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**Article**

## Green Funds and Environmental Disclosure Quality

Junior Management Science (JUMS)

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# **Online-Appendix zu**

## **„Green Funds and Environmental Disclosure Quality”**

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## Appendix I

### Quality Principles for Environmental Disclosures

Quality Principle	Reporting Standard Providers				
	GRI	TCFD	IASB	SASB	EFRAG
Clarity/ Understandability	Yes	Yes		Yes	Yes
Comparability	Yes	Yes	Yes	Yes	Yes
Completeness	Yes	Yes			
Consistency		Yes	Yes		
Faithful Representation/ Credibility/Verifiability	Yes		Yes	Yes	Yes
Neutrality			Yes	Yes	
Relevancy		Yes	Yes		Yes
Reliability		Yes			
Timeliness	Yes	Yes			

Source: Derived from GRI 2022, TCFD 2017, TCFD 2018, ISSB 2022, SASB 2020 and EFRAG 2022.

Notes: This table provides an overview on the terms different standard providers use to define their principles for quality and indicates that despite the use of sometimes different terminology the standard providers have a similar understanding of what quality means in the context of environmental disclosures.

## Appendix II

### Framework for the Generation of an Environmental Disclosure Quality Score

Description of Disclosure Items	Scale
<b>(A) Adoption of Environmental Disclosures (max score: 2)</b>	
1. Public Availability of Environmental Disclosures	0 or 1
2. Adoption of Voluntary Reporting Standards/Guidelines	0 or 1
<b>(E) Extent of Environmental Disclosures (max score: 52)</b>	
<u>Hard Disclosure Items:</u>	
<i>(E1) Environmental Performance Indicators (EPI) (max score: 30)</i>	
1. EPI on Emissions	0 to 6
2. EPI on Energy Use and/or Energy Efficiency	0 to 6
3. EPI on Waste Generation and/or Management	0 to 6
4. EPI on Water Use and/or Water Efficiency	0 to 6
5. EPI on Products/General Resources for Products	0 to 6
<i>(E2) Environmental Financial Indicators (max score: 7)</i>	
1. Reporting of Revenue from Environmental Products	0 or 1
2. Presentation of Environmental R&D Expenditures to Revenues	0 or 1
3. Disclosure of Environmental Assets under Management	0 or 1
4. Information on Environmental Expenditures Investments	0 or 1
5. Information on Environmental Provisions	0 or 1
6. Presentation of Environmental R&D Expenditures	0 or 1
7. Information on Carbon Offsets/Credits	0 or 1
<i>(E3) Internal Carbon Pricing (max score: 2)</i>	
1. Information on the Implementation of an Internal Carbon Pricing	0 or 1
2. Disclosure of the Internal Carbon Price per Tonne	0 or 1
<i>(E4) Environmental Fines (max score: 2)</i>	
1. Declaration of Environmental Fines	0 or 1
2. Disclosure of Self-Reported Environmental Fines to Revenues	0 or 1
<i>(E5) Reporting Scope (max score: 2)</i>	
1. Environmental Reporting Scope	0 or 1
2. Reporting of Global Activities	0 or 1

## Appendix II (continued)

### Soft Disclosure Items:

#### *(E6) Executive Statements (max score: 2)*

- |   |        |
|---|--------|
| 1. Statement regarding recent Controversies                       | 0 or 1 |
| 2. Statement on Climate Change Commercial Risks and Opportunities | 0 or 1 |

#### *(E7) Vision and Strategy: Environmental Policies (max score: 7)*

- |   |        |
|---|--------|
| 1. Policy on Emission Reduction                     | 0 or 1 |
| 2. Policy on Environmental Supply Chain Improvement | 0 or 1 |
| 3. Policy on Sustainable Packaging                  | 0 or 1 |
| 4. Policy on Water Efficiency                       | 0 or 1 |
| 5. Policy on Resource Reduction                     | 0 or 1 |
| 6. Policy on Fossil Fuel Divestment                 | 0 or 1 |
| 7. Policy on Land Environment Impact Reduction      | 0 or 1 |

### **(C) Credibility of Environmental Disclosures (max score: 20)**

#### *(C1) Governance Structure and Management Systems (max score: 10)*

- |   |        |
|---|--------|
| 1. Existence of Management Positions for Environmental Management | 0 or 1 |
| 2. Existence of an Environmental Issues Committee in the Board    | 0 or 1 |
| 3. Implementation of ISO 14000 at the Plant and/or Firm Level     | 0 or 1 |
| 4. Executive Compensation is linked to Environmental Performance  | 0 or 1 |
| 5. Environmental Incentives for Compensation                      | 0 or 1 |
| 6. Organization in Environmental Partnerships                     | 0 or 1 |
| 7. Implementation of an EMS (Environmental Management System)     | 0 or 1 |
| 8. Existence of an Environmental Supply Chain Management System   | 0 or 1 |
| 9. Internal Audits of Environmental Supply Chain Management       | 0 or 1 |
| 10. Environmental Supply Chain Partnership Termination            | 0 or 1 |

#### *(C2) Assurance (max score: 1)*

- |  |        |
|--|--------|
| 1. Independent Assurance about Environmental Information disclosed | 0 or 1 |
|--|--------|

#### *(C3) Environmental Initiatives (max score: 7)*

- |   |        |
|---|--------|
| 1. Involvement in Environmental Investments Initiatives | 0 or 1 |
| 2. Commitment to Environmental Project Financing        | 0 or 1 |
| 3. Involvement in Environmental Restoration Initiatives | 0 or 1 |
| 4. Commitment to Climate Related UN SDGs                | 0 to 4 |

## Appendix II (continued)

### *(C4) Environmental Initiatives and Trainings (max score: 2)*

- |   |        |
|---|--------|
| 1. Active Dialogue/Training of Suppliers for Environmental Issues | 0 or 1 |
| 2. Environmental Management Training                              | 0 or 1 |

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Total Score (max score: 74)

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Source: Derived from Braam et al. 2016, 732-733, Clarkson et al. 2008 312-313, GRI 2022, TCFD 2017, TCFD 2018, ISSB 2022, SASB 2020 and EFRAG 2022.

Notes: The scores are determined based on whether a disclosure item is presented, for the availability of an item a point is awarded. The value of a disclosed item is not relevant. The resulting score does not represent the environmental performance but the environmental disclosure quality independent of whether the disclosed information is positive or negative regarding environmental performance. The scoring scale of environmental performance data (EPDs) is from 0 to 6. A point is awarded for each of the following items: (1) Performance data is presented; (2) Performance data is presented relative to revenue; (3) Targets for performance are presented; (4) Performance data is presented relative to targets; (5 and 6) Advanced performance data relevant for the specific item (such as carbon intensity of energy use, amount of recycled water, waste recycling ratio, differentiation of upstream and downstream emissions and others). This rating is modified, based on the idea of Clarkson et al. (2008). The whole framework is based on the idea of Braam et al. (2016), which is based on the GRI in 2016. I modified it based on the disclosure items which are discussed as important in the current (voluntary) environmental disclosure standards as the standards were revised since the publishing of the paper by Braam et al. (2016). The climate related UN SDG are Climate Action, Life Below Water, Life on Land, as well as Affordable and Clean Energy. ISO 14000 is a group of standards related to environmental management that exists to help organizations minimize how their operations negatively affect the environment. See also Chapter 2.2 for explanations regarding the requirements of environmental disclosure quality and Chapter 4.1.2 for a description of the design process of the framework.

## Appendix III

### Detailed Description of Green Fund Selection Processes

Fund	Selection Process	Description
SRI Euro Quality	<i>General Information</i>	SRI Approach, Climate Conscious
	<i>Negative Screening</i>	Stocks which represent corporate responsibility risks are excluded. Exclusion of: Tobacco production, controversial arms, coal mining, fossil-fired power generation, companies in violation of the UN Global Compact, conventional oil and gas, electricity generation coal (10% revenue threshold), thermal coal production (10% revenue threshold), non-conventional gas and oil production (20% revenue threshold).
	<i>Positive Screening</i>	Application of own rating model to assess positive impact of company based on a variety of indicators. Application of rules of Label Febelfin, a green label of the Belgian financial sector federation which provides standards for an in-depth analysis and independent supervision of green funds.
	<i>Active Dialogue</i>	Seek to meet with the managers of the investee and visit their site to deepen their understanding of the business policies.
	<i>In-House Research</i>	Not applicable.
	<i>Environmental Disclosures</i>	Explicitly mention disclosures as fundamental source for financial and environmental analysis, but also point out the difficulties in criteria definition and measurement as well as data access and reliability when it comes to environmental disclosures.

### Appendix III (continued)

Fund	Selection Process	Description
ESG Multi-Asset Fund	<i>General Information</i>	ESG Approach, Climate Conscious
	<i>Negative Screening</i>	Exclusion based on baseline of the fund provider: Production of controversial weapons, production and auxiliary services for nuclear weapons, production of small firearms or ammunition intended for retail to civilians, thermal coal extraction or thermal coal-based power generation (5% revenue threshold), production of tar/oil sands (5% revenue threshold), production of tobacco products, production distribution or retail of tobacco-related products (5% revenue threshold), failure to comply with UN Global Compact Principles Fund specific exclusion criteria: production, distribution and retail of alcoholic products, gambling, pornographic material Exclusion of issuers with MSCI-ESG rating below BBB
	<i>Positive Screening</i>	Not applicable.
	<i>Active Dialogue</i>	Not applicable.
	<i>In-House Research</i>	Not applicable.
	<i>Environmental Disclosures</i>	Are used for the assessment of companies within their selection process.



### Appendix III (continued)

Fund	Selection Process	Description
Global Impact	<i>General Information</i>	Impact Investing Approach, Climate Conscious
	<i>Negative Screening</i>	Exclusion: Strategies that exclude securities from portfolios where they are not aligned to the investor's values. Includes customized screening criteria which are not further described.
	<i>Positive Screening</i>	Impact assessment to identify companies with the intention to gain a measurable environmental and/or social benefit. Assessment is based on a framework developed by the fund providers which considers the UN Sustainability Development Goals as fundamental guidelines.
	<i>Active Dialogue</i>	Pro-active dialogue with the companies to gain further information on ESG matters and to positively impact material ESG matters.
	<i>In-House Research</i>	Not applicable.
	<i>Environmental Disclosures</i>	Are used for the assessment of companies within their selection process.

### Appendix III (continued)

Fund	Selection Process	Description
Global SDG Engagement Equities	<i>General Information</i>	SRI Approach, Climate Conscious
	<i>Negative Screening</i>	Exclusion of companies that are exposed to controversial behavior and products: Controversial weapons, tobacco, palm oil, fossil fuel, military contracting, firearms, nuclear power, cannabis, alcohol, gambling, adult entertainment with a 0% exposure. Especially exclusion of activities with highly negative climate impacts such as thermal coal, oil sands and arctic drilling.
	<i>Positive Screening</i>	Application of the Robeco Sustainability Development Goals (SDG) Framework which is based on 17 main SDG challenges and assesses how the companies fulfill these and how they try to improve their contribution. Consideration of factors which have an adverse impact on the sustainability goals of the fund.
	<i>Active Dialogue</i>	Active engagement with the company to gain better insights on their fulfilment of the SDGs and to motivate the companies to improve their contribution.
	<i>In-House Research</i>	Formed a sustainable investment center of expertise as part of corporate strategy which sets standards for the ESG integration in the investment strategies and includes a research center for sustainability and impact.
	<i>Environmental Disclosures</i>	Are used for fundamental internal assessments.

### Appendix III (continued)

Fund	Selection Process	Description
Sustainable Energy Fund	<i>General Information</i>	ESG Approach, Clean Energy/Tech
	<i>Negative Screening</i>	Exclusion of: Coal and consumables, oil and gas exploration and production, and integrated oil and gas companies.
	<i>Positive Screening</i>	The fund invests at least 70% of its total assets in equity securities of sustainable energy companies worldwide. Sustainable energy companies are those that are active in alternative energy and energy technologies. For this the funds uses a best-in-class approach to select the companies which are the best within one industry. Focus on the following industries: Clean Power, Sustainable Mobility, Industrial Efficiency, Renewable Energy Technology, Energy Storage, and Infrastructure.
	<i>Active Dialogue</i>	Not applicable.
	<i>In-House Research</i>	Not applicable.
Sustainable Global Thematic Portfolio	<i>Environmental Disclosures</i>	Are used for the assessment of companies within their selection process.
	<i>General Information</i>	ESG Approach, Climate Conscious
	<i>Negative Screening</i>	Exclusion criteria only on fund provider level and not fund specific: For controversial weapons such as anti-personnel mines, cluster munitions and/or munitions made with depleted uranium.
	<i>Positive Screening</i>	Investment manager identifies investment themes that are broadly consistent with the UN Sustainability Development Goals such as Climate. The fund manager analyses individual companies, focusing on assessing a company's exposure to environmental, social and governance (ESG) factors. No further details are provided.
	<i>Active Dialogue</i>	Not applicable.
	<i>In-House Research</i>	Not applicable.
	<i>Environmental Disclosures</i>	Are described as their main source for manager research.

## Appendix III (continued)

Fund	Selection Process	Description
Global Climate and Environment Fund	<i>General Information</i>	SRI Approach, Climate Solutions
	<i>Negative Screening</i>	Exclusion of: Controversial Weapons, nuclear weapons, oil sand (10% revenue threshold), thermal coal (10% revenue threshold), general coal (30% revenue threshold).
	<i>Positive Screening</i>	Own ESG Rating to assess an ESG score which is future directed and not just based on past information. Includes how sustainability trends can have a positive or negative impact on the company's business model, its value chain, and its product and service offering. It is expected that investee companies include relevant social and environmental risk factors in their long-term strategic business planning. Incorporate the ESG factors in the strategic assessment, quantify the ESG impact in the valuation. Especially climate change criteria are integrated. Companies need to demonstrate how they integrate climate change challenges into their business strategies, investment decisions and risk management; need to show how they identify and capitalize opportunities related to climate change and should also be transparent in regard to their position on climate change regulation and interaction with regulators and policy makers.
	<i>Active Dialogue</i>	Active dialogue to generate a deeper understanding of how the companies operate and do field trips to the companies. Especially aim to generate future directed information and not just information which is based on past events. Describe this as integral part of their investment strategy.
	<i>In-House Research</i>	Dedicated sustainable finance research team and engaged in a responsible investment committee which aims to gain an in-depth understanding on how companies operate and on how they are affected by and react to climate change challenges.
	<i>Environmental Disclosures</i>	Publicly available data is used for fundamental assessment.

### Appendix III (continued)

Fund	Selection Process	Description
Worldwide Positive Change Fund	<i>General Information</i>	Impact Investing Approach, Climate Conscious
	<i>Negative Screening</i>	Exclude companies with an obvious negative impact, no further definition of this obvious negative impact is provided.
	<i>Positive Screening</i>	They aim to identify companies which can deliver positive impact in one of the following four themes: Social Inclusion and Education, Environmental and Resource Needs, Healthcare and Quality of Life, Base of the Pyramid (Addressing the needs of the world poorest population). This is reflected in their four-stage assessment approach. They assess whether companies have a positive impact in one of the four themes and whether their business is profitably growing. Additionally, they aim to identify companies that generate new ideas for challenges of the four themes. Based on their fundamental research they assess the impact of the company, its growth potential, its quality and a valuation of these factors. Lastly, they assess the impact of the company whilst considering its business practices, product impact and how these factors align with making a positive impact.
	<i>Active Dialogue</i>	They are engaged with the management for information purposes.
	<i>In-House Research</i>	Focus on fundamental in-house research considering climate impact and financial factors. Research results are used as fundamentals in their positive screening process.
	<i>Environmental Disclosures</i>	Explicitly mention that they look at company reports and disclosures and that they monitor significant news.

### Appendix III (continued)

Fund	Selection Process	Description
Global Sustainable Equity Fund	<i>General Information</i>	SRI Approach, Climate Solutions
	<i>Negative Screening</i>	Negative Screening for companies which do not meet Mirova's minimum requirements regarding controversial activities. Exclusion of: Fossil fuels, nuclear power, palm oil, genetic engineering, agrochemical, tobacco, alcohol, cannabis, sugar-sweetened beverages, gambling, weapons, adult entertainment, tax havens and other activities.
	<i>Positive Screening</i>	They are engaged with the management for information purposes.
	<i>Active Dialogue</i>	Not applicable.
	<i>In-House Research</i>	Research team aiming to provide targeted and in-depth data for the assessment of a company within the SRI ratings, models, and frameworks for the funds.
	<i>Environmental Disclosures</i>	Explicitly mention that their selection is based on the information disclosed by the companies.

Source: The presented information on the selection processes of green funds is based on the documents which the fund managers and fund providers publish on their websites. These can be key investor information documents, the annual fund reports, ESG methodologies and other documents provided. All considered documents and the respective links are listed under 'Additional Sources' which can be found following the reference list.

Notes: With this table I provide detailed descriptions of the selection processes of the green funds in my sample. This table is the fundament for my descriptive analysis of the green fund selection processes which I provide in Chapter 5.1. For definitions of the terms in 'General Information' see Table 1 for the investment approaches of green funds and Table 3 for the categories of green funds.

## Appendix IV

Top Ten Selected Companies and the Selecting Green Funds

Top Ten Selected Companies and the Selected Green Funds										
Company		Funds								
		SRI Euro Quality	ESG Multi-Asset Fund	Global Impact	Global SDG Engagement Equities	Sustainable Energy Fund	Sustainable Global Thematic Portfolio	Global Climate and Environment Fund	Worldwide Positive Change Fund	Global Sustainable Equity Fund
		Type 2	Type 1	Type 2	Type 3	Type 1	Type 1	Type 3	Type 3	Type 2
1	ASML Holding	Yes	Yes					Yes	Yes	Yes
2	Orsted AS		Yes				Yes		Yes	Yes
3	Linde PLC	Yes	Yes			Yes		Yes		
4	Christian Hansen Holding AS		Yes				Yes		Yes	Yes
5	Infineon AG			Yes		Yes	Yes	Yes		
6	Allianz SE	Yes	Yes							Yes
7	Koninklijke DSM NV		Yes				Yes	Yes		
8	Schneider Electric SE	Yes	Yes			Yes				
9	Dassault Systems SE	Yes				Yes	Yes			
10	L'Oreal SA	Yes	Yes		Yes					

Source: Derived from various sources provided by the fund providers, for details see sources in Appendix III.

Notes: This table provides an overview of the companies which are the most frequently selected by the green funds in my sample and by which funds they were selected as well as the types of the funds' selection processes. For the green fund types see Table 7.

## Appendix V

EDS Adoption and Green Fund Selection

	Dependent Variable:			
	eds_adoption (1)	eds_adoption (2)	eds_adoption (3)	eds_adoption (4)
green_fund	0.214*** (0.036)	0.039 (0.036)	0.190*** (0.021)	-0.049 (0.041)
SIZE	0.089*** (0.008)	0.124*** (0.028)	0.088*** (0.007)	0.085** (0.030)
ROA	-0.308 (0.206)	-0.271 (0.267)	-0.265 (0.131)	-0.142 (0.266)
LEV	0.042 (0.105)	0.385 (0.206)	0.013 (0.070)	0.100 (0.181)
Constant	0.684*** (0.089)			
Estimator	ols	ols	ols	ols
Observations	1360	1360	1360	1360
R <sup>2</sup>	R2	0.124	0.793	0.130
R <sup>2</sup> Adjusted	R2 Adj.	0.121	0.736	0.125
Fixed Effects	None	Firm	Year	Firm, Year

Notes: This table presents the results of four OLS regressions with the environmental disclosure component adoption as the dependent variable and the selection by a green fund as independent variable as well as additional control variables. The sample and all variables are defined in Table 12. Standard errors are presented in parentheses below the coefficients. The asterisks indicate the two-sided significance levels and should be interpreted as \* p<0.05/ \*\* p<0.01/ \*\*\* p<0.001.



## Appendix V (continued)

EDS Extent and Green Fund Selection

	Dependent Variable:			
	eds_extent (1)	eds_extent (2)	eds_extent (3)	eds_extent (4)
green_fund	5.548*** (0.544)	1.876*** (0.393)	4.960*** (0.420)	-0.539 (0.424)
SIZE	2.063*** (0.119)	1.846*** (0.301)	2.024*** (0.069)	0.856*** (0.235)
ROA	-0.580 (3.097)	-2.959 (3.720)	0.185 (0.458)	-0.392 (3.369)
LEV	0.845 (1.573)	8.130** (2.965)	0.250 (1.611)	1.249 (2.216)
Constant	2.777* (1.337)			
Estimator	ols	ols	ols	ols
Observations	1360	1360	1360	1360
R <sup>2</sup>	0.252	0.884	0.264	0.910
R <sup>2</sup> Adjusted	0.250	0.853	0.259	0.885
Fixed Effects	None	Firm	Year	Firm, Year

Notes: This table presents the results of four OLS regressions with the environmental disclosure component extent as the dependent variable and the selection by a green fund as independent variable as well as additional control variables. The sample and all variables are defined in Table 12. Standard errors are presented in parentheses below the coefficients. The asterisks indicate the two-sided significance levels and should be interpreted as \* p<0.05/ \*\* p<0.01/ \*\*\* p<0.001.

## Appendix V (continued)

### EDS Credibility and Green Fund Selection

	Dependent Variable:			
	eds_credibility (1)	eds_credibility (2)	eds_credibility (3)	eds_credibility (4)
green_fund	2.731*** (0.244)	1.650*** (0.228)	2.137*** (0.111)	-0.173 (0.200)
SIZE	0.989*** (0.053)	1.074*** (0.267)	0.950*** (0.080)	0.283 (0.151)
ROA	-1.848 (1.391)	-2.437 (1.602)	-0.827 (0.517)	0.363 (1.231)
LEV	1.429* (0.706)	6.502*** (1.905)	0.787 (0.588)	0.759 (1.047)
Constant	-0.929 (0.600)			
Estimator	ols	ols	ols	ols
Observations	1360	1360	1360	1360
R <sup>2</sup>	0.282	0.831	0.338	0.906
R <sup>2</sup> Adjusted	0.280	0.785	0.334	0.880
Fixed Effects	None	Firm	Year	Firm, Year

Notes: This table presents the results of four OLS regressions with the environmental disclosure component credibility as the dependent variable and the selection by a green fund as independent variable as well as additional control variables. The sample and all variables are defined in Table 12. Standard errors are presented in parentheses below the coefficients. The asterisks indicate the two-sided significance levels and should be interpreted as \* p<0.05/ \*\* p<0.01/ \*\*\* p<0.001.

## Appendix VI

### Environmental Disclosure Scores over Time - Green Fund vs. Non-Green Fund

Year	eds	eds_adoption	eds_extent	eds_credibility
<i>Green Fund</i>				
2017	35.30	1.68	24.75	8.88
2018	37.88	1.70	26.64	9.54
2019	41.63	1.75	28.42	11.46
2020	43.61	1.80	29.06	12.75
2021	45.33	1.81	30.39	13.13
<i>Non-Green Fund</i>				
2017	25.93	1.27	18.33	6.32
2018	28.93	1.41	20.49	7.02
2019	32.51	1.55	22.25	8.71
2020	34.87	1.60	23.43	9.84
2021	37.18	1.63	25.07	10.49

Source: Based on my data sample, for more information on the sources see Chapter 4 and Appendix III.

Notes: This table presents the environmental disclosure scores as well as their components for the treatment group (green fund) and the control group (non-green fund) over time. For variable and sample definitions see Table 12. For the framework based on which the scores are calculated see Appendix II.

### Environmental Disclosure Score Growth - Green Fund vs. Non-Green Fund

Year	eds	eds_adoption	eds_extent	eds_credibility
<i>Green Fund (in %)</i>				
2017 - 2018	7.31	1.32	7.64	7.54
2018 - 2019	9.88	3.03	6.68	20.03
2019 - 2020	4.77	2.94	2.25	11.30
2020 - 2021	3.95	0.41	4.58	3.00
Average	6.48	1.92	5.29	10.47
Compound Annual	5.13	1.53	4.19	8.15
<i>Non-Green Fund (in %)</i>				
2017 - 2018	11.57	10.98	11.79	11.05
2018 - 2019	12.38	9.90	8.58	23.98
2019 - 2020	7.26	2.84	5.32	13.01
2020 - 2021	6.64	2.30	6.97	6.58
Average	9.46	6.51	8.16	13.65
Compound Annual	7.48	5.11	6.46	10.64

Source: Based on my data sample, for more information on the sources see Chapter 4 and Appendix III.

Notes: This table presents the environmental disclosure scores percentage growth as well as the components percentage growth for green fund holdings (treatment group) as well as non-green fund holdings (control group) over time, on average and compound annual. For variable and sample definitions see Table 12.

## Appendix VI (continued)

### Environmental Disclosure Scores over Time - Green Fund Types

Year	eds	eds_adoption	eds_extent	eds_credibility
<i>Type 1</i>				
2017	41.01	1.81	30.66	8.54
2018	42.35	1.83	31.54	8.98
2019	46.45	1.85	32.47	12.14
2020	49.39	1.89	32.86	14.63
2021	48.78	1.88	32.69	14.20
<i>Type 2</i>				
2017	34.71	1.86	25.36	7.50
2018	34.92	1.78	25.80	7.33
2019	40.08	1.85	27.67	10.55
2020	46.14	1.88	30.39	13.86
2021	46.53	1.86	30.96	13.70
<i>Type 3</i>				
2017	34.95	1.95	26.14	6.86
2018	39.80	1.97	30.53	7.30
2019	43.42	1.92	31.63	9.88
2020	48.56	1.94	32.91	13.72
2021	48.63	1.94	33.30	13.39

Source: Based on my data sample, for more information on the sources see Chapter 4 and Appendix III.

Notes: This table presents the environmental disclosure scores as well as their components for green fund holdings (treatment group) depending on the green fund type the companies are selected by in the respective year. For variable and sample definitions see Table 12. For the fund types see Table 7. For the framework based on which the scores are calculated see Appendix II.

## Appendix VI (continued)

### Environmental Disclosure Score Growth - Green Fund Types

Year	eds	eds_adoption	eds_extent	eds_credibility
<i>Type 1 (in %)</i>				
2017 - 2018	3.27	1.26	2.88	5.10
2018 - 2019	9.69	0.90	2.94	35.17
2019 - 2020	6.33	2.67	1.21	20.57
2020 - 2021	-1.24	-0.58	-0.51	-2.97
Average	4.51	1.06	1.63	14.47
Compound Annual	3.53	0.84	1.29	10.70
<i>Type 2 (in %)</i>				
2017 - 2018	0.59	-3.99	1.76	-2.22
2018 - 2019	14.76	3.85	7.22	43.93
2019 - 2020	15.12	1.33	9.85	31.36
2020 - 2021	0.86	-0.66	1.88	-1.16
Average	7.83	0.13	5.18	17.98
Compound Annual	6.04	0.07	4.08	12.81
<i>Type 3 (in %)</i>				
2017 - 2018	13.87	0.73	16.79	6.46
2018 - 2019	9.09	-2.54	3.58	35.27
2019 - 2020	11.85	1.09	4.05	38.92
2020 - 2021	0.13	0.00	1.20	-2.43
Average	8.73	-0.18	6.41	19.56
Compound Annual	6.83	-0.15	4.96	14.31

Source: Based on my data sample, for more information on the sources see Chapter 4 and Appendix III.

Notes: This table presents the environmental disclosure scores percentage growth as well as the components percentage growth for green fund holdings (treatment group) over time, on average and compound annual depending on the green fund type the companies are selected by in the respective year. For variable and sample definitions see Table 12. For the fund types see Table 7.

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