

## QUANTIFYING SUSTAINABILITY— MAKING SENSE OF ESG DATA

The variety and quantity of ESG data are increasing rapidly. In this ‘insights’, our ESG experts answer eight important questions on how ESG data has evolved, what challenges institutional investors face and how a quantitative investment approach can give them transparent solutions.

### 1.) How have ESG data providers evolved during the last ten years and what are the current challenges?

Ten years ago, asset managers looking to apply responsible investing criteria to portfolios were faced with a choice: Should they buy the data from external providers, knowing that the availability is limited and the quality perhaps questionable? Or, should they invest in building up the large teams necessary to conduct in-depth research themselves? Asset owners looking to implement ESG typically searched for specialist asset managers.

Today, data providers flood the market as awareness for ESG has grown as both asset managers and asset owners prepare their portfolios for increasing regulatory requirements. While data quality has improved, the new challenge is its quantity. We have entered a phase of “ESG Big Data.” The new data is often inconsistent across providers and also unstructured.

Some asset managers will maintain and expand their in-house research teams but will have to compete in quality with the rising number of data providers. These managers must also remain cost efficient and continue to believe that they can add value versus data providers. The remaining managers will choose to buy data and turn it into useful information for their investment process.

Institutional clients no longer have a narrow selection of ESG asset managers. They face not only an oversupply of data but a barrage of asset managers claiming expertise. To reduce the complexity of the task, they will need to identify the asset managers who help them understand all the data and show them the way to best implement their regulatory requirements and stakeholder objectives.

### 2.) What makes too much ESG data a challenge for asset managers and owners?

Imagine that a pension fund with no experience in ESG wanted to take 1 billion EUR in assets from 0% to 100% ESG invested. Where would that asset owner start? Terms like ESG roll off the tongue but we have to remember that each letter stands for a highly complex, qualitative topic that needs to be first understood, interpreted and quantified.

We are constantly broadening our knowledge of ESG data and its interdependencies.

Mara Schneider, SRI Manager

At Quoniam, we have analysed different data providers including MSCI, ISS and Bloomberg and found that similar data sets have low correlations. For example, the MSCI ESG score has a 0.35 correlation with Bloomberg’s ESG score. This poses a huge challenge for institutional investors because the data provider you choose will lead to different outcomes.

### 3.) How does this look when you drill down to a single company?

Let’s take one of the world’s largest meat producers as an example. S&P Trucost’s metrics for the company’s CO2 footprint and water usage are both high and the MSCI rating is poor (CCC), as we would expect. If we look at the UN Sustainable Development Goals, we have conflicting insights by MSCI and ISS. While MSCI indicates a 97% positive impact on UN SDGs, ISS rates the meat producer negatively.

The next example is a hydropower plant. The company’s overall ESG rating is AA and both MSCI and ISS give the company good SDG scores. What doesn’t look so good is the score for environment. The company’s CO2 footprint is high and its water usage categorized as very high.

You see by these two examples that ESG ratings and metrics can express opposing views for the same company. Context matters when evaluating a company’s ESG performance. Each mandate’s guidelines can create an individual context, for example investing with a specific focus on reducing water usage. From this angle, the hydropower plant would most likely be excluded despite its positive contribution to the SDGs.

**SRI is a complex game—look at all the aspects**

	 Meat producer	 Hydropower plant
ESG RATING (MSCI)	0 (CCC)	7.7 (AA)
CARBON INTENSITY <sup>1</sup>	1,165	555
WATER INTENSITY <sup>2</sup>	3,663	60,423
MSCI SDG	96.9%	73.3%
ISS SDG	-6.4 (-)	1.8 (+)

**Figure 1:** 1) Carbon Intensity: t water intensity: m<sup>3</sup> water usage/million USD revenue  
2) CO<sub>2</sub>/million USD revenue; Source: MSCI, Trucost, ISS

These differences force asset owners to dive into the details. Institutional investors have to know which data providers will best express their preferences and avoid reputational risk from misunderstanding. We try to make ESG easier for our clients by guiding them through the differences in data and help them to make the right choices from the outset.

**4.) Can all ESG data be quantified?**

If you want to screen a global investment universe for controversies or calculate the environmental footprint of your portfolio, you need this information quantified. Data providers bridge the qualitative question, “Does this company violate ethical labor practices?” to a binary output that can be filtered. In the case of the environmental footprint, the data provider must first define “Water intensity” and answer that question with an absolute or

**Context is decisive when evaluating ESG performance.**

Dr Veronika Herzberger, *Portfolio Management*

relative number that an asset manager can use in the portfolio construction process. While environmental impacts can be easily quantified such as CO<sub>2</sub> emission or water usage, quantifying social impacts still remains a challenge.

ESG ratings are based on many facets, much like bond ratings, and draw on qualitative aspects, whereas ESG metrics are specific and one dimensional, like CO<sub>2</sub>, water and waste intensity. Both ESG ratings and metrics show the current state of a company and a focus on SDGs gives a future-oriented perspective.

The shift towards more and complex data plays right into the hands of quantitative asset managers who know how to turn vast amounts of data into useful information and how to adapt it to customers’ preferences. Whereas in the past many believed that

**We combine ESG ratings, environmental metrics and SDGs into our own ESG-composite.**

Johannes Probst, *Portfolio Management*

ESG and quant did not mix, today quantitative asset managers are increasingly competitive and may even have an advantage when it comes to the integration of ESG into investment processes.

The most qualitative part of an ESG process is engaging directly with companies to push for sustainable corporate development. Typically, quantitative asset managers do not engage with the companies in which they invest. We have the advantage of partnering with the dedicated ESG team of our parent company Union Investment with regards to ESG research and advisory as well as engagement services. We are also able to quantify and make use of information generated in meetings. For example, from dialog with companies on two-degree alignment we gain useful information on how to evaluate the topic in a systematic way. The same goes for patterns in proxy voting.

**5.) How does ESG integration work in a quantitative investment process?**

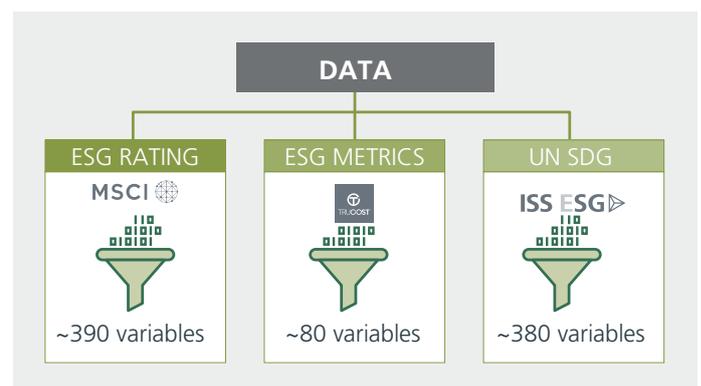
We integrate ESG criteria during portfolio construction together with our forecasts for alpha, risk and transaction costs. We set rating or metric levels as absolute or relative constraints in our portfolio optimisation tool. We optimise the portfolio with regards to:

- E, S, G Factors & industry adjusted score (IAS)
- ESG Management Score and ESG Momentum
- Environmental footprints: carbon, water and waste
- Measuring exposure to SDG, e.g. revenue from SDG’s

**6.) What does ESG research mean in the context of quantitative asset management?**

What you include and exclude and how you integrate ESG into live portfolios affects portfolio performance. Therefore, we have

**Multiple sources of data used in ESG integration**



**Figure 2:** Quoniam Asset Management

**ESG has many facets–Correlations are low between factors and data providers**

CORRELATIONS	MSCI IAS	ESG RATINGS			General observations				
		Bloomberg	RobecoSAM	Quoniam	Carbon	ENVIRONMENTAL	Water	Waste	SDG
Bloomberg	0.35	Bloomberg							
RobecoSAM	0.46	0.63	RobecoSAM						
Quoniam	0.39	0.25	0.27	Quoniam					
Carbon	0.10	-0.21	-0.02	0.00	Carbon				
Water	0.16	-0.09	0.09	-0.02	0.71	Water			
Waste	0.12	0.03	0.12	-0.01	0.47	0.52	Waste		
SDG	0.08	-0.10	0.03	0.13	0.21	0.12	0.07	SDG	

Figure 3: Source Quoniam Asset Management

to ensure that the data can be integrated and processed before it is implemented into our investment processes or used for research.

This is why the majority of our SRI Committee is from the Investments team and headed by our CIO Thomas Kieselstein. The committee’s job is to monitor our ESG data with respect to two essential objectives:

- 1) ensuring the quality and coverage of all of our data sets including ESG rating, ESG metrics and UN SDG (see figure 2)
- 2) reevaluating criteria to assure that the context has not changed with respect to screening, integration and engagement.

For example, we historically only excluded 1% of top CO2 emitters. This criterion will now change to include thermal coal (producers and distributors). These two criteria are to some extent overlapping but have shifted in context due to regulation and trends.

A challenge when dealing with large and complex amounts of data is quality assurance and the efficient extraction of relevant information. As a quantitative asset manager this is an area where we are ideally positioned. Hence our research has focused on broadening our knowledge of ESG data and understanding its interdependencies. We have analysed the correlations between various types of data sets and calculated our own Quoniam ESG composite. Our indicator combines ESG rating, environmental

We turn vast amounts of ESG data into useful information for our investors.

Hanna Kurz, Client Relations

metrics and SDGs to create a holistic representation of a company’s overall ESG performance. Research has shown that due to

the complexity of ESG, it is necessary to include all aspects and perspectives. This assures that significant divergences will not impact the ESG objectives of our clients’ portfolios.

**7.) How does your research on data and data providers support transparency?**

Let’s go back to the pension fund who wants to take a large portfolio from no ESG consideration to becoming ESG compliant. The asset owners must first set forth an ESG policy that meets the requirements of stakeholders and regulators. Their policy should answer questions like, “What controversies do we exclude? How do we define E,S and G?” or, “What is our position on SDGs?” A critical final question is, “How do we measure whether we are fulfilling our policy?”

We can help investors get as close as possible to their beliefs and requirements by taking the mystery out of ESG data and data providers. We discuss the results of our data research with clients, explain why we made the choices we made in compliance with our Guidelines for Responsible Investments help them come to their own conclusions. We also offer our existing clients transparent ESG reporting with multiple KPIs for their portfolio. This way our clients can keep their own stakeholders and regulators informed on the fulfillment of the ESG policy.

**8.) What are implications of the EU action plan for sustainable finance for a quant asset manager?**

The EU action plan covers several regulations with the objective to foster a sustainable financial sector which is capable of funding, for example, the EU’s transition towards net zero emissions by 2050.

A vital step to streamline the financial sector towards this goal is the disclosure regulation. Going forward we will see an increase in transparency on how companies consider sustainability risk in their investment processes, which implications their investment decision-making has on ESG aspects and how a financial product actually fulfils the classification to be sustainable.

In addition, we will have the EU taxonomy which provides the financial sector and the real economy with clear goals on mitigating

and adapting to climate change. These are two out of the six environmental goals that the EU commission will successively insert into the economy in order to fulfil the EU green deal. Transparency and decision-making are highly dependent on the availability of data and know-how. Reporting the CO2 footprint is only possible if the data is available and integrated into the rele-

vant processes. Reducing the CO2 footprint is only possible if the implications on the portfolio are understood. Overall, we will see an increase in ESG data covering various indicators and the necessity to comprehend its complexity. As a quantitative asset manager, we can add value in this area for our clients. //

## CONCLUSION

We have entered a phase of “ESG Big Data.” Institutional investors need asset managers who ensure the quality of the data plus analyse and classify it to help you decide which data is relevant.

As quantitative asset managers, we know how to turn vast amounts of data into useful information and how to adapt it to your preferences.

Our research shows that your choice of data providers leads to different outcomes and that ESG ratings and metrics can express opposing views for the same company.

We make ESG easier for you by guiding you through the differences in data and help you to make the right choices from the outset.

Through our quantitative investment process, we optimize your portfolio for ESG criteria, alpha, and risk forecasts simultaneously.

We provide you with transparent, individual ESG reports in accordance with the EU disclosure regulation: ratings, environmental indicators, SDGs and much more.

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