Corporate Workstream May 7, 2024

Bloomberg

The Goldfish Bowl

What does good data look like for a corporate and how are financial market participants using company reported data to compare, rank and invest



Regulatory

Bloomberg | DATA <GO>

Data License Bulk Data License Per Security Solutions Fields Tools & Resources *

Data License Per Security 🕽 Use Cases

Por	Sec	urity	Δ.

Filters		Q sfdr	
Themes Derived	0	Search Results: sfdr ESG and Sustainability ×	Clear All
Entity Reference Data	0		Plaambarn I P
ESG and Sustainability	7		Bloomberg LP SFDR Good Governance
Fundamentals and Estimates	0	I want the same of Dec Country	
Funds	3	Leverage the power of Per Security and create a customized feed with	Provides mapping of Bloomberg ESG data fields to Sustainable Finance Disclosure
Holdings and Ownership	0	only the data you need using our	Regulation (SFDR) sustainable investment
Instrument Reference Data	0	recommended fields.	good governance screening criteria.
Pricing - BVAL Evaluated	0		
Pricing - Exchange and Contributed	0	Create Per Security Request	14 Fields
Regulatory	0		
Risk	0	Bloomberg LP	Bloomberg LP
		SFDR Fund European ESG Template (EET) Reported Data	SFDR Mandatory Principal Adverse Impacts Indicators
ploratory data analysis and value		SFDR Fund EET reported data enables clients to compare 3rd party ESG funds, support ESG Regulatory disclosure and compliance with MiFiD II suitability assess	Bloomberg data supports asset manager with the Sustainable Finance Disclosure Regulation (SFDR) Principal Adverse Impacts (PAI) mandatory metric reporting.
		164 Fields	75 Fields
		Bloomberg LP	Bloomberg LP
<u>+</u>		MiFID II ESG Investor Protection	ESG Regulatory Disclosure Data
re) to retrieve data.		Provides fields to indicate the sustainability nature of products in line with MiFID II Investor protection requirements including EU Taxonomy and SFDR data.	Provides company level reported EU Taxonomy alignment and SFDR Principal Adverse Impact (PAI) data points, which form the foundation to meet minimum, mandat
		79 Fields	68 Fields
<u>+</u>		Bloomberg LP	Bloomberg LP
		Task Force on Climate Related Financial Disclosures	Implied Temperature Rise
		Most relevant fields for climate related Task Force on Climate Related Financial Disclosures by companies for governance, criticities with means and tark	The fields in this list provide Bloomberg's Implied Temperature Rise (ITR) metrics, which calculate the temperature alignment of companies with climate goals such as N

BCube

A set of convenient wrapper functions around the Data License Rest API. It is designed to help data scientists conduct exp assessment of Bloomberg Data License datasets by providing a light API with intuitive functions.

Operating System	Language	Version	Date	
	Python	0.16.1	2023-5-31	<u>+</u>

Sustainable Finance Disclosure Regulation

Sample code for aggregating Bloomberg SFDR data on a portfolio level. Uses per-security requests via BCube (see above

Operating System	Language	Version	Date	
Linux, Windows, macOS	Python	0.3.0	2023-6-21	Ŧ

strategy, risk management, metrics and tar..

	⊥v 0v ∰v
nt	DL793157 PROD V & Account Settings
	Relevance 🗸
_	
	^{Bloomberg LP} SFDR Regulatory Disclosure Data
	Provides company level reported ESG content and Green House Gas (GHG) estimates mapped to the Principal Adverse Indicators (PAIs) to meet the European Uni
	52 Fields
	Adverse Impacts Indicators Bloomberg data supports asset manager with the Sustainable Finance Disclosure Regulation (SFDR) Principal Adverse Impacts (PAI) optional metric reporting.
	36 Fields
	Bloomberg LP EU Taxonomy Company Reported Data
	This product lists all fields that capture company reported EU Taxonomy data and offers the minimum data required for compliance.
	21 Fields
	Bloomberg LP
	EBA Pillar 3 Climate Risk
	Fields mapped to the European Banking Authority (EBA) Pillar 3 disclosures for ESG risks to support banks with disclosure requirements including Green Asset Ratio (

Research – Supply chain

Thematic Investing



What Problems We Solve



Thematic Screening

Screen for companies which are aligned with the fund's investment theme.

Explore the global company universe :

 Company segment fundamentals (standardized) data to identify companies aligned with the fund theme by screening at the sector, industry, sub industry and more granular segment levels

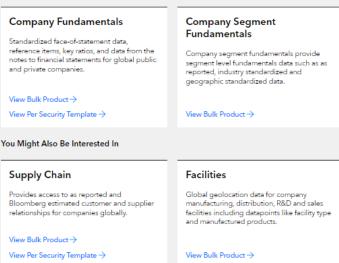


Research companies which are aligned with the Perform due diligence and risk assesment of the fund's investment theme. selected companies prior to including them in the fund.

Perform deep bottom up company research and Perform due diligence and assess risk: peer analysis:

- Company financials data to perform individual company analysis utilizing financial and operating metrics to pick the best in class companies
- Industry specific company financials to perform peer analysis on companies within a sector, industry or sub industry

Use Bloomberg Recommended Products



Standardized company reported sector and industry-specific line items for covered industries including. View Bulk Product →

View Per Security Template ightarrow

Industry Specific Company

Fundamentals

Bioomberg.com/solutions/ https://data.bioomberg.com/solutions/thematicInvesting



Due Diligence & Risk Assessment

- Supply chain data to track the company's
- business suppliers and customers to identify
- supplier vulnerabilities and product demand risk
- Facilities data to assess exposure to physical risk, geopolitical risk and ESG risk

Risk @ security level

Net Zero Banking Alliance



Background

Every bank will need to adjust their business modes, develop credible planes for the transition to a low carbon, climate resilient future and then implement those plans. Net Zero Banking Alliance brings together banks worldwide representing about 40% of global banking assets which are committed to aligning their lending and investment portfolios with net zero emissions by 2050. Senior leaders have made voluntary commitments to reduce their carbon footprint through such frameworks as the United Nations Sustainable Development Goals (UN SDGs), Glasgow Financial Alliance for Net Zero (GFANZ), and Task Force on Climate-Related Financial Disclosures (TCFD) and need to report progress to internal and external stakeholders.

What Problems

We Solve





Self Assessment

Measure against current and forecasted emissions per peers, companies in own supply chain, and companies in high CO2 emitting sectors.

Assess where you are today:

- Company financials data to find granularity across peers
- suppliers and customers
- · Classifications data to identify clusters of companies per industry including high carbon emitting areas
- Carbon Emissions scope 3 data to determine carbon emissions impact of all companies within your supply chain
- Implied temperature rise data to validate against SBTi targets

Set Action Plan

Set multi-stage emissions reduction plan by year, near-term interim goals as well as longterm goals, even beyond 2025.

Create governance process for tracking targets: Manage new and ongoing projects:

- ESG company reported data to monitor what
 BNEF data to deep dive into industry your peers are reporting about their progress research on carbon, energy, and power sectors Supply chain data to track all of your business
 Carbon intensity data to view a simplified way
 - to compare companies' greenhouse gas emissions performance

Legal Entity Level BICS

BICS classifications data for public and private legal entities.

Use Bloomberg Recommended Products

Reported and estimated greenhouse gas

emissions data, including scope 1, 2 and 3

globally. History back to 2010 is included.

emissions and intensity ratios for companies

Corporate hierarchy and entity reference data

for legal entities including public/private

governments, agencies and municipalities.

companies, sovereign entities, funds,

Carbon Emissions

View Bulk Product →

View Per Security Template \rightarrow

You Might Also Be Interested In

Corporate Structure

View Per Security Template \rightarrow

View Bulk Product \rightarrow

View Bulk Product→

View Per Security Template →

Supply Chain

Company ESG

companies globally.

View Bulk Product →

Provides access to as reported and Bloomberg estimated customer and supplier relationships for companies globally.

Company-reported Environmental, Social and

Governance (ESG) data, derived ratios, and

sector and country-specific ESG detail for

View Bulk Product → View Per Security Template \rightarrow

Provides companies' carbon target data,

companies or from the SBTi website, or by

CDP in their climate change information req...

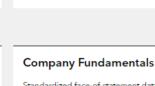
sourced by Bloomberg directly from

Standardized face-of-statement data, reference items, key ratios, and data from the notes to financial statements for global public and private companies.

View Bulk Product \rightarrow

View Per Security Template →

Boomy oer omberg.com/solutions/netZeroBankingAlliance



View Per Security Template ightarrow

Carbon Targets



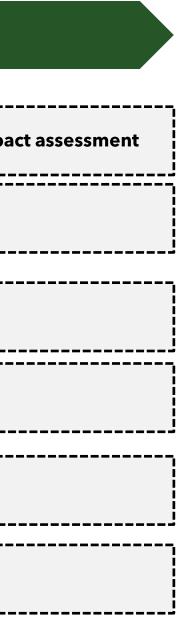
Management

Accelerate deployment of mature climate solutions, support development of new climate solutions, and determine how to phase out uneconomic assets.

The Why and What that Financial Market Participants care about

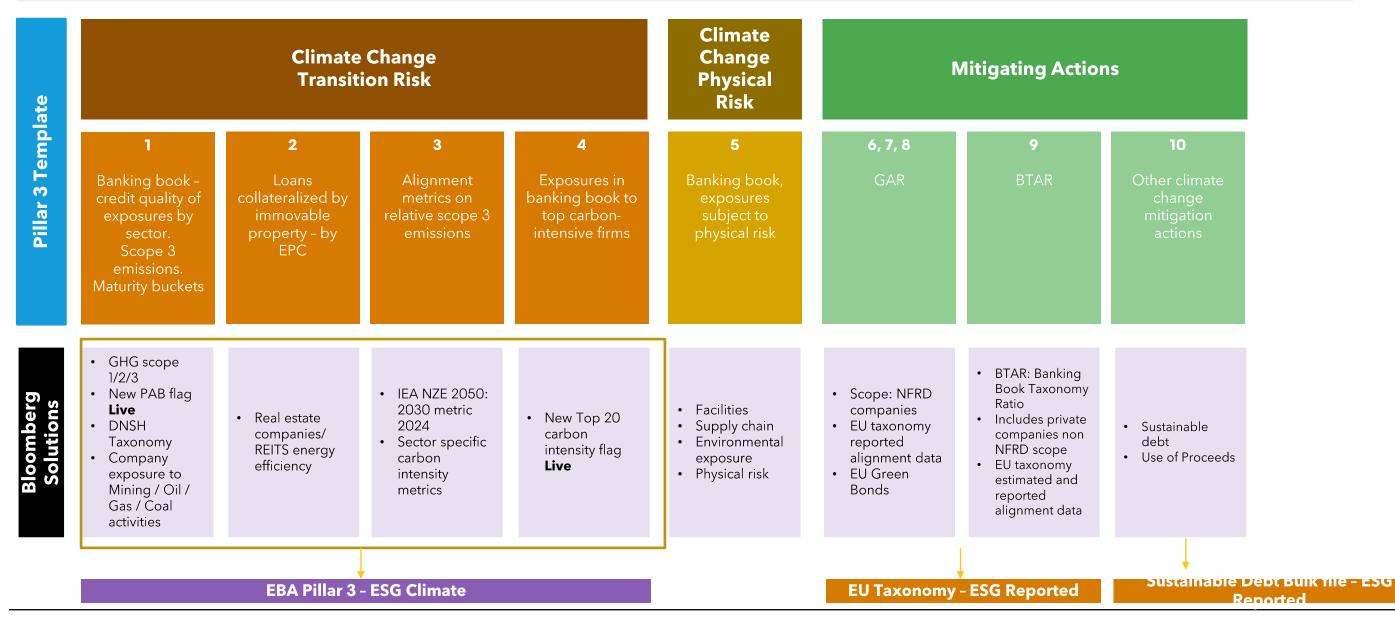
Solving the evolving and complex industry challenges

ſ		
	Sustainable Investment Monitoring	Custom defined Sustainable Investment criteria that is compliant with SFDR and optimises for UN SDG imp
		In-house ESG score: sector specific materiality factors
ſ		
		GHG latency and estimate quality
	Climate Risk	Credibility of Net Zero pledges
	and Nature	
		Portfolio exposure to deforestation risk via supply chain
L T		
	Regulatory Disclosure	Compliance with EU Taxonomy and SFDR disclosure requirements
		CSRD reporting and audit
1		`



EBA Pillar 3 ESG Disclosures- energy efficiency & fossil fuel disclosure is now mandatory

Bloomberg's EBA Pillar 3 Climate Risk data supports banks in populating the ESG pillar 3 Climate Risk templates by providing underlying fields such as carbon scope 1/2/3, carbon sector specific production metrics, Top 20 Carbon Intense companies, Paris Aligned Benchmark (PAB) exclusion indicator, EU Taxonomy Climate Change Mitigation (CCM), and Climate Change Adaptation (CCA) that are required for reporting.



Bloomberg

6

Bloomberg EU Taxonomy: rewards energy supply type



Data Quality Reported Data

- Accuracy and timeliness of reported data
- Broad global company coverage: NFRD/CSRD
- 1,644 Reported Eligibility & 1,371 Reported OMV AV Equity • Alignment



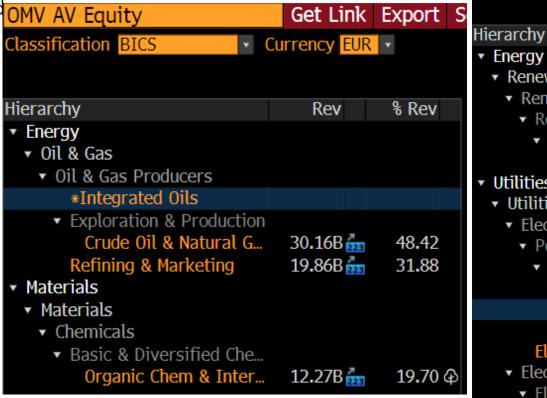
Fit for Purpose Estimates

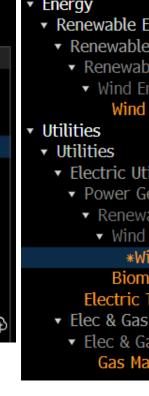
- Comply with ESMA guidance
- Full transparency
- Detailed documentation
- 50K+ elgiblity and up to 15K companies estimated alignment testing



Future-Proof

Ready to ingest large volumes of data in anticipation of reporting requirements in 2024 - 26 +





ORSTED DC E

Classification

Bloomberg



Bloomberg LP Climate Risk EBA Pillar 3

Bloomberg's Climate Risk EBA Pillar 3 solution provides banks with climate data for the Transition Risk templates 1-4 enabling regulatory disclosure and compliance.

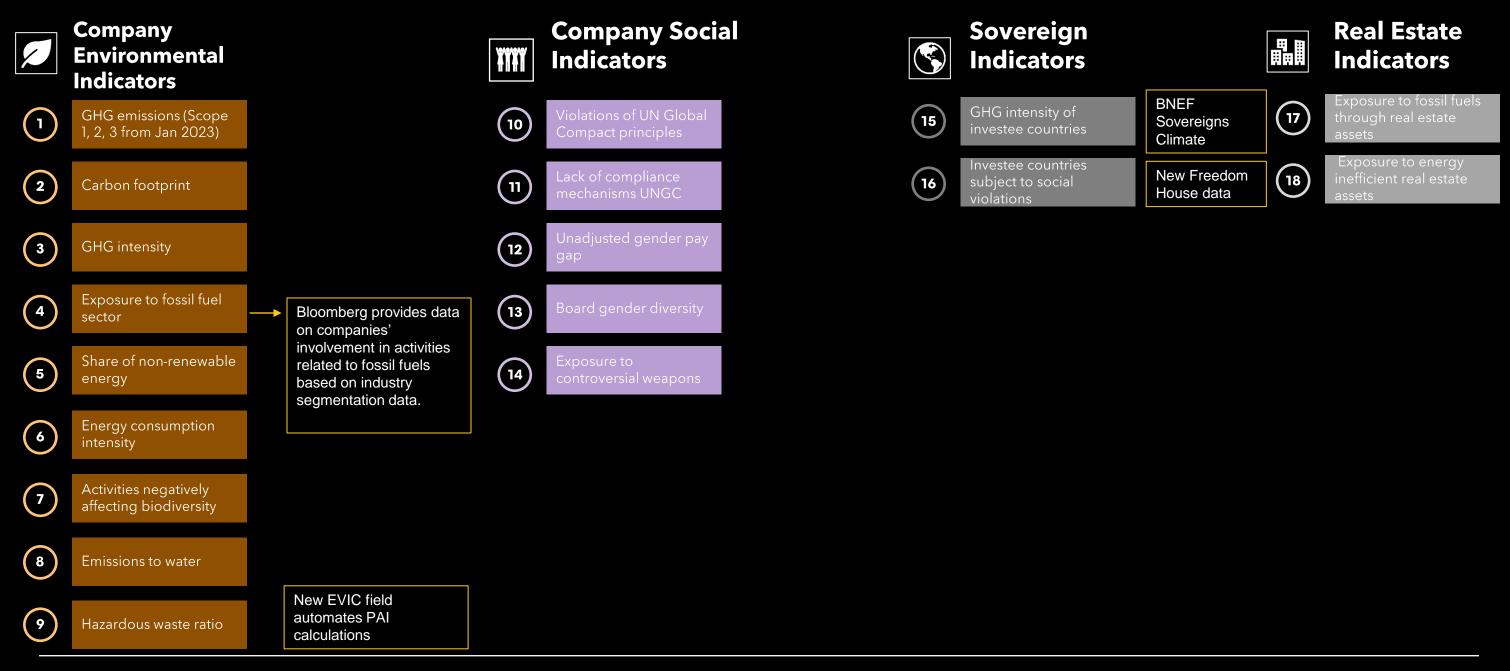
Bloomberg LP **Company Segment** Fundamentals

Company segment fundamentals provide segment level fundamentals data such as as reported, industry standardized and geographic standardized data.

quity	Get Link	Export Se
ICS 🔹 C	Urrency EUR	•
	Rev	% Rev
Energy e Energy ble Energy Equi Energy Equipment I Turbines	4.69B 🏧	26.45 🚱
tilities	0.070	
Generation	9.86B 🏧	
vable Energy Ge Energy Genera	7.75B 🏧	43.69 🚱
lind Energy - R	6.99B 🚋	39.41 🚱
nass & Waste En	354.07M 🌆	2.00 🚱
Transmission &	37 . 15M 🌆	0.21 🚱
s Marketing & T Gas Marketing &	3.15B 🚋	17.78
arketing & Tradi	2.81B 🏧	15.84

Sustainable Finance Disclosure Regulation (SFDR)

Bloomberg Company and Security SFDR PAI Data

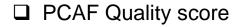


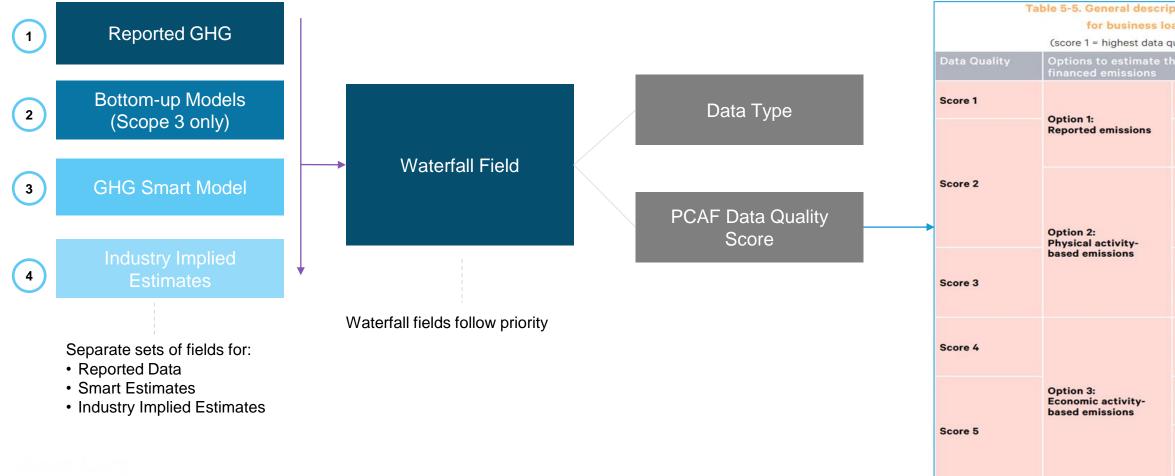
Bloomberg GHG Estimates and Waterfall

- energy supply type determines Scope 2 emissions. GHG Emissions are a risk factor, investors will divest

Reported Carbon data limited: estimates allows significant expansion of coverage

- □ Bloomberg deliver three set of GHG fields: Reported, Smart Estimates & Industry Implied Estimates
- □ Smart estimates: 70K+ companies Scope 1 & 2, 58K Scope 3 with ML, 5K+ bottom-up Scope 3
- □ Industry implied: 130K+ Scope 1 & 2, 117K Scope 3
- □ Waterfall fields for every company covered: reported data will always take preference over the estimates





Climate Risk and Nature Featured

Bloomberg LP Carbon Emissions

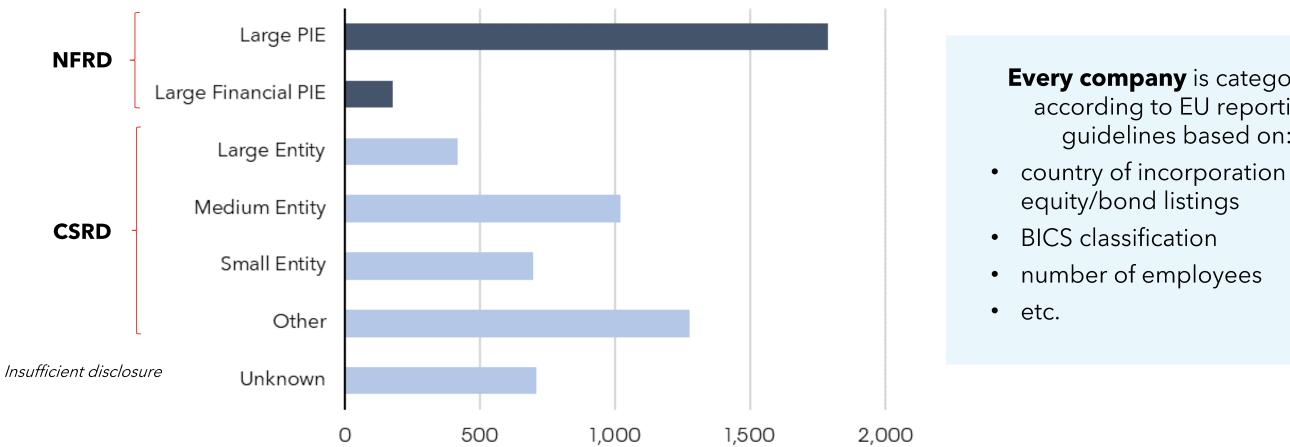
Reported and estimated greenhouse gas emissions data, including scope 1, 2 and 3 emissions and intensity ratios for companies globally. History back to 2010 is included.

SUBSCRIBED

GHG latency and estimate quality
Credibility of Net Zero pledges

ption of the data quality score table						
oans and unlisted equity ⁹²						
quality; score 5 = lowest data quality)						
1		When to use each option				
	1a	Outstanding amount in the company and total company equity plus debt are known. Verified emissions of the company are available.				
	1Ь	Outstanding amount in the company and total company equity plus debt are known. Unverified emissions calculated by the company are available.				
	2a ⁹³	Outstanding amount in the company and total company equity plus debt are known. Reported company emissions are not known. Emissions are calculated using primary physical activity data for the company's energy consumption and emission factors ⁹⁴ specific to that primary data. Relevant process emissions are added.				
	2b	Outstanding amount in the company and total company equity plus debt are known. Reported company emissions are not known. Emissions are calculated using primary physical activity data for the company's production and emission factors specific to that primary data.				
	3a	Outstanding amount in the company, total company equity plus debt, and the company's revenue ⁹⁵ are known. Emission factors for the sector per unit of revenue are known (e.g., tCO ₂ e per euro of revenue earned in a sector).				
	3Ь	Outstanding amount in the company is known. Emission factors for the sector per unit of asset (e.g., tCO_2e per euro of asset in a sector) are known.				
	3c	Outstanding amount in the company is known. Emission factors for the sector per unit of revenue (e.g., tCO_2 e per euro of revenue earned in a sector) and asset turnover ratios for the sector are known.				

Clients can assess the reporting obligations of companies in their portfolio



Number of EU Firms by Reporting Category

Bloomberg

Every company is categorised according to EU reporting guidelines based on:

CSRD requires greater granularity in ESG reporting

Field Breakdown (preliminary)

	Theme	Total
E1	Climate Change	196
E2	Pollution	68
E3	Water	54
E4	Biodiversity	122
E5	Circular Economy	74
S 1	Workforce	166
S2	Value Chain	60
S 3	Communities	60
S4	Consumers	66
G1	Business Conduct	45
	Total	911

including qualitative fields

requiring narrative disclosure

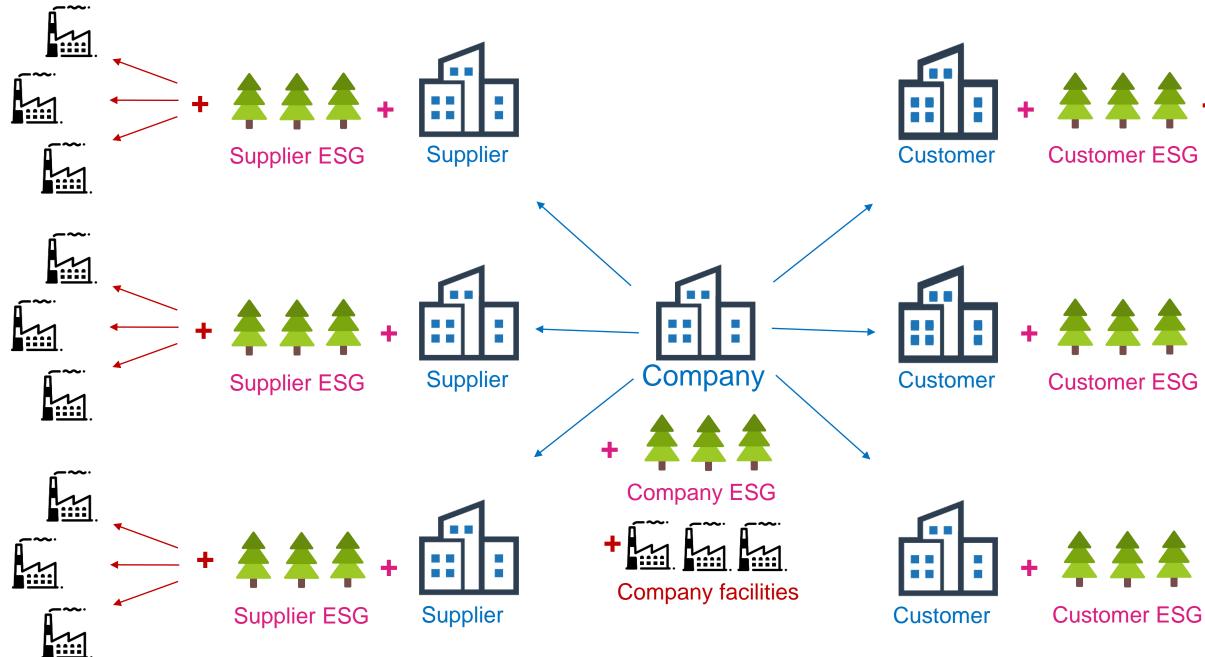
new fields

(not present in current ESG data templates)

Bloomberg Buy-Side Solutions

Global Facilities – combined with ESG and Supply Chain

Supplier facilities



Customer facilities Bloomberg

Corporate Physical Risk Scores – energy source location is a risk



Bloomberg LP Climate Change

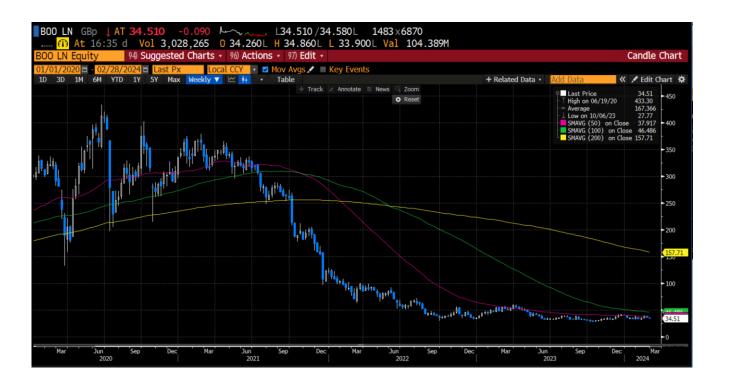
This product includes fields that can be used to assess the exposure of companies to climate related risk.

british VOGUE

What impact does fashion have on biodiversity?

"Growing cotton – which makes up <u>a third of fibres</u> found in our clothes – can lead to soil degradation and habitat loss, as well as damage to species through the use of harmful pesticides. Leather, meanwhile, is a product of livestock farming, an industry that is responsible for <u>70 per cent</u> of deforestation in the Amazon rainforest. Viscose, too, is a significant contributor to deforestation, with an eye-watering <u>150 million trees</u> <u>logged annually</u> to produce the fibre."

"Supply Chains are the Front Lines of ESG, Like it or Not*"



How Leicester's booming clothes factories fell apart at the seams

The city once clothed the world. Now it's blighted by fast fashion and its reputation is stained after a 'slave labour' exposé

Boohoo faces £100m lawsuit over 'modern slavery' scandal at Leicester workshops that exposed how staff worked for as little as £4 an hour in poor conditions and wiped more than £1bn from its value

· A case is being planned on behalf of investors who lost out when shares fell

Fast fashion: Boohoo breaks promises on ethical overhaul

6 November 2023



The Social

Bloomberg

Share

Company Reported Data

Bloomberg captures significant amounts of company reported data which helps the user to understand.

- Pressures a company exerts on nature \bullet
- Governance & management structures in place \bullet to manage nature related risks
- Commodity sourcing and certification •
- Nature related policies \bullet
- Nature related metrics and targets \bullet

See MDLZ US Equity ESGD ALL /S 5TCZ1XWHILALXVR96TV4GA3KR<GO>

For a link to all company reported fields.

Coverage = 15,000 global companies or ~96% global market cap

MDLZ US Equ	iitv	Co	opy	Se	arch Lin	k	ES(G Data Discove	ery
All BBG Sco		ISCI Counts							
Framework: TNF		ovenance: As F			×				×
Hide Filters		*							
				.1	Field ID	Description	Freq	Field Value	
 Applicability 			1)	al	ES005	GHG Scope 1 & 2 Location-Based	Yearly	1,672.880	
Company	/Issuer	145	2)	al.	ES076	GHG Scope 1	Yearly	879.703	
Security		3	3)	al,	ES077	GHG Scope 2 Location-Based	Yearly	793.176	
			4)	al,	ES078	GHG Scope 3	Yearly	28,485.199	
 Provenance 			5)	al i	ES020	Total Waste	Yearly	280.000	
As Repor	ted	148	6)	al,	ES016	Total Water Use	Yearly	13,767.000	
Derived		29	7)	а	DT607	Green Bond/Loan Indicator	Ad hoc		
			8)	al l	ES059	Human Rights Policy	Yearly	Υ	
 Data Type 			9)	al.	ES019	Hazardous Waste	Yearly		
Metric		105	10)	al.	ES037	Environmental Supply Chain Management	Yearly	Υ	
Qualitativ	ve infor.	. 42	11)	al.	ES039	Waste Reduction Policy	Yearly	Υ	
Date		1	12)	al.	ES021	Waste Recycled	Yearly		
		More	13)	а	ES118	Social Supply Chain Management	Yearly	Υ	
 Asset Class 			14)	а	ES269	Total Water Withdrawal	Yearly	13,767.000	
Equity &	Fixed I	. 145	15)	al.	ES033	Amount of Environmental Fines	Yearly		
Fixed Inc		3	16)	al.	ES032	Number of Environmental Fines	Yearly		
			17)	al i	ES041	Environmental Quality Management Policy	v Yearly	Υ	
 Field Availabi 	ility		18)	al l	ES007	Nitrogen Oxide Emissions	Yearly		
■ ► EQS		121	19)	.1	ES042	New Products - Climate Change	Yearly	Ν	
BOL			20)	al.	ES018	Discharges to Water	Yearly		
Data Lice	ense	89	21)	al	ES017	Pct Water Recycled	Yearly		-

Data licenced for use across your enterprise via data.Bloomberg.com

Bloomberg | DATA <GO>

Home Data License Bulk Data License Per Security Real Time Solutions Fields

Data License Per Security > Create Current Data (getData) Request

Create Current Data (getData) Request

Select your inputs (Instruments and Fields) and scheduling (ad hoc, daily, weekly or monthly) to retrieve the data.	1. Compile Field List Compile a field list with any combination of
This request can be submitted once all criteria below are met.	ப் Upload a List Drag and drop fields from a file, upload or drag and drop a file of fields
1. Compile Field List *	
2. Compile Instrument List *	Load a Saved List Load fields from a saved list in your DL account
3. Configure Request Details * 🥥	
Request Name	
 Delivery Frequency Other Settings 	Load a Bloomberg List Load fields from a list curated by Bloomberg

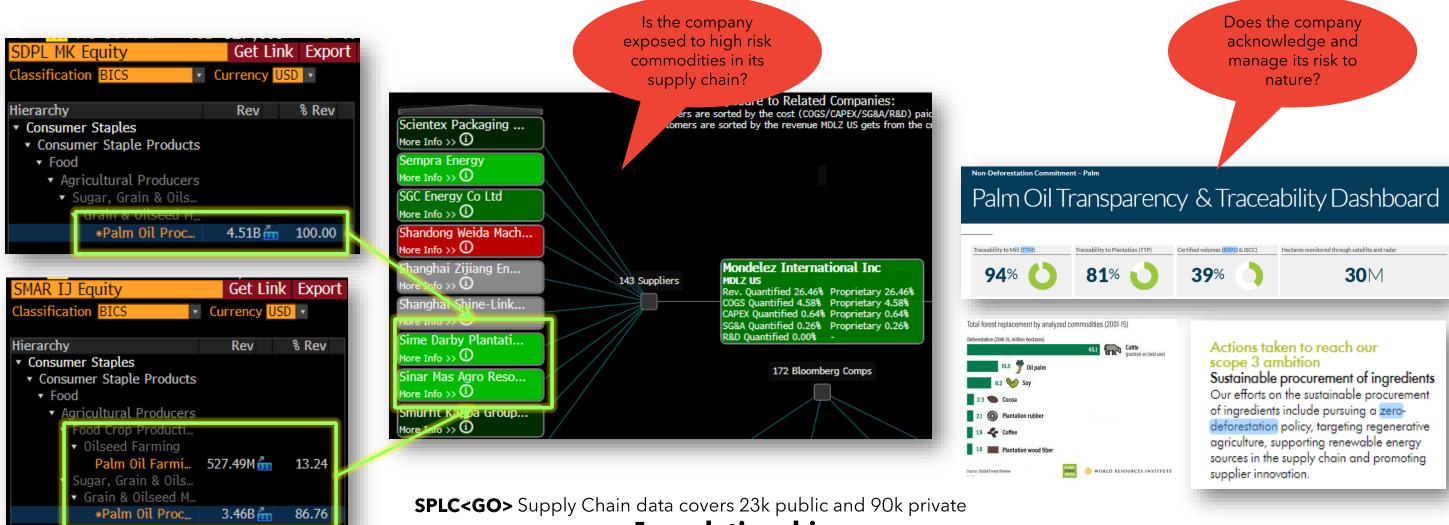
IDENTIFIER	BOO LN Equity	ASC LN Equity	GFG GR Equity	ZAL GR Equity
SHORT_NAME	BOOHOO GROUP PLC	ASOS PLC	GLOBAL FASHION G	ZALANDO SE
SPPLY_CHN_MODRN_SLVRY_ASSMNT	TRUE		FALSE	TRUE
ESG_SCORE_PERCENTILE	82.4	92.9	79.2	93.3
GHG_SCOPE_1_2_3_PER_EVIC	526	971	697	563
SUPPLIER_AUDITS_CONDUCTED				302
SOCIAL_SUPPLY_CHAIN_MGMT			TRUE	TRUE
CMDTY_SRCNG_ESG_RISKS_DISCSD		TRUE		
HUMAN_RIGHTS_DUE_DIL_PROC				TRUE
SUPPLIER_FACILITIES_AUDITED				
CDP_BIODIVERSITY_OVERSIGHT				Yes, executive management-level responsibility
ADOPT_TNFD_RECOMMENDATIONS		TRUE		
ZERO_DEFORESTATION_POLICY				
EXEC_LEVEL_OVERSIGHT_BIODIV				TRUE
COMMIT_EX_BIODIV_REL_INITITV				TRUE
CLIMATE SCENARIO ANALYSIS				TRUE

The Social

Understand Biodiversity-related exposures

At Risk Commodity Fields within the Supply Chain

Bloomberg uses our BICS classifications and segmentation allow you to find revenue exposure to 'at risk' commodities. Coverage >50k companies



companies, comprising **>1m relationships**

New Supply Chain Linked at risk commodity fields (end Q3 2023)

Portfolio exposure to deforestation risk via supply chain

Deforestation : Direct Exposure

Bloomberg also captures commodity exposure data for 50,000+ global companies, with transparency available.

For example for Mondelez, we find exposure to

Beef / Leather / Dairy Cocoa Coffee Palm Oil Soy

Fieldset : MDLZ US Equity ESGD ALL /S UXLGPIXC71QPH62FAERMG7YA<GO>

MDI	LZ US Equity	Raw Ma	terials and I	Packaging				
■∈∃ Ove	Chart ⊞ Table Suppliers erview Geo-Exposure ES	C sweeten to packa supply, o	ers, flavoring ge our produo	agents and n its and natura st and curren	uts. In addition, v I gas, fuels and e	we purchase an electricity for o	nd use significa ur factories an	wheat, edible oils, sugar and o ant quantities of packaging mate d warehouses. We monitor worldy ctively secure ingredients, packa
			Change	Change	Exposure Source	Date	Suppliers	
						•		
	Cheese »				10-K	02/03/23	7 »	Kraft Heinz Co/The
	Cocoa »	4.94%	10.43%	65.52%	10-K	02/03/23	9 »	Kraft Heinz Co/The
	Coffee »	9.73%	2.66%	-7.58%	10-K	02/20/15	8 »	Kraft Heinz Co/The
[]	corrugated Packaging »	0.00%	0.00%	-10.43%	10-K	03/03/14	16 »	Kraft Heinz Co/The
	Fuel Oil »				10-K	02/03/23	37 »	Kraft Heinz Co/The
	Grain »				10-K	02/03/23	8 »	
	Maize »	-1.91%	-13.40%	-31.58%	10-K	02/04/22	12 »	Kraft Heinz Co/The
~	Milk »	2.94%	-7.13%	-10.75%	10-K	02/04/22	9 »	Kraft Heinz Co/The
~	Natural Gas »	0.49%	-9.42%	-43.87%	10-К	02/03/23	38 »	Kraft Heinz Co/The
	Nut »				10-K	02/03/23	6 »	Kraft Heinz Co/The
	Palm »		 •	• • •	10-K	02/05/21	3 »	Premier Foods PLC
~	Polvethylene »	-4.648	mpanie	es with_s	egmenta	ା <u>୫୫</u> ୬୫୫/୦୭	egwyll us	Rraft Heinz Co/The
	RBD Palm Oil »	-2.])%	s datā4%		10-K	02/04/22	6 »	Dongsuh Cos Inc
	Repin //				10-K	03/03/14	10 »	Kraft Heinz Co/The
	Calt »				10-K	02/04/22	6 »	Ecolab Inc
	Soybean »	- <mark>0.</mark> Ке	sult <u>8.79</u> %	-3.30%	10-K	02/04/22	7 »	Kraft Heinz Co/The
	Sugar »	0.76%	<u>ጋ % ዮ</u> ቹ፣	evende	from fore	42/03/23	13 »	Kraft Heinz Co/The
	Water »		mmodit		10-K	02/04/22	37 »	Kraft Heinz Co/The
		100	J% of r	evenue	from palr	n oil		

other erials dwide aging

Biodiversity How to measure the impact of a company on its surroundings

Bloomberg's Approach to Biodiversity

- Understand the segments in which a company operates
- Identify whether the company operates in locations of high impact or dependency risks
- Reference supply chain & commodity exposure data to understand the flow of commodities which drive nature loss
- Capture data reported by companies on their nature-related disclosures
- Develop a company overview





Climate and Nature

Intactness measures how intact an ecosystem is in comparison to its pristine state, with 100% indicating a pristine ecosystem, 50% would indicate abundance and diversity of half the pristine state.

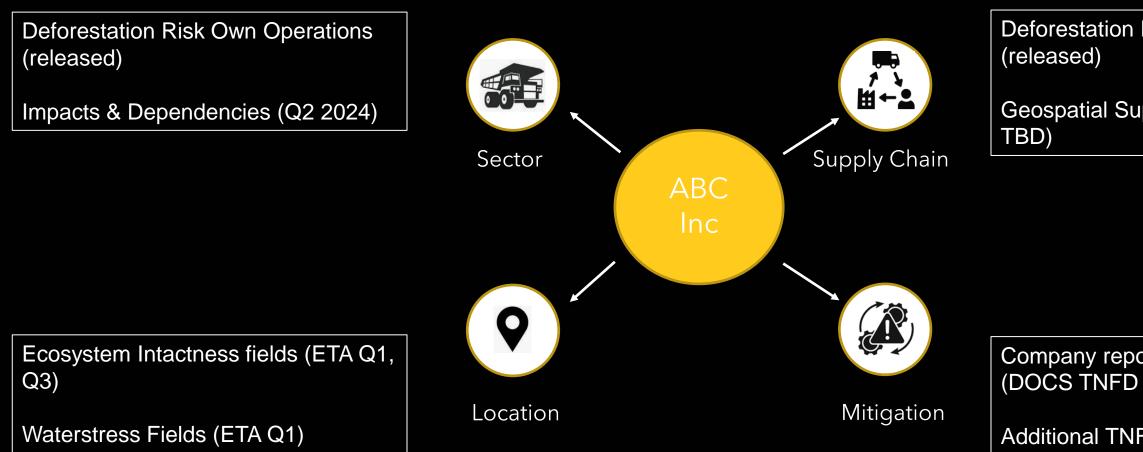
We will surface

- ✓ Flag companies with assets in proximity to highly intact areas
- ✓ Flag companies with assets in areas of rapidly decreasing intactness

Portfolio exposure to deforestation risk via supply chain

✓ Flag companies with assets in areas inside highly intact areas

How does this fit into broader Biodiversity Product?



Deforestation Risk Supply Chain

Geospatial Supply Chain risks (ETA

Company reported data (released) (DOCS TNFD Mapping<GO>)

Additional TNFD Fields (2024)

Supply Chain Climate Risk Exposure

Select a Company

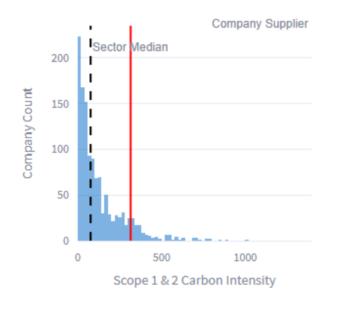
Caterpillar Inc

Carbon Intensity for Company and its Supply Chain

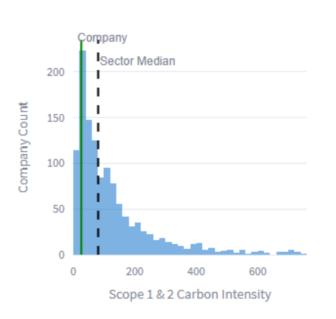
Company Supplier (Customer) Side Scope 1 & 2 Carbon Intensity is calculated as average supplier (customer) companies Scope 1 & 2 carbon intensity weighted by relationship percentage between company with its suppliers (customers).

-

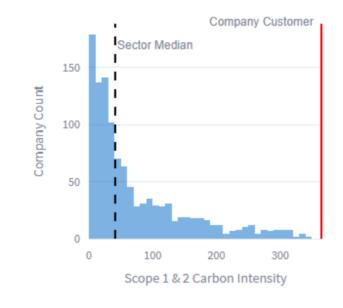
Supplier Side



Company



Customer Side



Bloomberg

GHG

Combining Fund & ETF Holdings and Supply Chain data

Combining Fund & ETF Holdings with Supply Chain data allows to uncover indirect risk exposures of a fund for a 360 understanding of positions.

This page allows you to measure various risks and exposure based on the suppliers and customers of a Fund holdings in 3 sections:

- Risk Breakdown section: shows top contributors to Credit risk, Centrality risk, Sanction risk and Climate risk for either Suppliers or Customers.
- Sector Exposure section: shows sector exposure of a Fund with or without looking at Suppliers/Customers to measure indirect sector exposure. ٠
- Geographic Exposure section: shows geographic exposure of a Fund with or without looking at Suppliers/Customers to measure indirect sector exposure. ٠

Supply Chain - Fund Analysis

Select a Fund:		Select a Perspective:
Ringturm - RT OESTERREICH AKTIENFONDS	~	 Holdings' Suppliers
Risk Breakdown	Sector Exposure	Geographic Exposure
Choose a focus of risk		Pick Exposure of the Fundus Market ⁽¹⁾ using Supply Chain data

```
Credit O Centrality O Sanction O Climate
```

Ticker: RTOSTAA AV Equity

RT OESTERREICH AKTIENFONDS is an open-end fund incorporated in Austria. It is an equity fund geared towards long-term capitalappreciation that invests solely in Austrian equities. Although the fund is oriented towards a benchmark (ATX Prime Index), the composition of the fund can at times deviate significantly from the index. The fund management pursues a top-down investment approach.

Risk Exposure of the Fund vs Market (**, using Supply Chain data



Credit Risk Suppliers Centrality Risk Suppliers Sanction Risk Suppliers Climate Risk Suppliers

Bloomberg LP **Climate Change**

This product includes fields that can be used to assess the exposure of companies to climate related risk.

Bloomberg LP Supply Chain

Provides access to as reported and Bloomberg estimated customer and supplier relationships for companies globally.

Bloomberg LP

Facilities

Global geolocation data for company manufacturing, distribution, R&D and sales facilities including datapoints like facility type and manufactured products.

Bloomberg LP Sanctions

Sanctions data for entities and securities covering US, EU, UK, Switzerland, UN, HK, Japan, Canada, Australia and Singapore including funds and index exposures

Bloomberg LP Default Risk

Daily credit risk indicators from the Default Risk (DRSK) and Market Implied Probability of Default (MIPD) engines including implied CDS spreads and recovery rates.

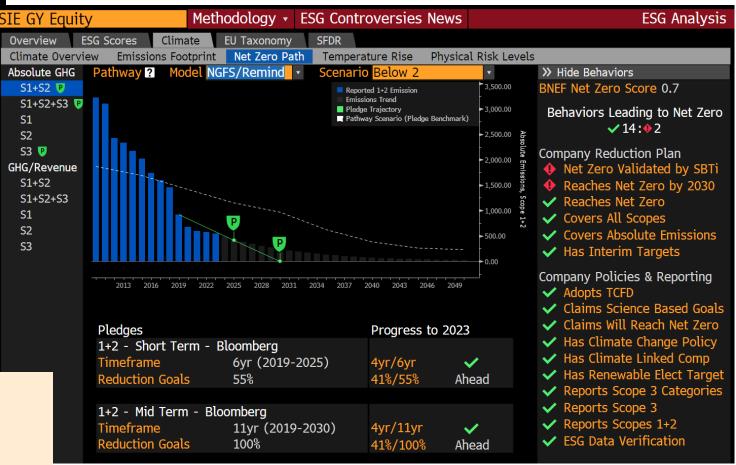
Net Zero Credibility Assessment and Pathways



- Net zero pathways different scenarios
- Bloomberg Net Zero commitment 8K companies
- Forward looking GHG
- **Distance** metrics

Credibility driven by:

Accountability



Pledges 1+2 - Short Term - Bl Timeframe Reduction Goals	oomberg 6yr (2019-2025) 55%	Progress to 2 4yr/6yr 41%/55%
Reduction doats	JJ.0	-10/JJ-0
1+2 - Mid Term - Bloc	omberg	
Timeframe	11yr (2019-2030)	4yr/11yr
Reduction Goals	100%	41%/100%

Financial Materiality - ESG Score

Overall ESG Score Aggregation

The Overall ESG score evaluates a company's aggregated ESG performance, across E, S and G Pillars. The score is based on Bloomberg's view of ESG financial materiality.

For each peer group, Pillar weights are determined by Bloomberg Intelligence fundamental research. The relative importance - from the point of view of financial materiality—of each of the three Pillars is specified by assigning them a "rank" on a 1-5 scale, with 1 reflecting the highest importance. G is ranked 3 for all peer groups, as company and region-specific factors can be more significant drivers of governance than industry factors. Rankings are translated into percentage weights. Aggregation of Pillars into the ESG score uses a weighted generalized or power/p-mean.

Examples of pillar weighting	by peer group	Import	ance (1 = hi	ghest)	Weight			
Sector	Peer Group	Е	5	G	E	5	G	
Communications	Advertising and Media Content	4	1	з	20.0%	50.0%	30.0%	
Consumer Discretionary	Automobiles	1	3	3	45.5%	27.3%	27.3%	
Financials	Diversified Banks	з	1	з	27.3%	45.5%	27.3%	
Materials	Iron & Base Metals	1	2	3	41.7%	33.3%	25.0%	
Oil & Gas	Exploration & Production	1	3	з	45.5%	27.3%	27.3%	

Financial Materiality ESG Score Holcin v Heidelberg 5.63 v

S D L	Metho	dology 🔹 ESG Controve	ersies News						ESG Analysis	;
	verview ESG Scores	Climate EU Taxonomy	SFDR							
	Inputs Latest	Peer Distribution Cement	CCB BECS »		Trend ES	G Score Tre	nding Down	3Y		
				30% "	ESG					
	ESG Score			►20% 의	E				6	
				► 10% eers	S G					
	5.63 Leading	┍┯┛┯┚┯┚┆┚┯┚┯╍							► 4	
		0-1 2-3 4-5 6	-7 8-9			2019 2020		2022 Latest	_	
	Metric		Score Level	Weight	Sco		Disclosure		Ø	
	 Environmental 		Pillar	50.00%		5.35		Leading		
	 Climate Exposure 		Issue	21.73%		3.00		Leading	Q	
	Energy Management		Issue	21.73%		5.88		Leading	a	
	GHG Emissions Mana	igement	Issue	21.73%		7.60		Leading	ď	
	Air Quality		Issue	9.39%		6.38		Leading	a	
	Waste Management		Issue	9.39%		6.60		Above Median		
	Water Management		Issue	9.39%		3.64	75%	Above Median	Q	
	 Ecological Impact 		Issue	6.64%		4.92	63%	Leading	a	
	 Social 		Pillar	20.00%		4.03		Above Median		
	Occupational Health	& Safety Management	Issue	51.86%		4.80	63%	Above Median	ď	
	Ethics & Compliance		Issue	36.94%		3.00	0%	Median	à	
	Community Rights 8	Relations	Issue	7.39%		1.97		Median	a	
	Product Quality Man	agement	Issue	3.82%		10.00		Leading		
	 Governance 		Pillar	30.00%		7.33	100%	Leading		
	Board Composition		Theme	35.00%		<mark>8.2</mark> 9	100%	Leading	a	
	Executive Compensation	ation	Theme	24.94%		5.01	100%	Leading	a	
	 Shareholder Rights 		Theme	24.94%		8.11		Leading		
	► Audit		Theme	15.12%		8.07		Above Median		

IEI	GY Equity		Methodology 🔹	ESG Co	ontroversie	s News	
	Overview	ESG Scores	Climate EU Taxo	nomy	SFDR		
	Transita Lat	est ·	Peer Distribution Ce		CCB BECS »		Trend
	Inputs Lat	est				30%	ESG
	ESG Score					►20% _	E S
						- Peer:	G
	4.98	Leading				5	
			0-1 1-2 2-3 3-4 4-5	5-6 6-7	7-8 8-9 9-10		2017
	Metric				Score Level	Weight	
	 Environm 				Pillar	50.00%	
		e Exposure			Issue	21.73%	
	Energy	Management			Issue	21.73%	
		nissions Manag	ement		Issue	21.73%	
	🕨 🕨 Air Qua				Issue	9.39%	
		Management			Issue	9.39%	
		Management			Issue	9.39%	
	Ecologi	ical Impact			Issue	6.64%	
	 Social 				Pillar	20.00%	
			Safety Managemer	it	Issue	51.86%	
		& Compliance			Issue	36.94%	
		inity Rights & F			Issue	7.39%	
	Produc	t Quality Manag	gement		Issue	3.82%	
	 Governar 				Pillar	30.00%	
		Composition			Theme	35.00%	
		ive Compensati	ion		Theme	24.94%	
		older Rights			Theme	24.94%	
	 Audit 				Theme	15.12%	

 Governance 	Pillar	30.00%	7.33
 Board Composition 	Theme	35.00%	8.29
 Director Roles 	Issue	25.00%	6.87
 Board Roles 	Sub-issue		4.17
Average Number of Public Company Boards	Field		3.59
 Highest Number of Boards Any Director Se. 	Field		2.96
 Pct Executive Directors on 2 or More Boar 	. Field		10.00
2022 Percentage of Executive Directors	. Input Data		0.00

 Governance 	Pillar	30.00%	5.37
 Board Composition 	Theme	35.00%	4.73
 Director Roles 	Issue	25.00%	4.12
 Board Roles 	Sub-issue		6.04
 Average Number of Public Company Boards 	Field		8.18
 Highest Number of Boards Any Director Se 	Field		5.00
 Pct Executive Directors on 2 or More Boar 	Field		

Bloomberg



ESG Analysis



Energy Diversity Risk : <u>Supply type</u>, <u>Supply chain & Supply location of the</u> energy

Ticker Cnt	itry 1													
		I G 3	Number of	Clmt Rsk Phys	Clmt Rsk Phys	Tot GHG /	SFDR PAI Cbn	Energy	NatGas Used	Oil/Dies Used	Elec Used	Renew Energy	Self Ger	ESG S
			Employees	Lvl	Cat		Ftprnt Percntle	Consump					Renew Elec	Perant
Of	Rsk I	ENA				Intens / Sl 🔻		Ţ						
		R												
• Materials (6)												. <u> </u>		
						_	_			-				_
AIR LIQUIDE SA d FR	ε μ	4 C 1	67,100	82.00	High Risk	1,280.484	54.40	75,927	3,300,490	0	42,994	7,509	0	83.60
AMAG AUSTRIA MET 🛛 👌 🗛	Г <i>І</i>	١. ١	2,214	55.00	Moderate Risk	86.002	38.20	711			241	241		99.50
BASF SE d DE	E B	E C -	111,481	83.00	High Risk	230.318	83.70	53,883	3,664	82	11,619	2,328	4	95.40
LENZING AG d AT	r I	C -	8,301	74.00	Moderate Risk	590.648	48.60	9,666	136,991	12	550	5,623	8	94.30
Mayr-Melnhof kar d at	「	۰ C	15,640	78.00	Moderate Risk	366.582	76.70	10,155	317,566	23	3,471	4,397	1,031	56.40
VOESTALPINE AG d AT	۱ ٦	N 1	51,202	80.00	High Risk	732.682	82.40	36,900	621,647	4	1,460	883	99	62.80



FEATURES - COLLECTIONS - PODCASTS CH

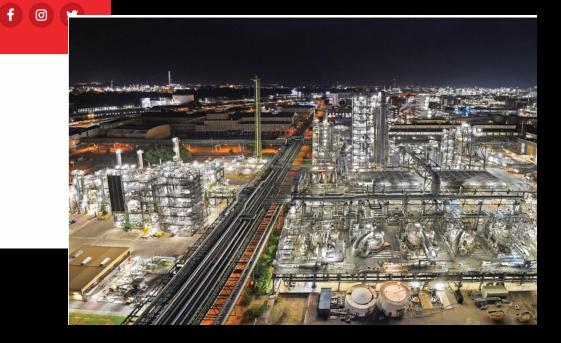
FINANCE

BASF is cutting back at its main site in Germany

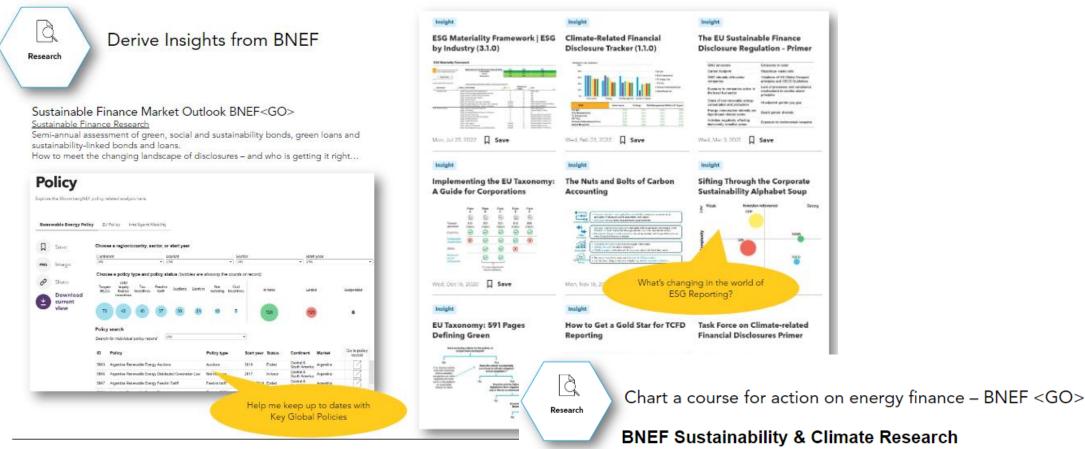
MAGAZINE -

The company says high energy prices are forcing it to shut plants at its Ludwigshafen complex

by Alexander H. Tullo February 27, 2023



Bloomberg NEF – BNEF Research



BNEF helps strategy professionals consider long-term
environmental and climate-oriented risks and
opportunities

BNEF tools, research and analysis enable decision makers to develop effective strategies that leverage sectoral transitions

BNEF research identify innovative technologies and the economic benefits of adoptions

Climate Risk CLIMATE SCENARIOS New Energy Outlook (NEO) Long-term climate scenarios for the global

- economy incl. net-zero by 2050 Long-term Electric Vehicle Outlook (EVO)
 - Road vehicle transition and impact on fuels
- Transition Metals Outlook (TMO)
- Impact of net-zero on metals and mining

TRANSITION REVENUE AT RISK

- Transition Risk Assessment Company Tool 2050 revenue projections, 4 scenarios
- 5000 companies in most-affected industries (Roadmap includes expanding to 40,000)
 - Equity-portfolio analysis: TRACT Portfolio

TRANSITION SCORES

- Market outlook: tracking volumes & policy Clean Energy Exposure Scores Power purchase agreement database
 - 8,000 equities Business model transition scores
 - Detailed industry-specific methodology
 - · 200 major oil & gas, metals & mining, utilities companies (expanding to 000s)
- Corporate PPA price survey RE100 targets data tool

>100GW of clean energy procurement projects

Clean electricity forecasts for 400 companies

Corporate sustainability

Net zero assessment tool

CARBON OFFSETS

Offset market data viewer

Over 6,000 offset projects

ranking buyers & developers

forecasts

Buyer profiles

CLEAN POWER

industries (expanding)

Science-based targets data tool

Long-term carbon offsets outlook

Assessing the quality of net-zero goals

SBTi targets mapped and visualized

2050 scenarios: price, demand, supply

-2000 companies (and counting)

1000 biggest companies in most polluting

NET ZERO

- Project-level data to track low carbon activity

Sustainable Finance REGULATION Sustainable finance policy database - Trends and policy outlook for G20 + key markets Timeline, target entities, impact Policy commentary Monthly take on major policy developments Policy primers Deep dive on key policies and announcements SUSTAINABLE DEBT Market outlook tracking developments & growth Sustainable debt tool visualize & slice market data Sustainability linkage data tool by ESG metrics Decarbonization alignment Benchmarking KPI design and impact reporting Assessing use of proceeds alignment with climate scenarios FINANCIAL INSTITUTION TRANSITION Clean : fossil fuel investment ratio benchmark Energy Supply Banking Ratio Deal facilitation data on ~1,200 banks Clean energy & fossil debt, equity & project finance Asset Manager Investment Ratio Under construction

• Disclaimer

• The data included in these materials are for illustrative purposes only. The BLOOMBERG TERMINAL service and Bloomberg data products (the "Services") are owned and distributed by Bloomberg Finance L.P. ("BFLP") except (i) in Argentina, Australia and certain jurisdictions in the Pacific islands, Bermuda, China, India, Japan, Korea and New Zealand, where Bloomberg L.P. and its subsidiaries ("BLP") distribute these products, and (ii) in Singapore and the jurisdictions serviced by Bloomberg's Singapore office, where a subsidiary of BFLP distributes these products. BLP provides BFLP and its subsidiaries with global marketing and operational support and service. Certain features, functions, products and services are available only to sophisticated investors and only where permitted. BFLP, BLP and their affiliates do not guarantee the accuracy of prices or other information in the Services. Nothing in the Services shall constitute or be construed as an offering of financial instruments by BFLP, BLP or their affiliates, or as investment advice or recommendations by BFLP, BLP or their affiliates of an investment strategy or whether or not to "buy", "sell" or "hold" an investment. Information available via the Services should not be considered as information sufficient upon which to base an investment decision. The following are trademarks and service marks of BFLP, a Delaware limited partnership, or its subsidiaries: BLOOMBERG, BLOOMBERG ANYWHERE, BLOOMBERG MARKETS, BLOOMBERG NEWS, BLOOMBERG PROFESSIONAL, BLOOMBERG TERMINAL and BLOOMBERG.COM. Absence of any trademark or service mark from this list does not waive Bloomberg's intellectual property rights in that name, mark or logo. All rights reserved. © 2023 Bloomberg.