparable within the peer group due to a lack of commonly accepted global reporting standards. This shifts the onus of ensuring data quality onto the shoulders of the consumers of data i.e. investment firms in this case. Any oversight on the self-reported numbers can potentially lead investment firms towards unintentional greenwashing. Also remember that in most cases, the quality and granularity of ESG datasets can also vary by geographies, asset classes and size of the firms. This means it's easier to access ESG data published by a large-cap stock listed in a developed market region than a convertible bond issuer domiciled in an emerging market.

ESG data vendors have built a vibrant data marketplace in the last decade. They have added incredible value in the proliferation of ESG investing with their core offerings. They have worked alongside industry practitioners and regulators to shape the narrative around Responsible and Sustainable investing. There are more than 100 ESG data providers in the global ESG ecosystem and they are currently going through a consolidation wave. Since there is a lot to cover on the ESG data firms, we will try to explore this area in another article in future.



Divergence in off-the-shelf ESG ratings and scores in the absence of a definitive global regulation:

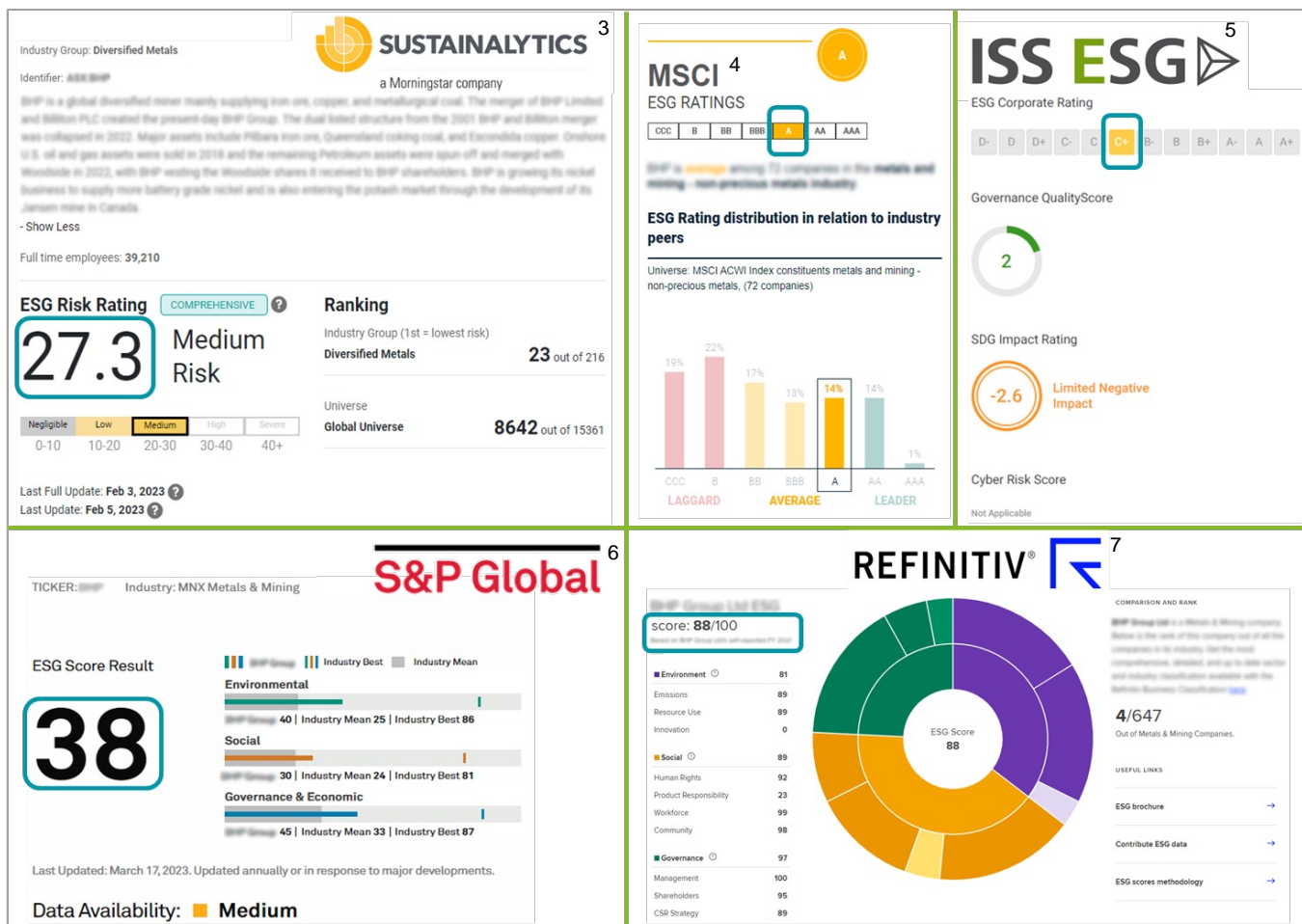
ESG composite scores and ratings of firms in their investable universe help buy-side firms in the research and portfolio management processes. However, portfolio managers have to deal with wide-ranging inconsistencies between the ESG ratings provided by various leading rating providers. According to a research conducted by MIT - Sloan School of Management², the average correlation among six prominent ESG rating providers (KLD/MSCI Stats, Sustainalytics, Vigeo Eiris/Moody's, RobecoSAM/S&P Global, Asset4/Refinitiv, and MSCI) was found to be 0.61. In comparison, mainstream credit ratings from Moody's and Standard & Poor's had a correlation coefficient of 0.99.

Even though there are some ESG reporting frameworks like SASB, TCFD, TNFD, ISSB, GRI, CDP etc., they are still evolving. Due to a lack of global consensus on what and how a particular ESG metric should be derived

and reported, the rating providers tend to exhibit idiosyncratic behaviour in their rating outcomes. These rating inconsistencies arise primarily due to three factors; scope misalignment, variance in raw data and difference in weighting preferences. Scope misalignment occurs when ratings are based on different attributes - for instance, an ESG rating provider includes carbon emissions or gender diversity in the workforce while another does not - resulting in rating inconsistencies. Some agencies measure the same attributes but do so using different raw data, which results in different rating outcomes. The last factor relates to weights divergence, which emerges when ESG rating agencies assign different weights to the individual ESG data components while calculating the overall ESG score of a firm.

Please refer to the below exhibit, which reflects the headline ESG scores for an ASX listed large cap security, which has been gathered from five prominent rating providers from the public domain.

Exhibit 3: An Example of Divergence in ESG Ratings



Rating Provider	ESG Score
Sustainalytics	27.3
MSCI	A
ISS	G+
S&P Global	38
Refinitiv	88

Another school of thought also compares ESG scores and ratings with sell-side research reports, which, by design, offer opinions instead of factual information. Sell-side research analysts study and process similar financial statements as their starting point but arrive at different investment recommendations. This means ESG ratings can remain subjective opinions and do not have to be synchronised between different vendors.

Lack of cohesion between ESG and traditional investment datasets: The ESG data feeds sourced from various data providers often end up outside the formal investment data ecosystem for many buy-side firms and remain isolated from financial reports, broker estimates, pricing, positions, transactions, performance, attribution, security level benchmark and risk metrics. This may lead to incomplete and fragmented insights since front office teams cannot derive a 360-degree view of a company's overall financial health, risk profile and sustainability practices at one central location and in the absence of that level of cohesiveness in the investment framework, portfolio managers and research analysts may overlook important risks or miss opportunities related to sustainability factors, which can impact investment outcomes over the long term. This type of ESG data silos creation happens because either the legacy enterprise data warehouse of the investment firm cannot offer a native unified data model to support data mastery and ingestion of ESG data at a granular level,

or sometimes the data management team lack the expertise to design a cohesive ESG data management workflow to combine ESG data with traditional investment data. Please note that the most legacy enterprise data management platforms were developed in the pre-ESG era and were equipped to handle only security master, positions, transactions, constituent level benchmark, attribution, risk etc. datasets. These datasets typically contain less than 200 attributes per security. With ESG, the number of attributes per security has gone beyond 1000 fields, and these field attributes are entirely new. Hence, most legacy data models can't support the storage and validation of ESG data.

As the investable universe of ESG assets keep expanding into new securities and asset classes and the regulation becomes more demanding, these technical limitations can severely restrict the scalability of ESG integration in the overall investment process.

This proves the point that ESG is not just a data problem from the supply side, but it is also an enterprise data management problem which needs a holistic approach.

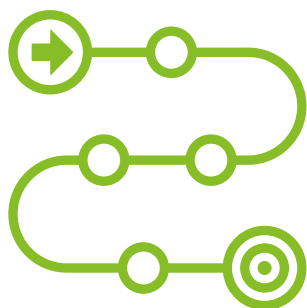
Lack of publicly available ESG datasets for Private Assets:

For unlisted/private assets, both General Partners and Limited Partners (GPs & LPs) are subjected to a different set of ESG data complexities. On one side, GPs are under tight pressure from their LPs to demonstrate a strong alignment of their portfolios with SDGs or other strategic initiatives like Climate Action, Diversity, Equity & Inclusion (DEI) and Corporate Governance and on the other side, GPs are looking for granular level E, S & G inputs within their investment universe to overlay it appropriately in their investment due diligence. However, unlike public markets, where investee firms publish a vast amount of financial and non-financial information

to meet their statutory requirements, private market assets are less heavily regulated. Hence, they are not obliged to release the same magnitude of information about their financial and non-financial performance. Several private firms also spread themselves too thin and tend to see ESG reporting as an overhead cost. So, these firms end up in situations where they neither have any real motivation to share this type of ESG information with their investors unless they are going public, nor do they have the adequate resource bandwidth to support it. Additionally, the information which is made available is also inconsistent and closely dependent on the sub-asset types.

Then, how can buy-side firms navigate their way through the above ESG Data Management challenges?

While the ESG data challenges continue to bother the entire investment community, the overall information asymmetry within the ESG data space also presents both investment and operational alpha opportunities for those who are ready to lift their game. Buy-side firms can create the following six-step game plan to get ahead in the ESG data maturity curve:



Develop an ESG-tailored data sourcing strategy:

The ESG market data space is buzzing with over a hundred vendors. Buy-side firms should consider multiple data providers based on the vendor's specific strengths and weaknesses in data quality, asset-class and geographical coverage and the materiality of key ESG factors on the aggregate scores. Before subscribing to a vendor data feed, the Front Office team, including Research analysts and Portfolio Managers, should spend time looking under the hood to understand a vendor's scoring methodology to avoid any unwanted biases and uncover any red flags with the data quality in the early stages. The

data feeds should be fit-for-purpose and provide adequate security universe coverage for portfolio construction and maintenance. The role of matching the right ESG metrics with the manager's investment philosophy can also be played by a team of external subject matter experts.

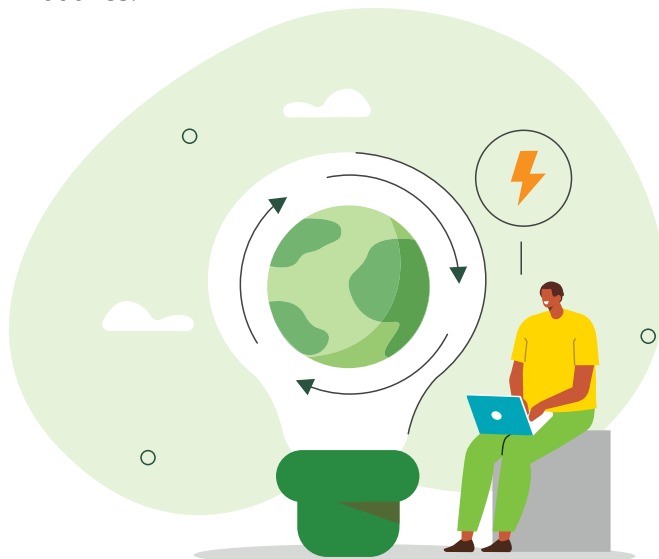
Formulate internal ESG assessment methodology:

The case of low correlations in ESG ratings compiled by data vendors and the data quality gaps associated with raw data also warrants the creation of a proprietary ESG scoring framework. A solid proprietary company-level ESG scoring process can filter the external noise from ESG data and add investment alpha to the portfolio. The investment teams can formalise their house views on materiality and weight allocations of ESG scores of their securities of interest at a granular level. However, it must also be noted that an ESG scorecard at a security level doesn't directly provide a buy/sell signal for a security. Under the ESG integrated approach, that ESG score has to be overlayed on top of the fundamental metrics of that security to derive a balanced performance and risk score. This strategy could be distinctly relevant for asset managers. They can implement this at least for listed securities and translate their unique understanding of the ESG domain into investment alpha.

Implement an ESG Data Governance framework:

The number of data elements catering to ESG domain has surged to an extent where it has even become its

Achilles heel. The lack of reliability and completeness with these massive volumes of ESG data has started creating more problems for the investment firms than solving it. To raise the trust quotient of ESG datasets, these firms should consider establishing an ESG Data Governance framework. As part of this framework, these firms can implement the below process-level initiatives:



ESG Data Governance Roadmap

1 Inculcate a culture of ESG data stewardship within the firm

Investment firms should imbibe a culture of accountability for ESG data by identifying resources across teams to govern all externally sourced ESG datasets. These ESG data stewards would be responsible for setting expectations with the ESG data quality. With an adequate expertise on the ESG data domain, this team would act as the first line of defence for ESG data. These resources would also be receiving ongoing trainings on regulations and frameworks which drive ESG investing in key jurisdictions. They would be documenting clear policies and procedures on ESG data and apply a business lens in mitigating any data quality gaps.

2 Create and maintain a comprehensive ESG business glossary

The ESG investing landscape is filled with jargons and acronyms. Ambiguities in ESG taxonomy can appear in a couple of forms. The same term can be interpreted in multiple ways by different team members and sometimes different terms can also be used interchangeably to refer to a common topic. By creating an ESG business glossary, buy-side firms can standardise the terminology used in ESG investing and drive ESG data literacy. This glossary can serve as a reference guide for all stakeholders involved in ESG investing, ensuring that everyone has a clear and consistent understanding of key terms and concepts. This can help to improve communication, reduce confusion, and support informed decision-making in the area of ESG investing.

3 Measure data quality on five key dimensions to certify ESG data

	Completeness	Consistency	Timeliness	Uniqueness	Lineage
Problem Statement	Does the dataset cover all the mandatory ESG information required for investment decision making?	Is the ESG information consistent if it is leveraged by multiple functions?	01. Is there any stale data reported in the ESG data feed? 02. Is the frequency of data collection agile enough to pick-up any sudden changes in ESG scores?	Are there duplicate records within the same ESG dataset?	Does the ESG dataset offer references to original sources?
Use Case	#What if an Asset Manager complying to SFDR received a missing Scope 2 GHG emission data from an investee firm?	#What if the energy consumption reported in CDP and Dow Jones Sustainability World Index turned out to be different for an investee firm?	#What if the previous year's board gender diversity data was accidentally copied over to the current year data feed? #What if the ESG controversy category score changed dramatically for an investee firm after a forensic financial research report was published but this change wasn't captured in the ESG dataset until next quarter?	#What if an investee firm operating in the Consumer Goods industry has reported multiple rows for Board Gender Diversity, Percent with same values but missed the record for Average Board Tenure ?	#What if the Renewable Energy Use Ratio for an investee firm operating in the metals and mining industry appears like an outlier record when compared to its peer group?
Conceptual Solution	Data profiling can help spot any missing record/values in the ESG dataset systematically	Data inconsistencies can be flagged via reconciliation and data providers should be able to explain this with any prior-period adjustments or any other reasons	The date and time stamps should be visible to reflect the status on latest data refresh. Time series data should be considered to investigate any big spikes on key ESG metrics on a periodic basis. Event based triggers should be embedded in the data feeds to flag any significant change in the ESG scores on a real time basis.	Duplicates can be spotted and removed by using a combination of parameters on the data headers. For instance a combination of data_source+security_id+effective_date+esg_field_attribute should always throw unique records. This type of check can be easily executed in either excel spreadsheets or SQL database.	A data dictionary or Entity Relationship Diagram (ERD) should be maintained to ensure that all ESG data attributes can be traced and connected. Any ESG data element at a granular level (e.g. Total Waste/Million in Revenue \$) which was derived by a data aggregator as opposed to being directly reported by an investee firm should be flagged to maintain transparency.

By taking the above steps, investment firms can ensure that ESG data is handled with the care and attention it deserves to support all responsible investment decisions that align with their client's goals.

Uplift the enterprise data warehouse to store both ESG and traditional investment data under a unified data model:

A modern ESG data management platform should allow data management teams to maintain, normalise, match, consolidate and merge ESG datasets gathered from multiple sources into a unified data model, so both ESG and non-ESG structured investment datasets can be cross-referenced and retrieved on-demand using common security identifiers. This scale of enhancement in ESG data management capabilities can help both front and middle office functions in creating a competitive advantage for their firm.

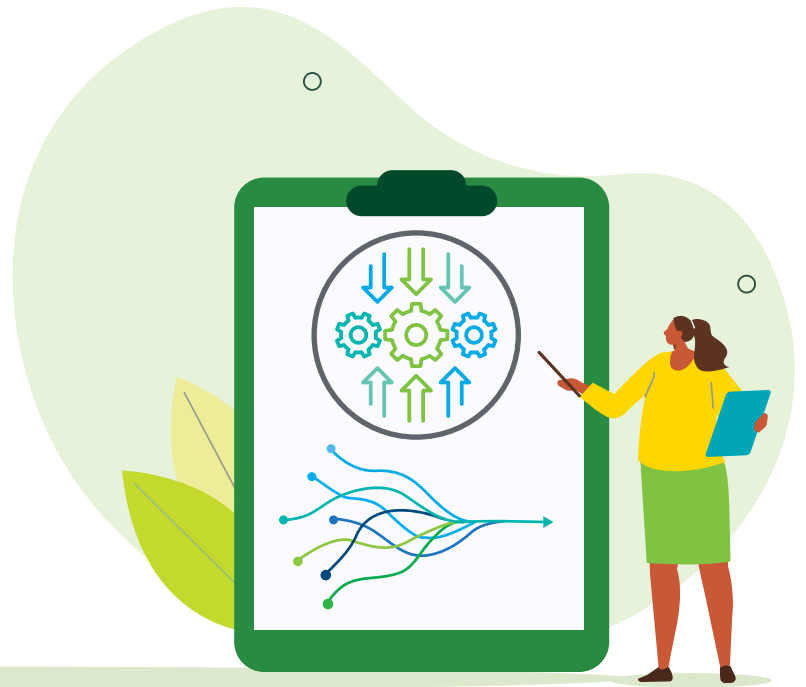
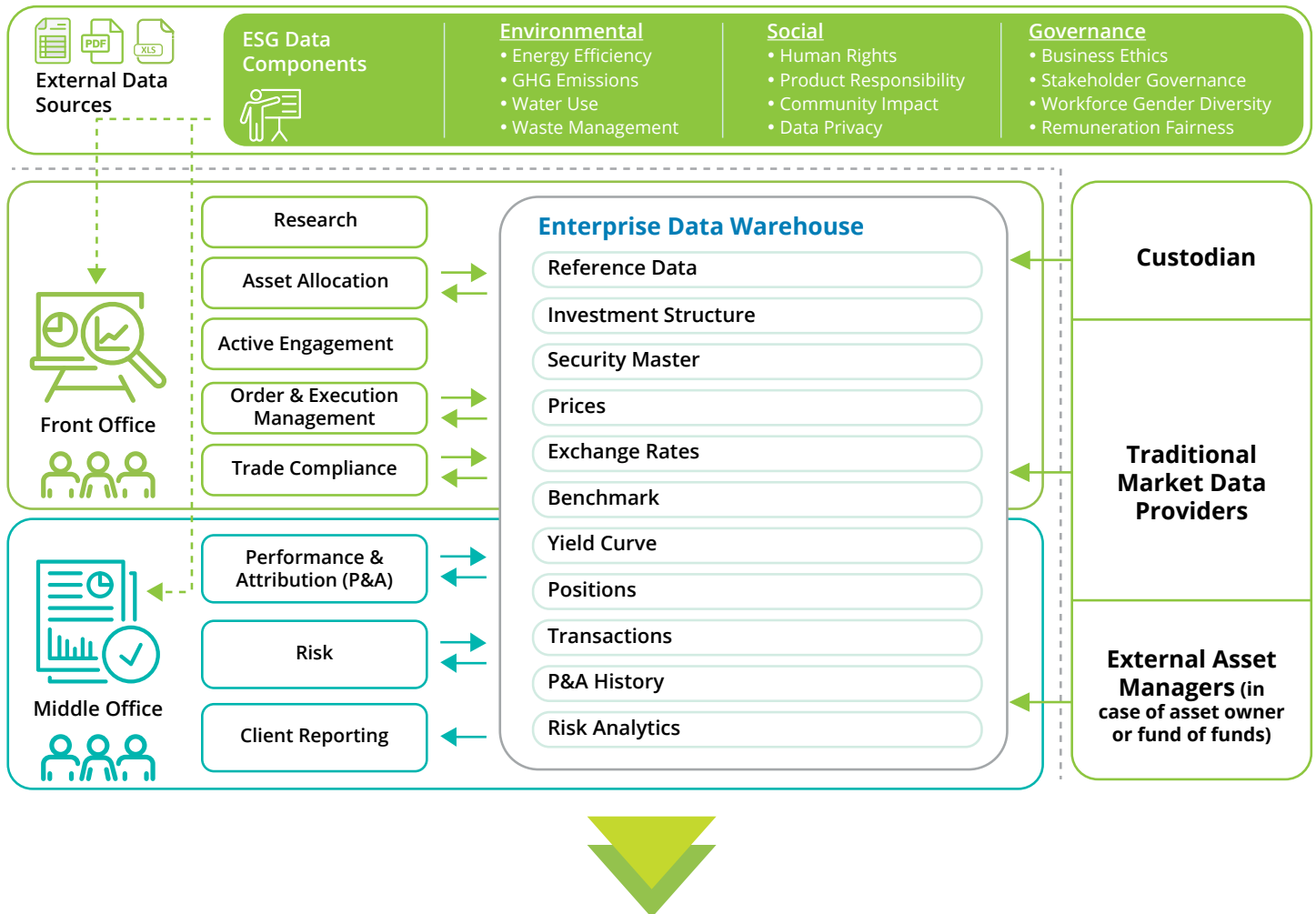
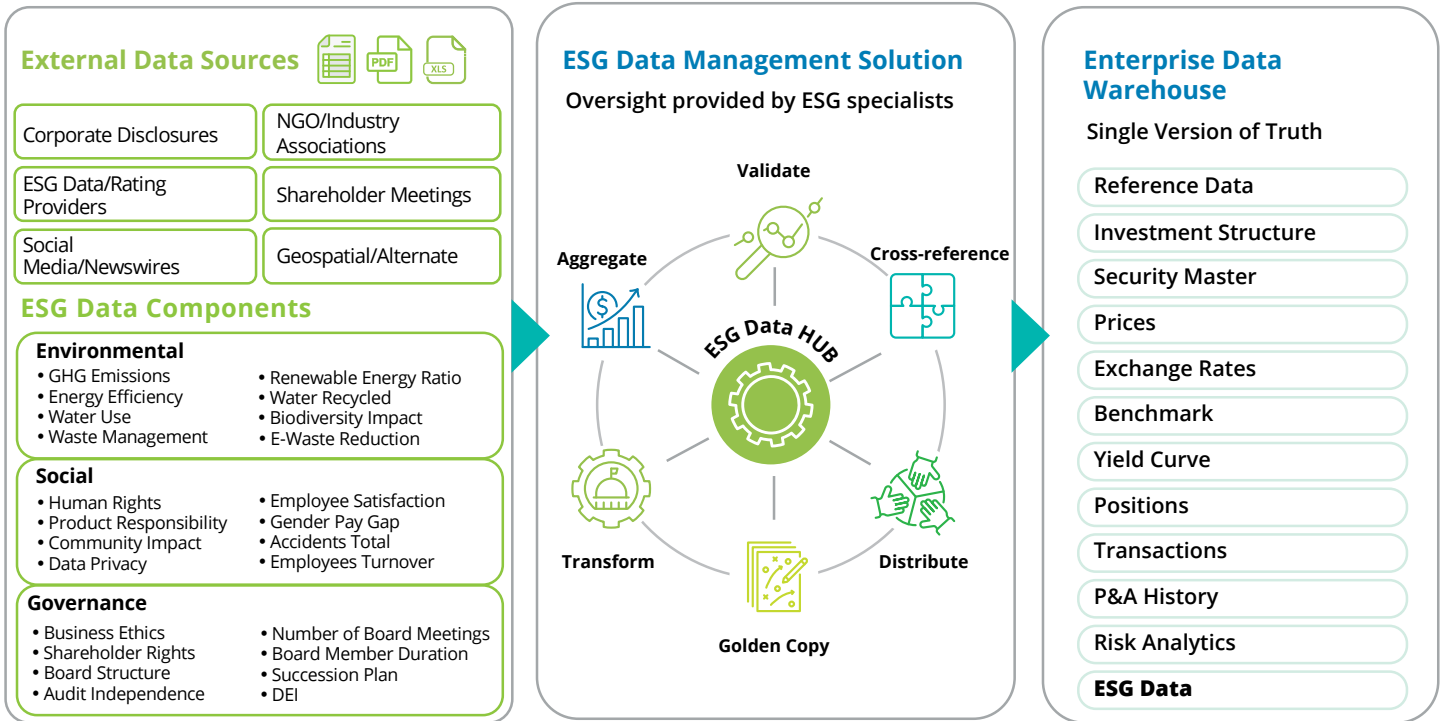


Exhibit 4: Develop a Target State ESG Data Integration Design

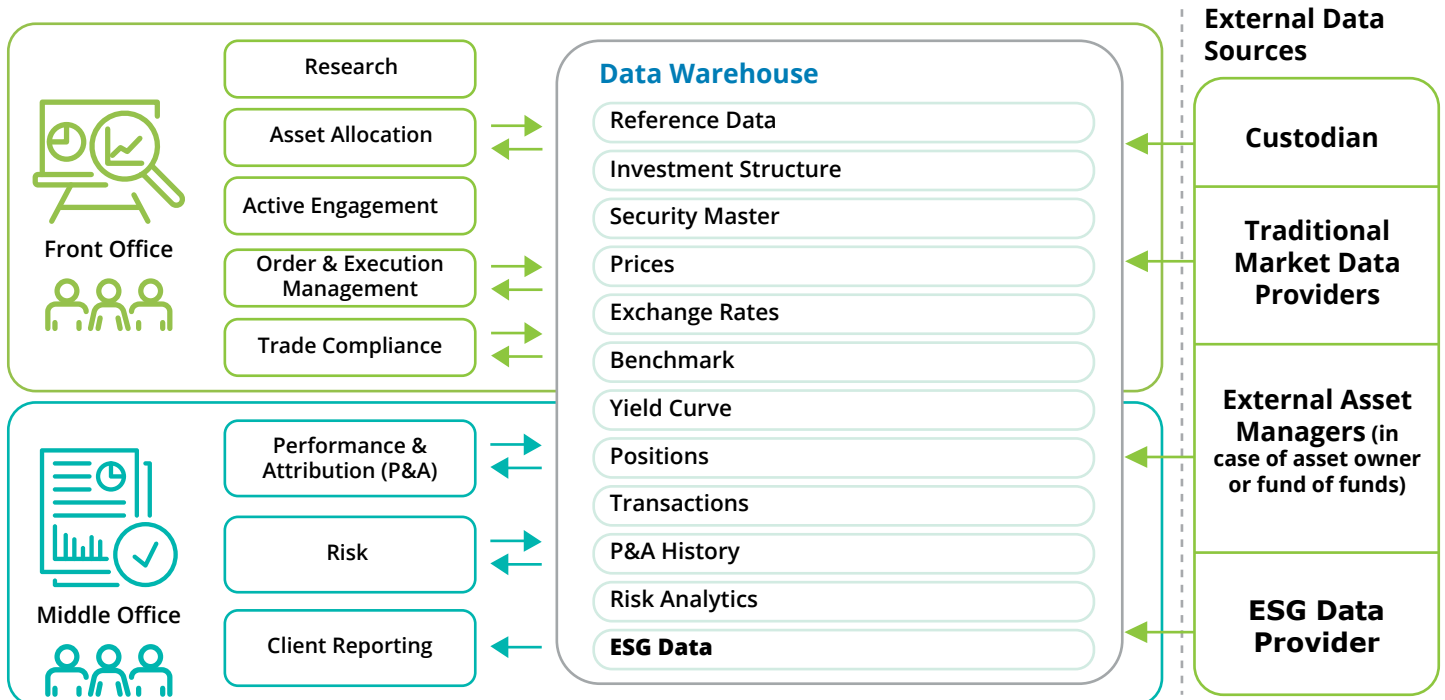
Current State **Siloed** ESG Data View



An Example of a Target State **Integrated** ESG Data Management Workflow



An Example of a Target State **Integrated** ESG Data View



This is perhaps one of the most critical steps in institutionalising the overall use of ESG data for investment firms. Both front and middle office functions should have a single source of truth for ESG data as opposed to having ESG data silos. This type of target-state solution can act as a gatekeeper and a central hub for ESG data and offer data lineage and full transparency into ESG data. When an end-user clicks on a specific ESG data element on the user interface, he/she should be able to view the source of that data attribute, its time series, any staging transformations or calculations which were executed, and the full audit trail of system approvals and manual overrides applied on it.

Gather data through active engagement with portfolio firms and join hands with industry forums in Private Markets:

In the absence of a global ESG data gathering and reporting framework in the Private Markets space, GPs should lead the conversations with their investee firms on key topics like DEI, Climate Change, Modern Slavery Act, Corporate Governance etc. The due diligence efforts of the GPs should extend beyond desktop research and must include direct dialogue with the leadership teams along with on-site inspections of the investee firm's factories and corporate offices. The response gathered via these interactions should be digitally stored in consistent formats for future reference. LPs can also join hands with industry forums like the ESG Data Convergence Project or Standards Board of Alternative Investments (SBAI) to drive change in bringing consistency in ESG reporting by unlisted firms.

Leverage alternative datasets: Unlike classic financial data, where quantitative analysis revolves primarily around a company's published balance sheet, income and cashflow statements, in ESG, many relevant alternative data points should also be extracted via non-traditional sources like social media, email traffic, satellite images, card transactions, surveys and polls, weather, Internet of things (IoT) etc. and then processed and normalised to gain insights on a firm's performance on the ESG factors.

With alternative datasets, asset managers can try to validate some claims made in the self-reported ESG data of the companies in their investment universe. However, please note that analysing unstructured data can be complex and time-consuming, and it may also require some in-house data science and data engineering skills with Artificial Intelligence (AI) or Machine Learning (ML) knowledge to curate and analyse alternative datasets. Some specialist technology vendors in this space harness the power of big data and apply AI to uncover ESG insights. Investment firms should try to gain mileage from those vendor capabilities and save their time and computational efforts on extracting alpha insights from another set of ungoverned data.

One use case for leveraging alternative ESG data could be to build a text-mining model over social media data to assess a company's social performance.

By analysing social media posts and sentiments related to an investee firm, it is possible to gain insight into how the company is perceived by the public and identify potential reputational risks associated with ESG issues such as carbon footprint, labour practices, product safety, and customer service.

A general hypothesis, in this case, would be to factor in higher stock price volatility for firms with bad labour practices, higher carbon footprint, long track record of product recalls and poor customer service experience.





How Deloitte can help?

Our knowledge in ESG, Sustainable Investing and Climate Risk combined with our deep understanding of leading market vendors' offerings in the ESG data ecosystem allows us to set you up for success in your ESG investment programs. With our unparalleled operating model expertise around investment data management, data governance, system architecture, technology and service provider marketplace, we can:

- Conduct ESG data management maturity assessments
- Assist buy-side firms with the selection of an ESG data supplier that best fits their investment process
- Design an ESG target-state data workflow
- Run proof-of-concept around sample ESG data and its integration impact on the investment process and
- Implement our proprietary⁸ and third-party climate risk solutions



Endnotes

1. [ESG assets may hit \\$53 trillion by 2025, a third of global AUM](#), Bloomberg Intelligence, Feb 23, 2021.
2. [Aggregate Confusion: The Divergence of ESG Ratings](#), MIT, Aug 20, 2019.
3. [Sustainalytics Company ESG Ratings](#)
4. [MSCI ESG Ratings & Climate Search Tool](#)
5. [ISS ESG Gateway](#)
6. [S&P Global ESG Scores](#)
7. [Refinitiv ESG company scores](#)
8. [Deloitte Decarbonisation Solution \(DDS\)](#), Deloitte



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