

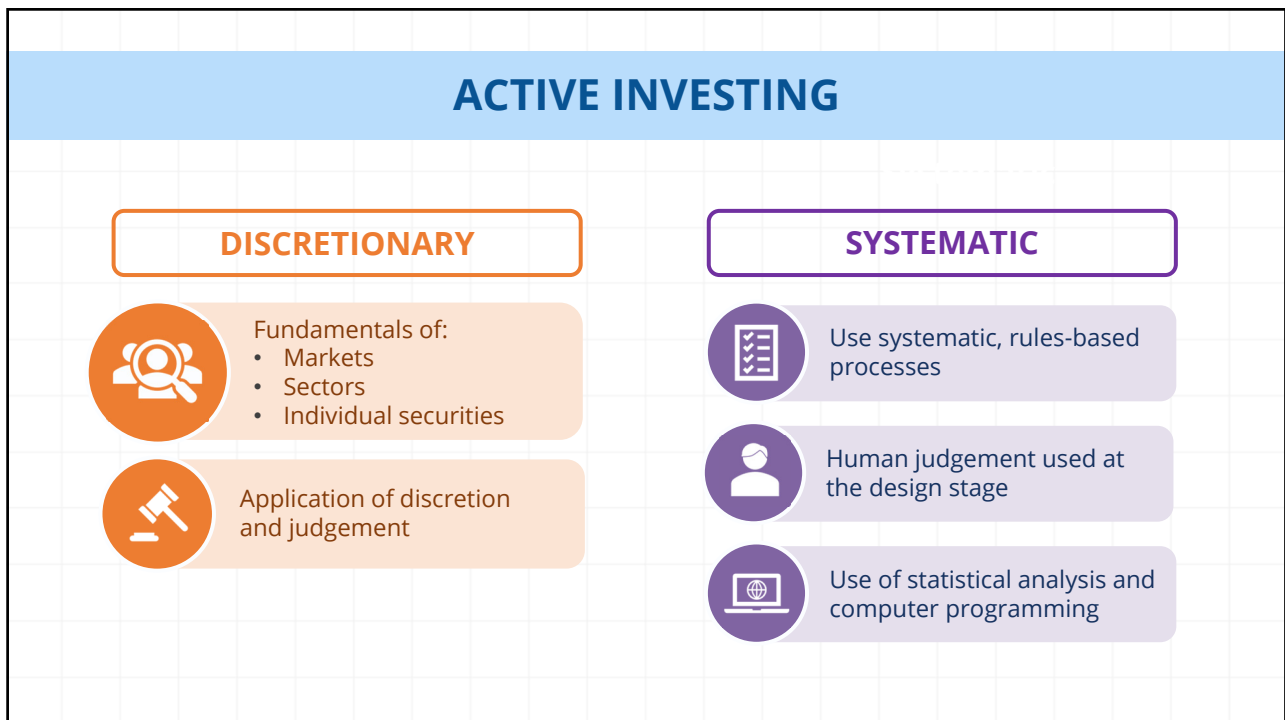
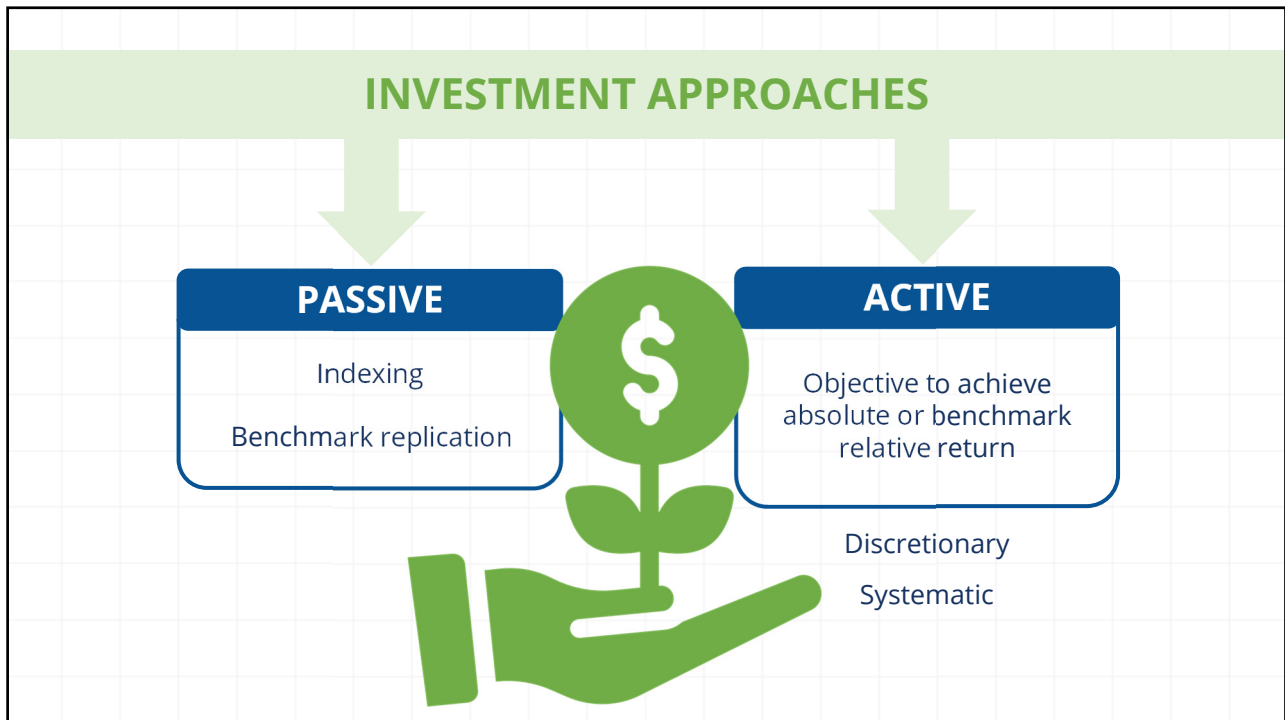


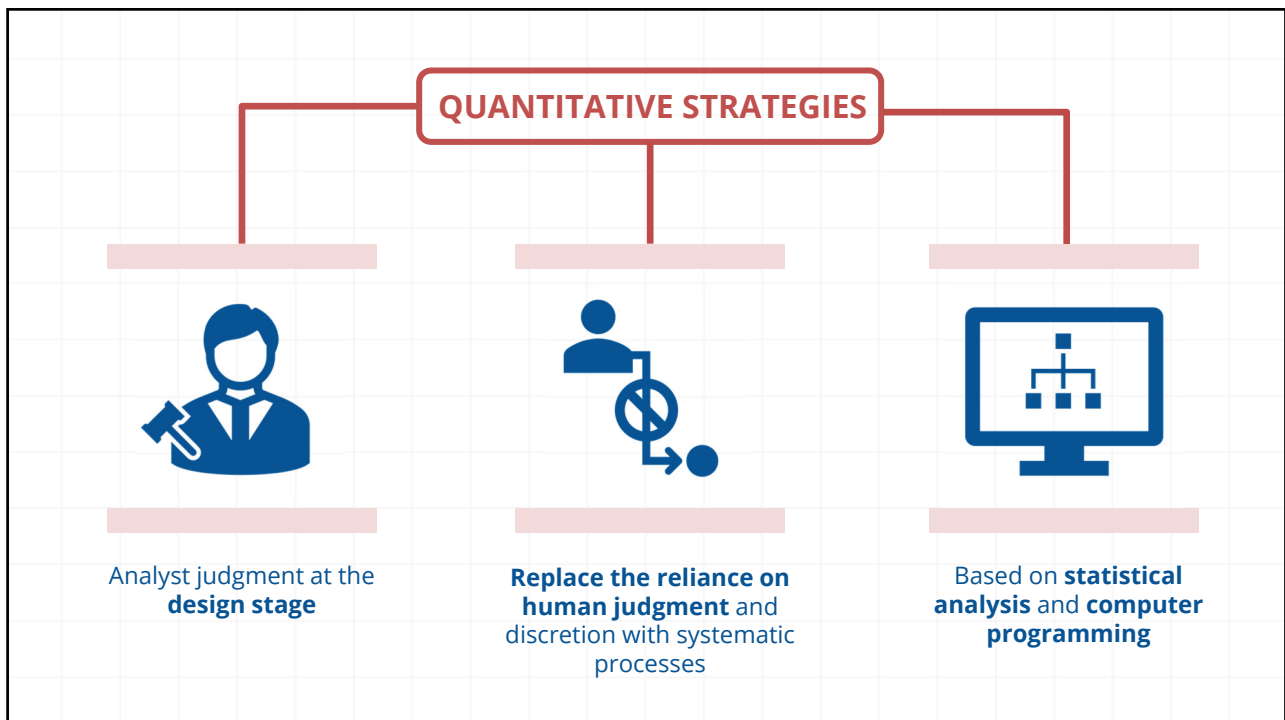
Integrated Portfolio Construction

FINANCIALEDGE⁷

Approaches to ESG Portfolio Construction

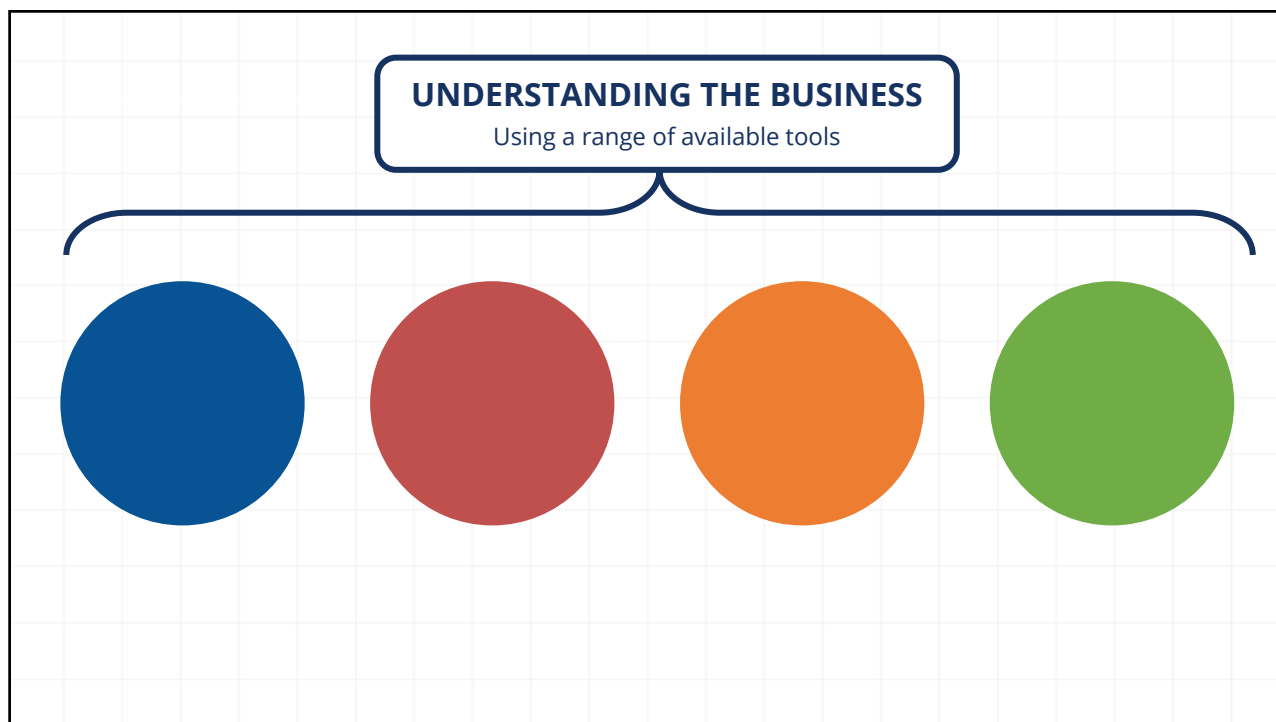
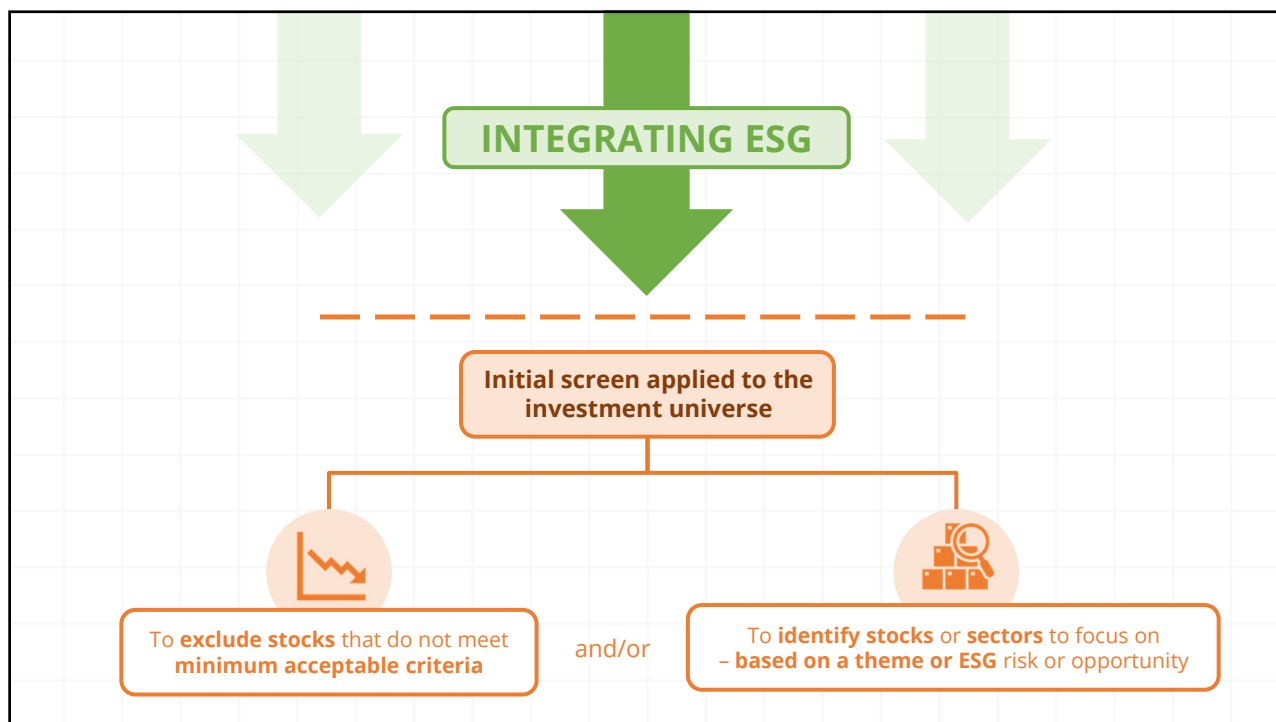
The slide features a central dark blue banner with the title. Above and below the banner are light blue rectangular boxes with rounded corners, each containing two icons. The top box contains a yellow crane and a green building. The bottom box contains an orange factory and a red house. The entire slide is set against a light gray grid background.

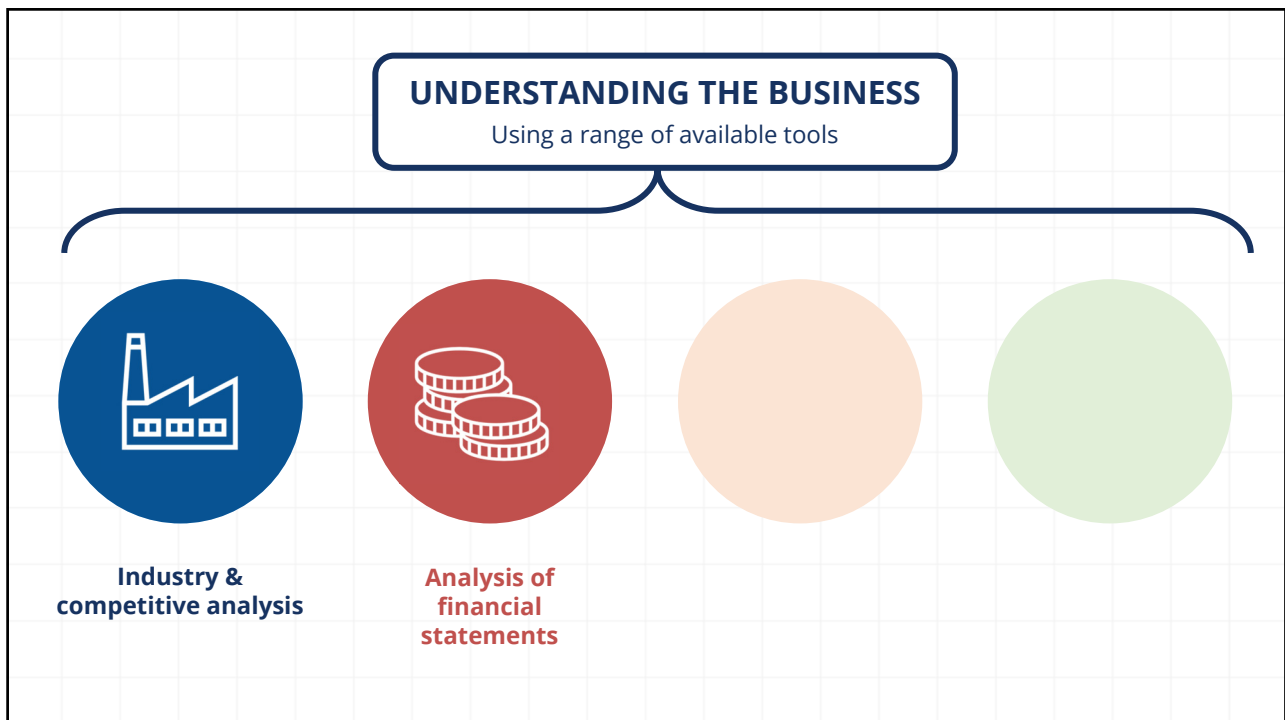
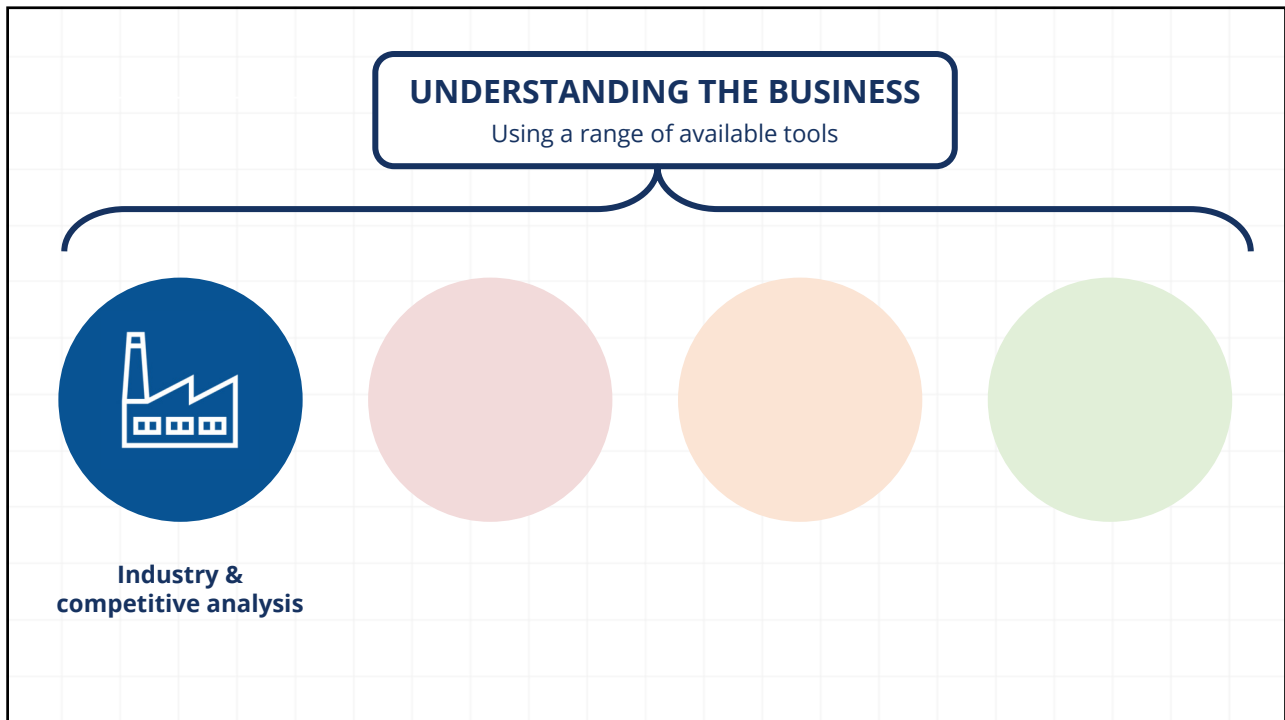


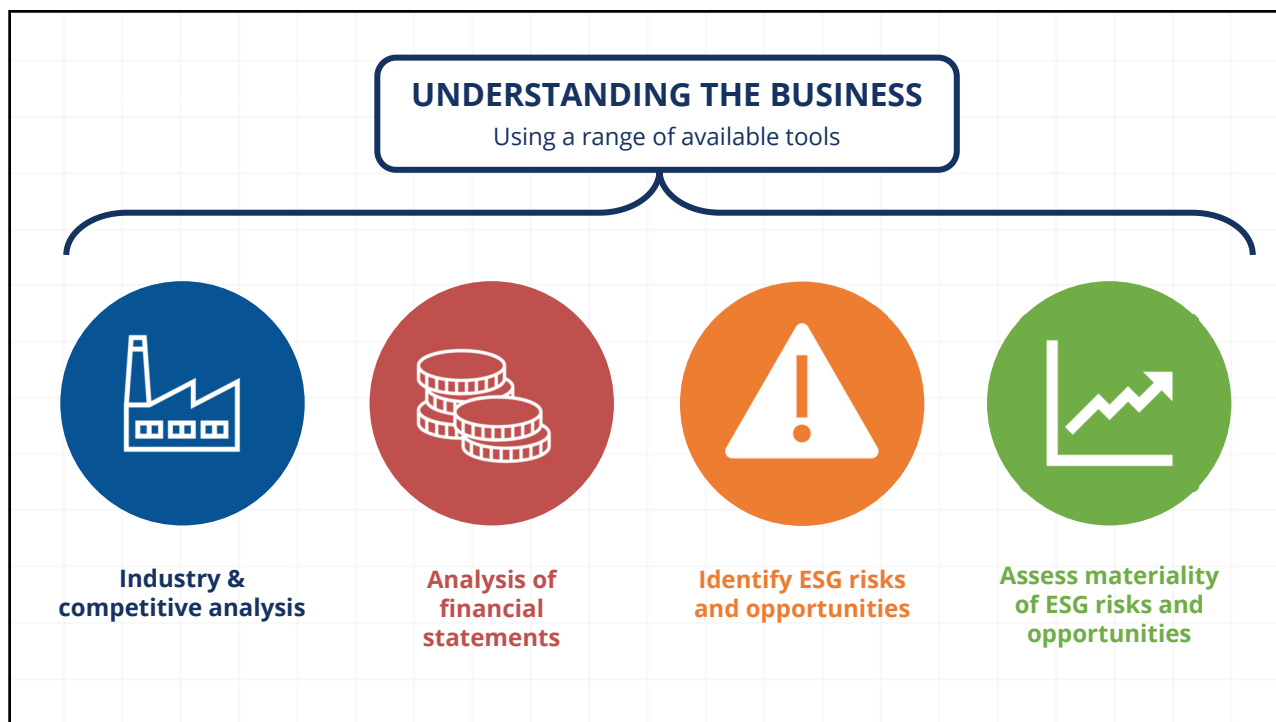
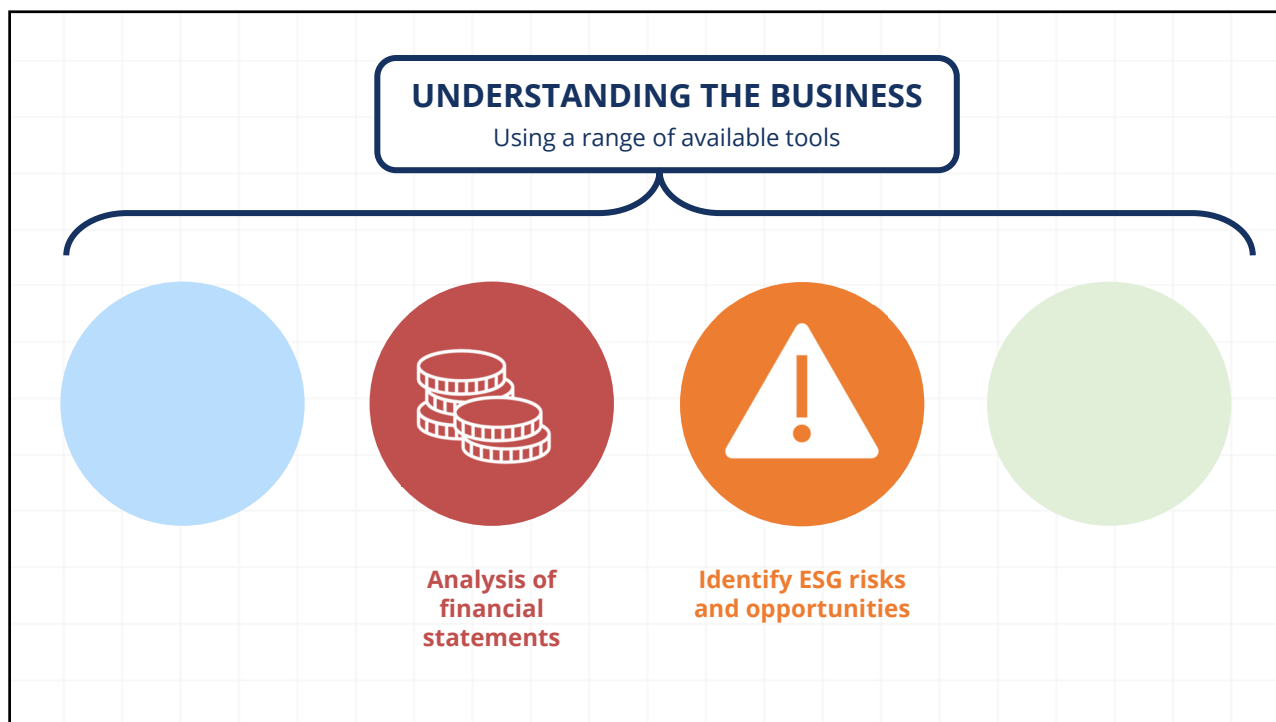


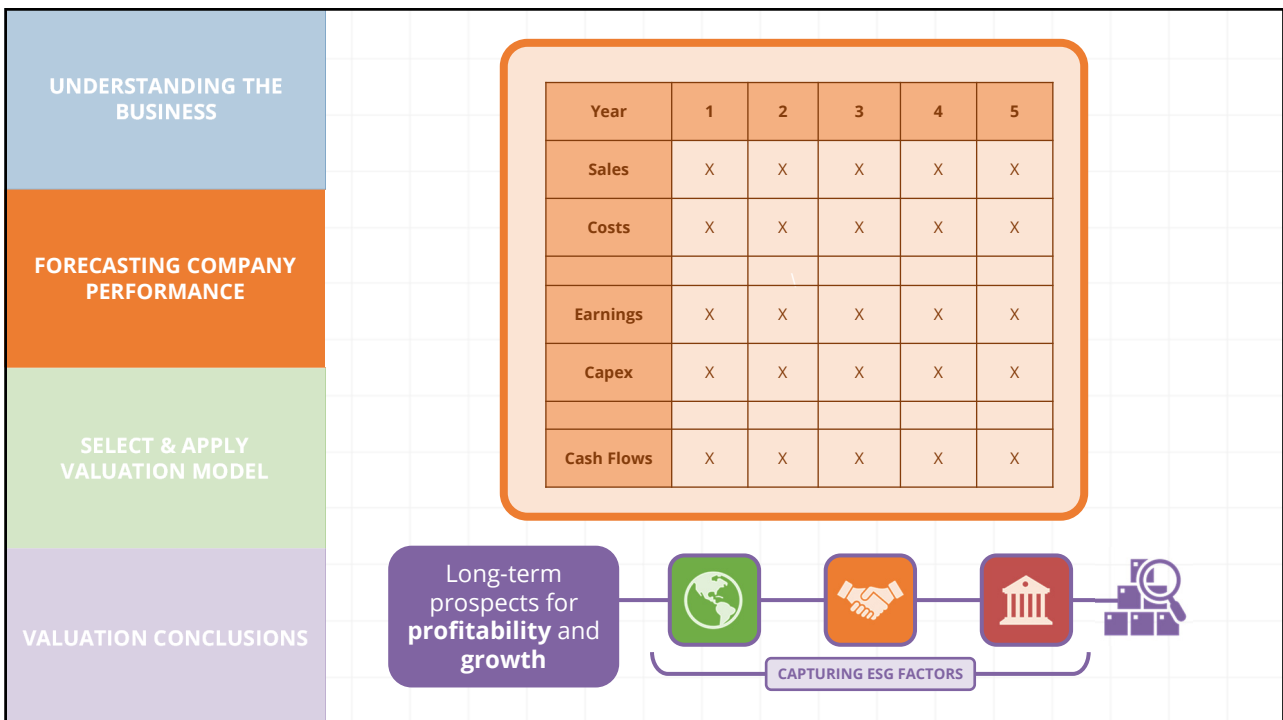
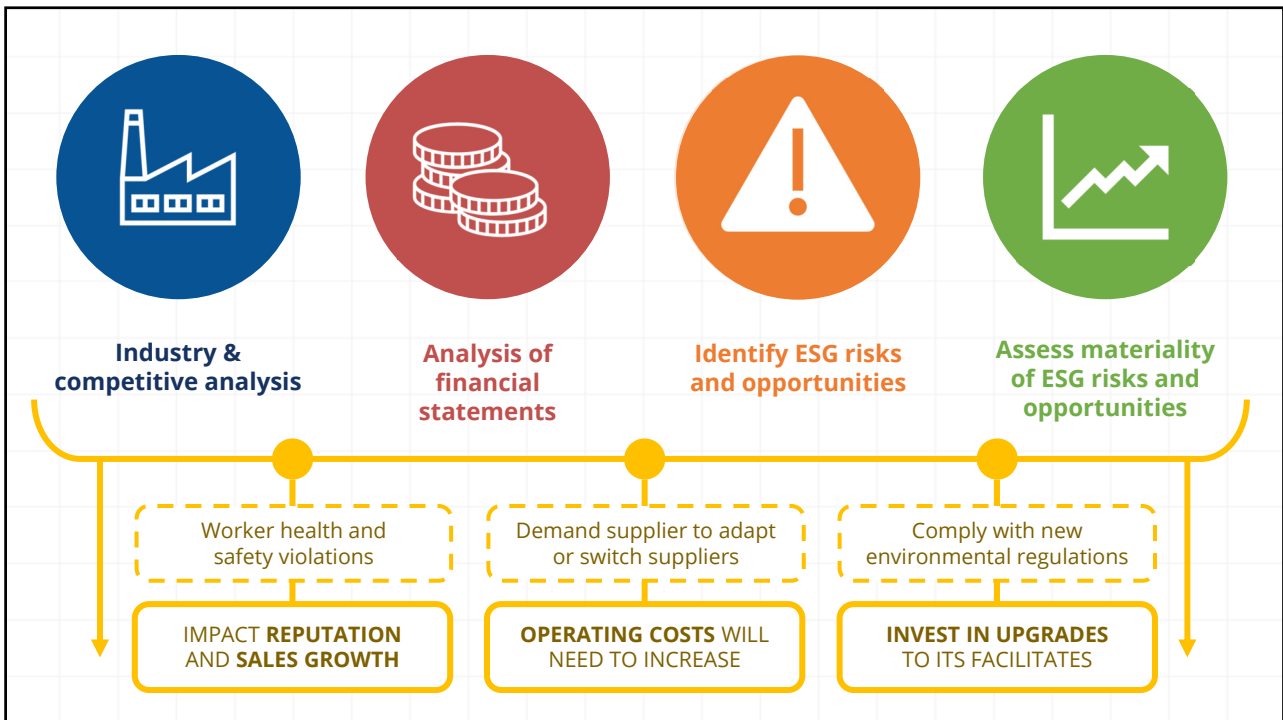


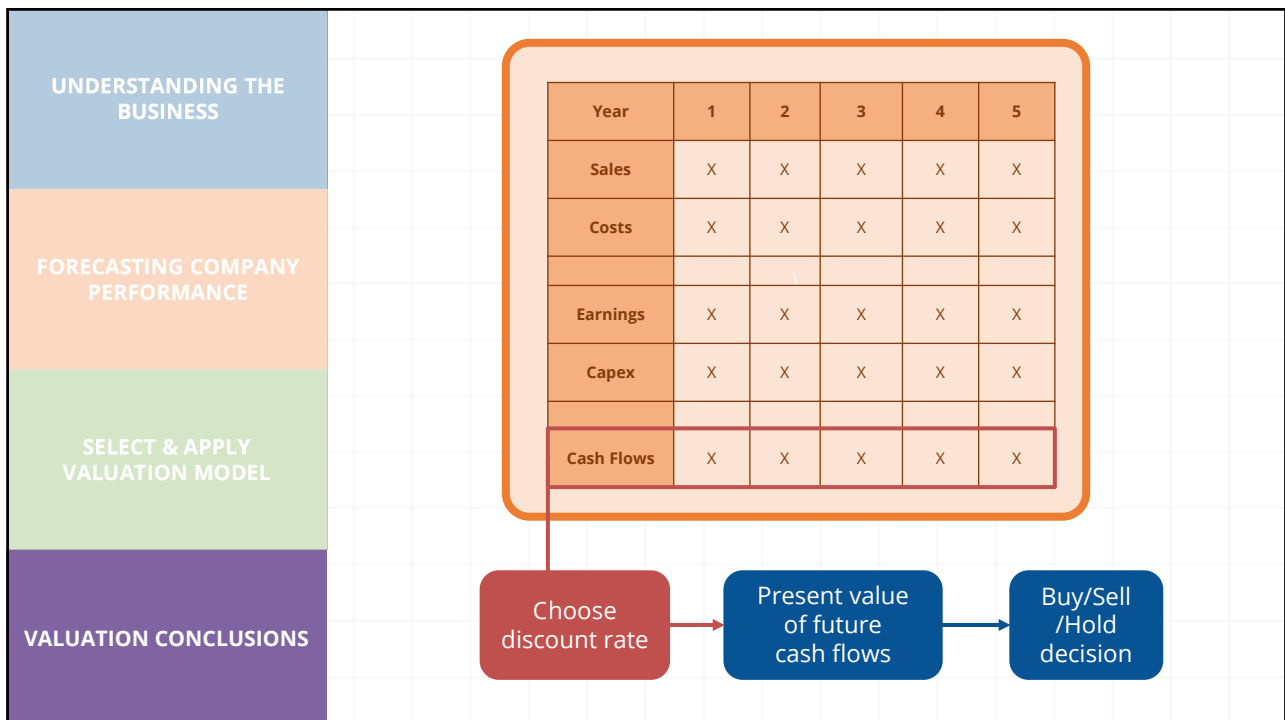
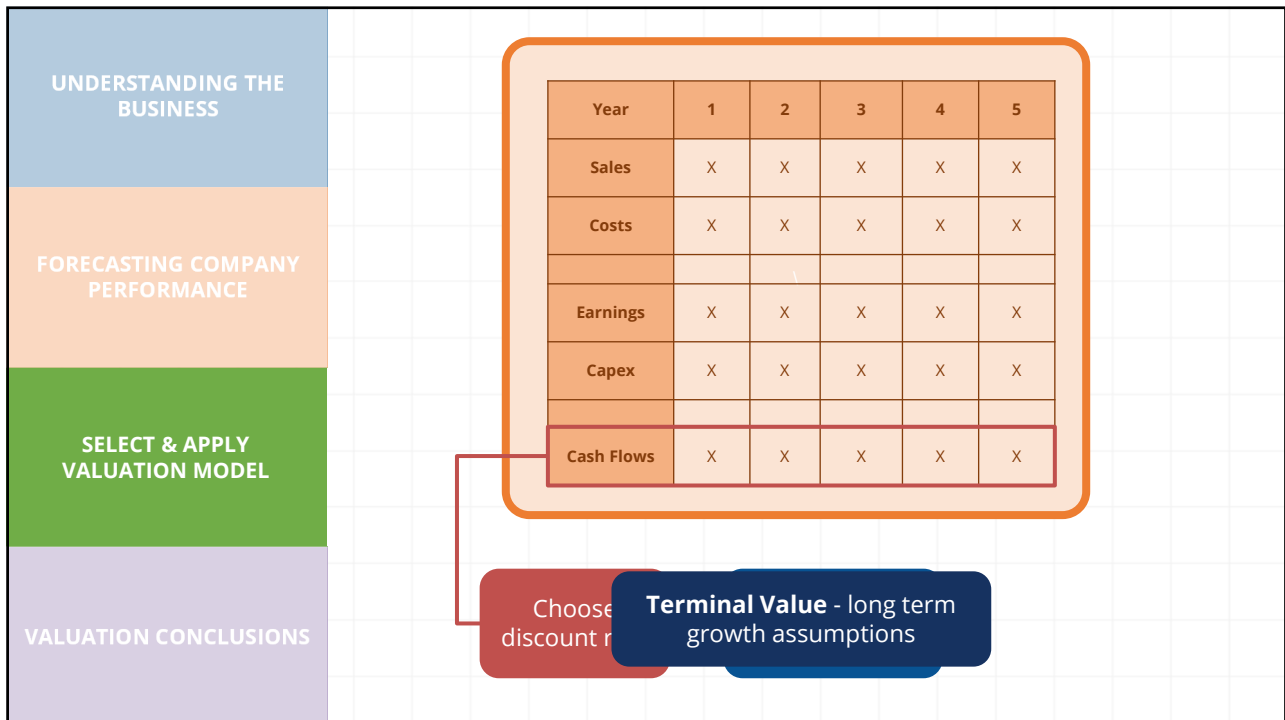
ESG Integration in Active Discretionary Strategies











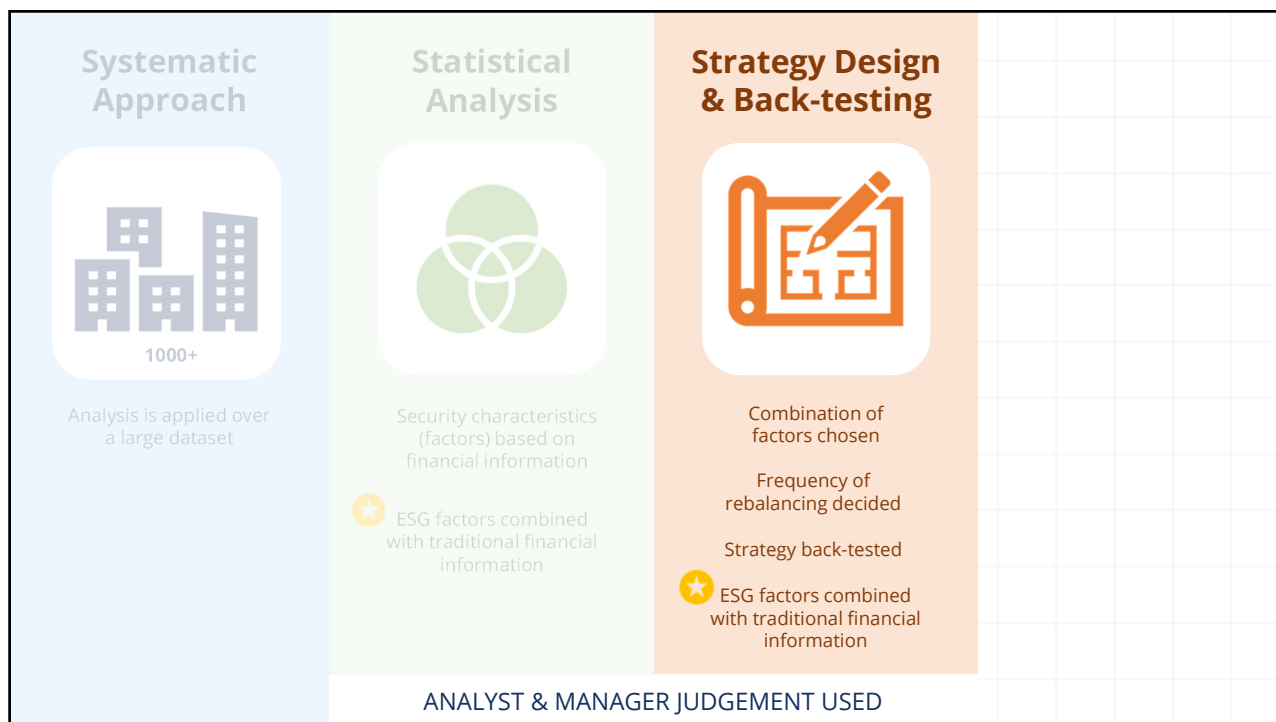
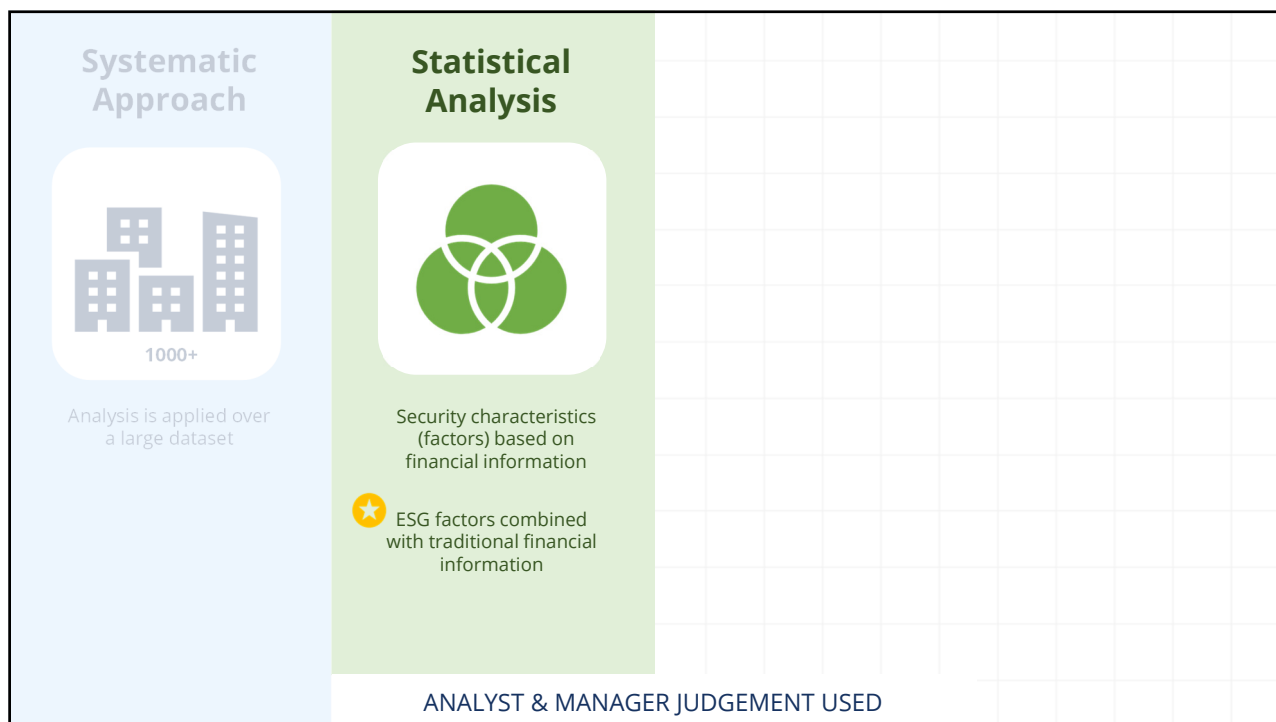
A graphic featuring a central dark blue banner with the title "ESG Integration in Active Systematic Strategies" in white. The banner is flanked by four light blue rounded rectangles, each containing a different icon: a yellow factory with smoke, a green recycling symbol, an orange document with a sun, and a red house. The entire graphic is set against a light gray grid background.

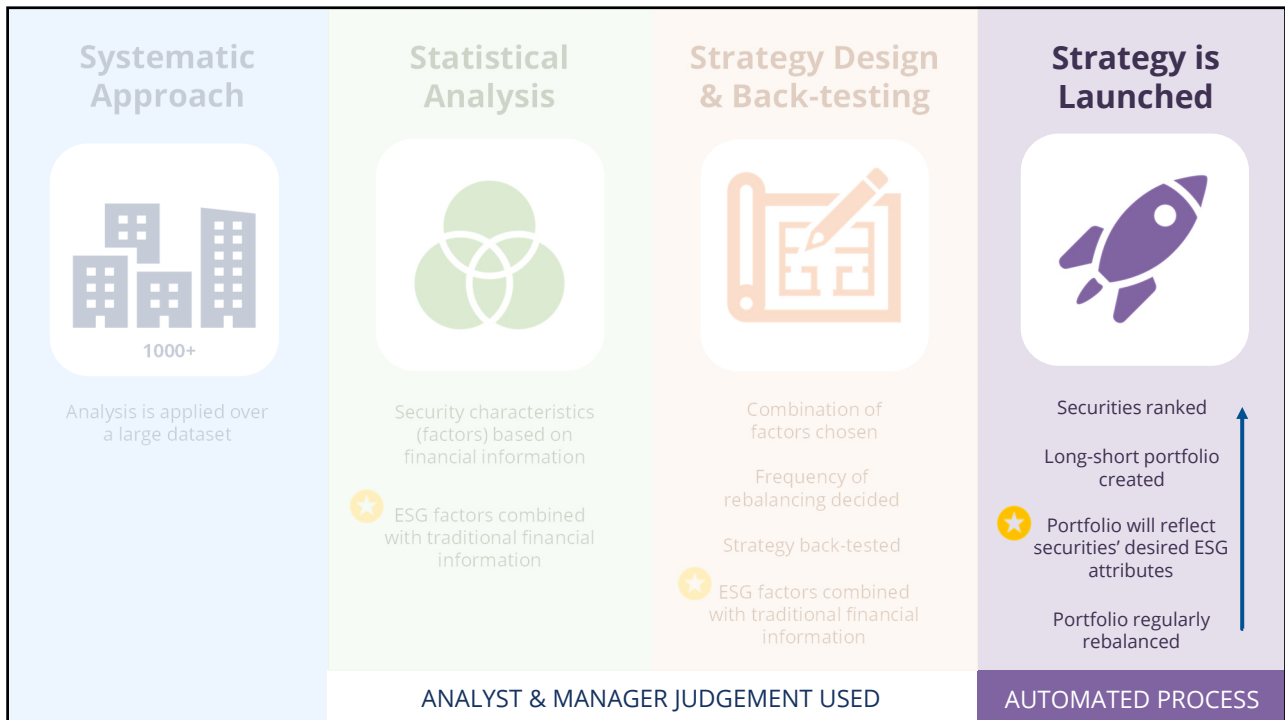
ESG Integration in Active Systematic Strategies

Systematic Approach



Analysis is applied over a large dataset





PASSIVE STRATEGIES WHAT ARE THEY?



Strategies to **match** or **replicate** the performance of an index



Use a range of techniques to meet their objective – sampling, full replication or use of derivatives

PASSIVE STRATEGIES WAYS OF INCORPORATING ESG



Apply Exclusions

Exclude companies with low ESG score

Exclude companies engaged in specific activities

PASSIVE STRATEGIES **WAYS OF INCORPORATING ESG**



Apply a Carbon Emissions Cap

Cap applied relative to an index

Exclude companies engaged in specific activities

PASSIVE STRATEGIES **WAYS OF INCORPORATING ESG**



Adjust Factor Tilts Toward a Style Factor

Exposure to a desired style factor achieved by adjusting position weightings

Negative tilt used to reduce weighting of investments with low metrics

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Adjust Factor Tilts Toward a Style Factor

Exposure to a desired style factor achieved by adjusting position weightings

Negative tilt used to reduce weighting of investments with low metrics



ESG INDICES

Used to measure fund managers against

Used as model funds for investors to use & invest in



Rules-based criteria

Based on underlying security scores

Applied through a formula

Company weightings tilted

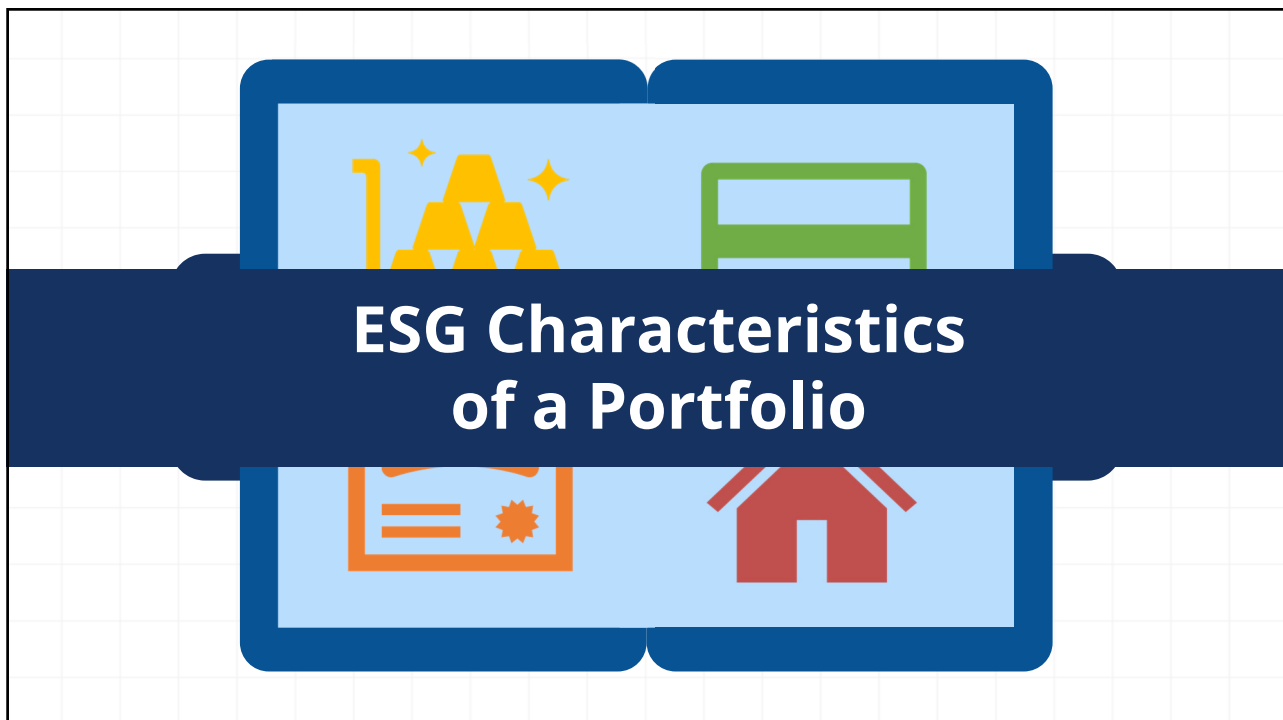
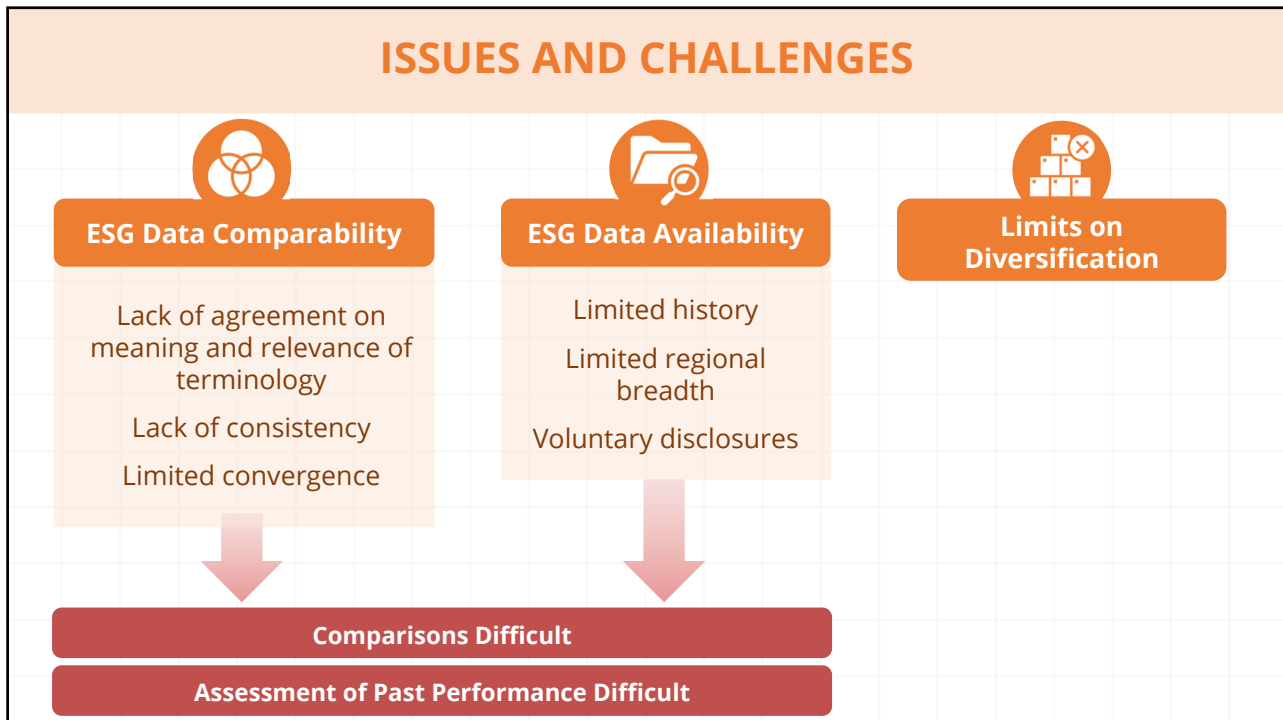
EXAMPLE

Underlying index before adjustments for ESG factors	
Constituents	Weight
Company 1	3.50%
Company 2	2.74%
Company 3	2.62%
Company 4	2.21%
Company 5	1.74%
Company 6	1.67%
Company 7	1.55%
...	...
Total	100%

Companies 1,4,5 and 7 were re-weighted higher, but company 3 was re-weighted lower

ESG index after adjustments & tilts	
Constituents	Weight
Company 1	3.85%
.....
Company 3	1.73%
Company 4	2.92%
Company 5	1.95%
.....
Company 7	1.35%
...	...
Total	100%

Companies 2 and 6 were excluded



ESG CHARACTERISTICS



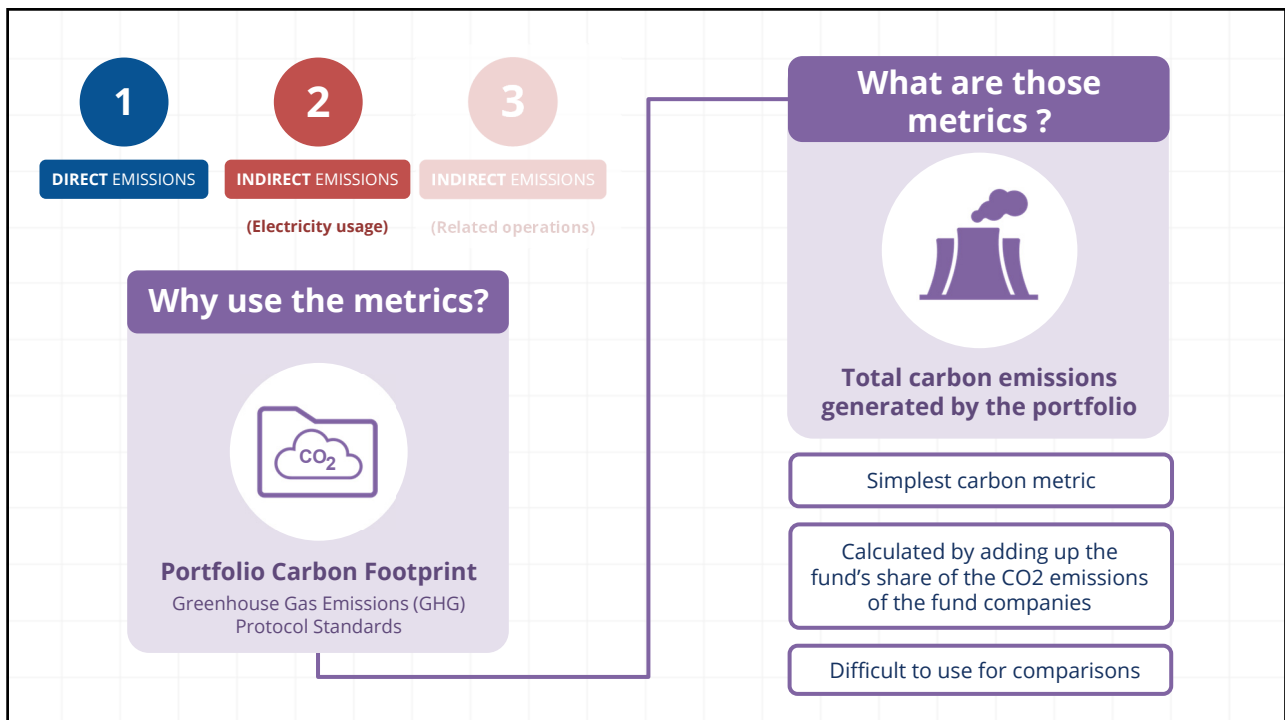
Measure exposure of fund to **climate-related risks**



Understand if **fund is sustainable**



Measure how well **fund scores on ESG matters**



WEIGHTED AVERAGE CARBON INTENSITY OF A FUND

$$\sum_i^n \left(\frac{\text{current value of investment}_i}{\text{current portfolio value}} \times \frac{\text{issuer's Scope 1 and Scope 2 GHG emissions}_i}{\text{issuer's \$M revenue}_i} \right)$$



Measures **emissions** relative to the **output of the companies** in the portfolio

Considers a company's **polluting efficiency** or **inefficiency** relative to its output

Usually expressed as amount of **CO2 emissions** in **tonnes per 1USDm** of sale

Weighted by how big the **investment** is relative to the **size of the fund**

A SIMPLIFIED EXAMPLE

Portfolio of 10 stocks

The size of each position

Carbon intensity of each security

Overall carbon intensity of the fund

	Weight in the portfolio	Carbon intensity	Weight x intensity
Company A	12%	204	24.5
Company B	6%	210	12.6
Company C	5%	16	0.8
Company D	7%	23	1.6
Company E	11%	40	4.4
Company F	14%	32	4.5
Company G	9%	140	12.6
Company H	14%	156	21.8
Company I	12%	180	21.6
Company J	10%	190	19.0
Portfolio score	100%		123.4

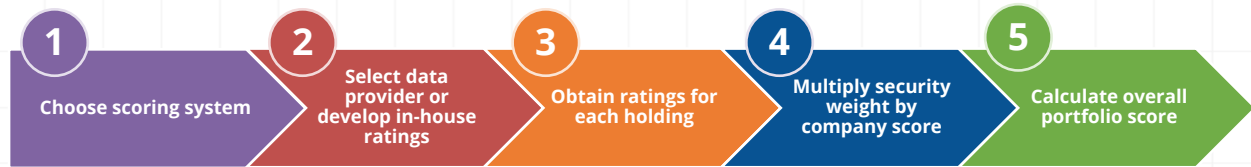
Carbon intensity

A measure of how much CO2 is being emitted per US\$ million of sales by each company that the fund invests in

Portfolio carbon intensity can be

- ✓ Compared to that of the benchmark
- ✓ Compared to other funds
- ✓ Compared to its own history

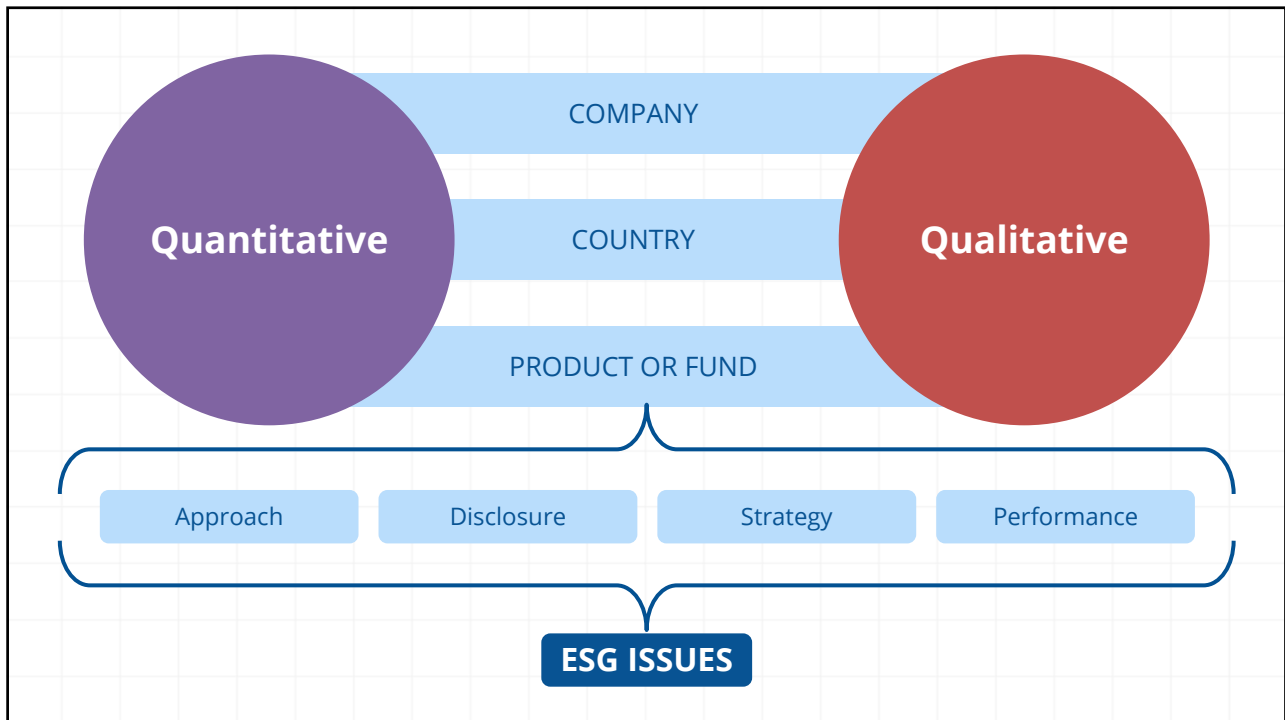
PORTFOLIO ESG RATING



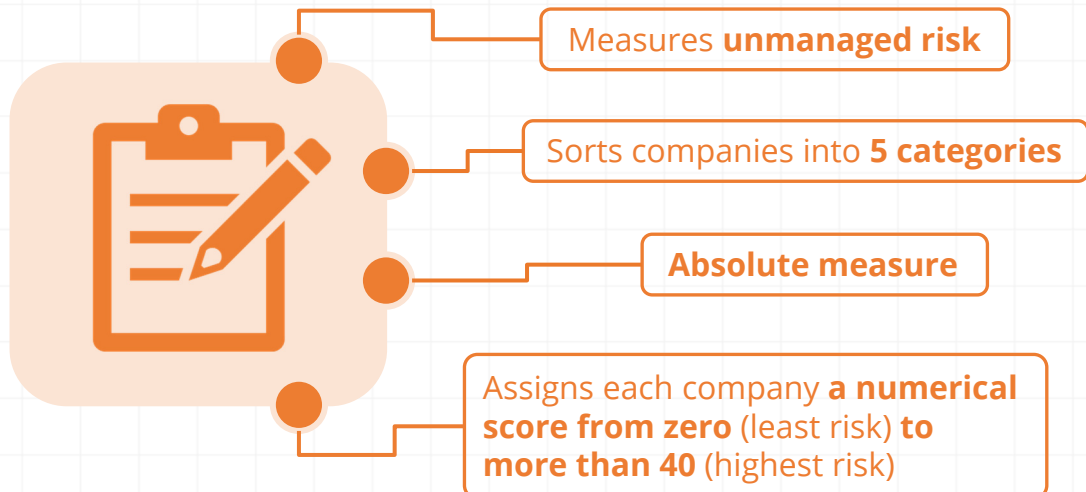
	1	2	3		4		
	Position weight	E score	S score	G score	Weight x E score	Weight x S score	Weight x G score
Company A	12%	58	76	77	7.0	9.1	9.2
Company B	6%	49	34	82	2.9	2.0	4.9
Company C	5%	76	88	81	3.8	4.4	4.1
Company D	7%	86	74	64	6.0	5.2	4.5
Company E	11%	83	54	78	9.1	5.9	8.6
Company F	14%	78	48	80	10.9	6.7	11.2
Company G	9%	45	61	59	4.1	5.5	5.3
Company H	14%	40	52	64	5.6	7.3	9.0
Company I	12%	78	69	68	9.4	8.3	8.2
Portfolio score	100%				65.8	60.1	71.2

EXAMPLE - Scoring system from 0 to 100 chosen (100 being the best)

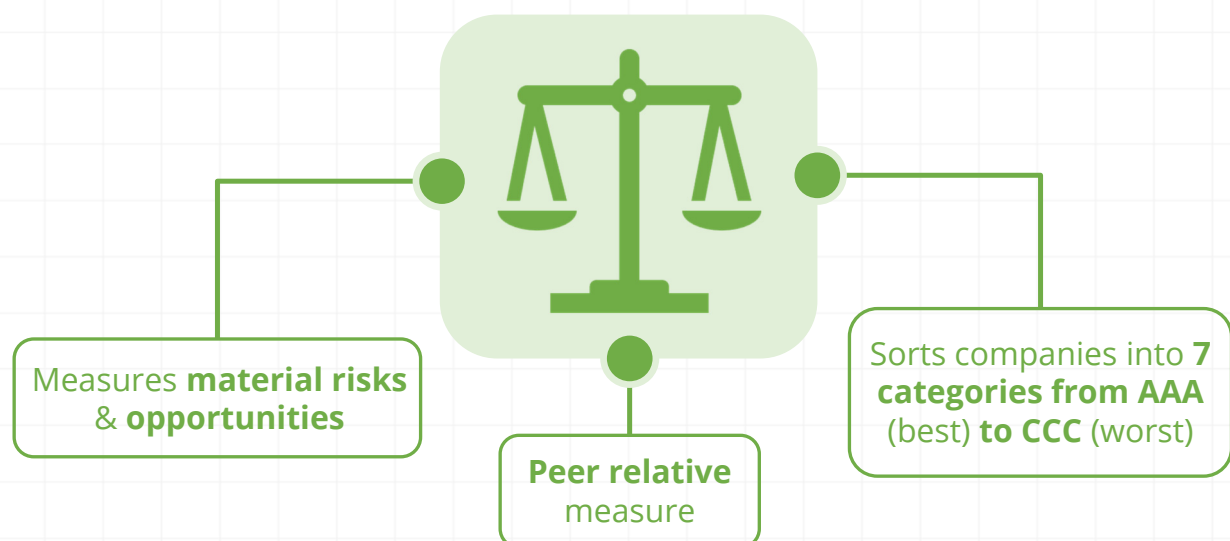
ESG Ratings Service Providers



SUSTAINALYTICS



MSCI RATINGS





Challenges in Calculating Portfolio Metrics

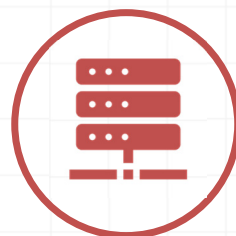
INTEGRATING ESG CHALLENGES



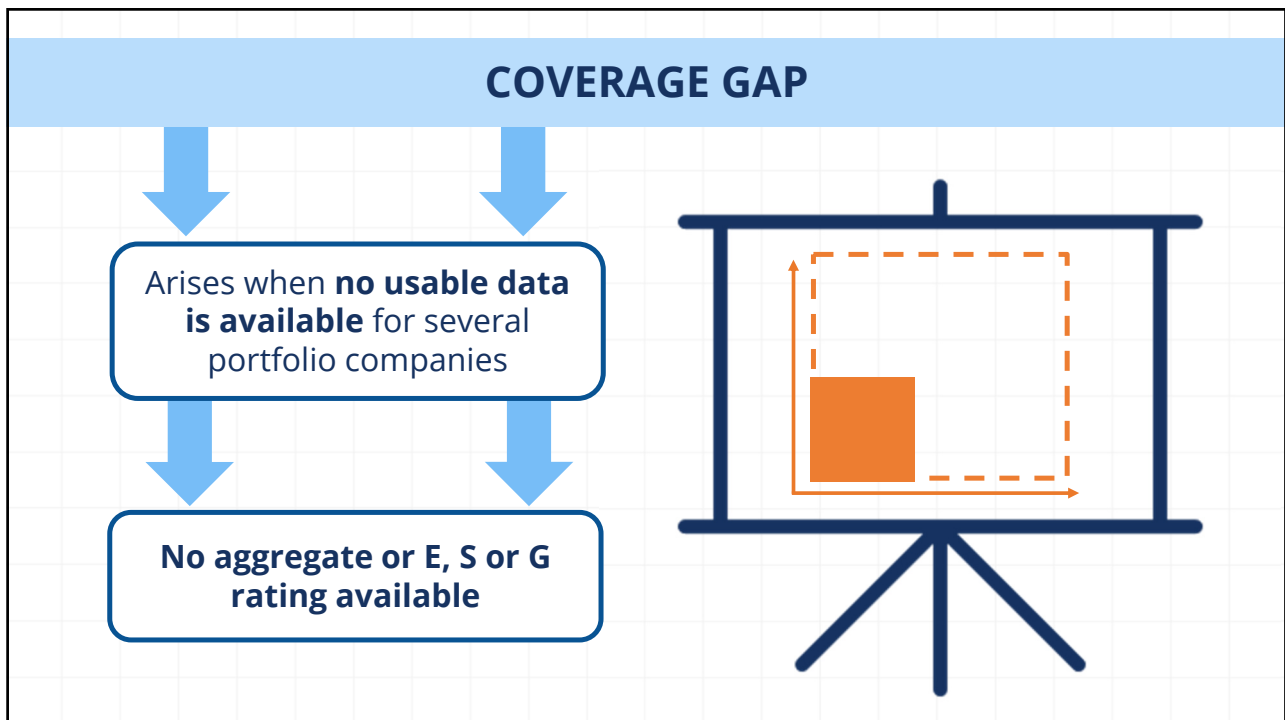
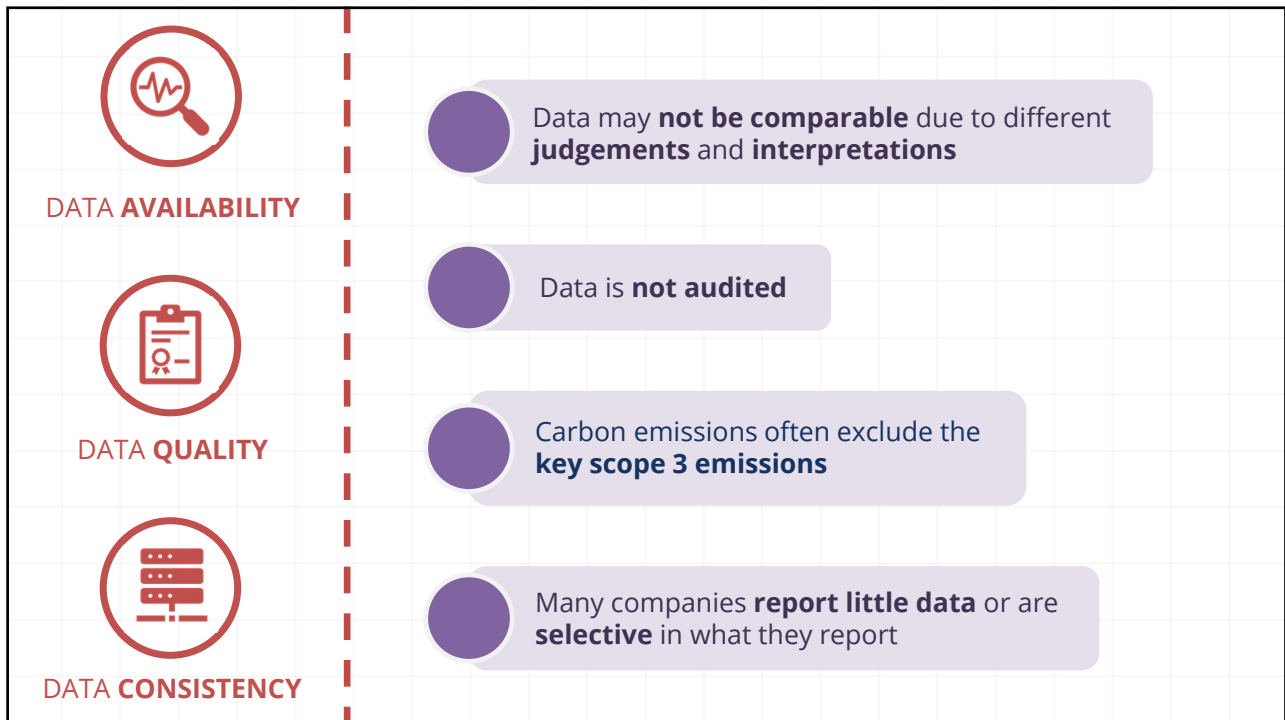
DATA AVAILABILITY



DATA QUALITY



DATA CONSISTENCY





Issues in Portfolio Assessment

Portfolio carbon intensity and ESG scores give a **static view of the portfolio characteristics**

Do not take into account that **companies may have** embarked on a path toward **improvement**

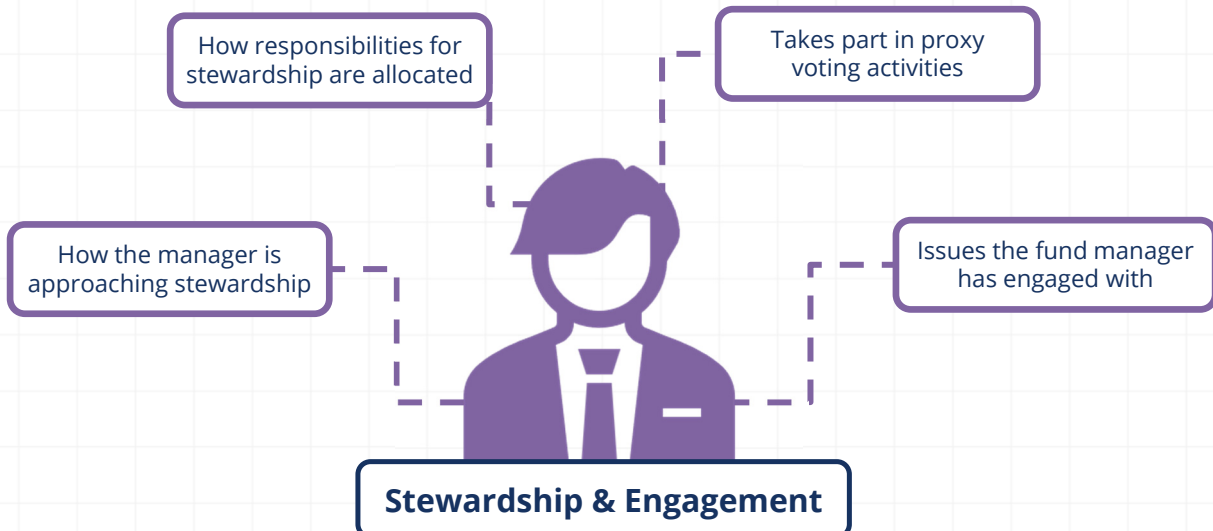


STATIC ASSESSMENTS



Looking at the change in portfolio ESG metrics over time may **indicate what progress the fund manager is making**

DYNAMIC ASSESSMENTS



QUALITATIVE ASSESSMENTS

Assessment is done on a numerical basis rather than the more anecdotal basis of the questions in a case study – type assessment.



PORTFOLIO-WIDE ASSESSMENTS

Performance Attribution

