

SECOND PARTY OPINION (SPO)

Sustainability Quality of the Issuer and Asset Pool

BASF SE
19 May 2020

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Overall Evaluation of the Green Bond

BASF SE (“BASF”) commissioned ISS ESG to assist with its Green Bond by assessing three core elements to determine the sustainability quality of the Bond:

1. BASF’s Green Finance framework – benchmarked against the International Capital Market Association’s (ICMA) Green Bond Principles (GBPs) and the Loan Market Association’s (LMA) Green Loan Principles (GLPs).
2. The asset pool – whether the projects aligned with ISS ESG’s issue-specific key performance indicators (KPIs) (See Annex 2).
3. BASF’s sustainability performance, according to the ISS ESG Corporate Rating.

ISS ESG ASSESSMENT SUMMARY

SPO SECTION	SUMMARY	EVALUATION ¹
Part 1: Performance against GBPs	The issuer has defined a formal concept for its Green Finance Instruments regarding use of proceeds, processes for project evaluation and selection, management of proceeds and reporting. This concept is in line with the ICMA GBPs and the LMA GLPs.	Positive
Part 2: Sustainability quality of the asset pool	The overall sustainability quality of the asset pool in terms of sustainability benefits, risk avoidance and minimisation is good based upon the ISS ESG Green Finance Instruments KPIs. The Green Finance Instruments KPIs contain a clear description of eligible asset categories which include: accelerator solutions, carbon management, electric vehicles battery materials and plants, chemical recycling and renewable energy. The green finance instruments issued under the Framework, contribute positively to the UN SDGs. The management of the environmental and social risks associated with the Use of proceed categories is good.	Positive
Part 3: Issuer sustainability performance	The issuer itself shows a good sustainability performance and has been given a rating of B-, which classifies it as ‘Prime’ by the methodology of the ISS ESG Corporate Rating. It is rated 12 th out of 169 companies within its sector as of 19.05.2020. This equates to a high relative performance, with a Decile Rank ² of 1.	Status: Prime Rating: B- Decile Rank: 1

¹ The ISS ESG’s present evaluation will remain valid until any modification of the Green Finance Framework and as long as the Corporate Rating does not change (last modification on the 20.01.2020). The controversy check of the underlying assets has been conducted on the 06.05.2020.

² Rank relative to industry group. 1 indicates a high relative ESG performance, while 10 indicates a low relative ESG performance.






Contribution of the Green Bond to the UN SDGs

Based on the assessment of the sustainability quality of the green finance asset pool and using a proprietary methodology, ISS ESG assessed the contribution of the BASF's Green Finance Instruments to the Sustainable Development Goals defined by the United Nations (UN SDGs).

This assessment is displayed on 5-point scale (see Annex 2 for methodology):

Significant Obstruction	Limited Obstruction	No Net Impact	Limited Contribution	Significant Contribution
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Each of the Green Finance Instrument's Use of Proceeds categories has been assessed for its contribution to, or obstruction of, the SDGs:

USE OF PROCEEDS	CONTRIBUTION OR OBSTRUCTION	SUSTAINABLE DEVELOPMENT GOALS
Accelerator solutions³	Significant contribution	
Carbon management	Significant contribution	
Electric vehicles battery materials and plants	Limited contribution	
Chemical recycling products and plants	Significant contribution	
Renewable energy	Significant contribution	

³ The SDG contribution assessment of the "Accelerator solutions" category (more than 11.000 solutions) has been conducted by BASF based on the results of its "Sustainable Solution Steering" methodology which has been reviewed by an external assurance provider. ISS ESG assessed the BASF's SDG contribution assessment as credible and robust. For all other Use of Proceed categories, ISS ESG used its proprietary methodology to assess the contribution of the assets and expenditures to be (re-)financed to the UN SDGs.

ISS ESG SPO ASSESSMENT

PART I: GREEN BOND PRINCIPLES

1. Use of Proceeds

The net proceeds of BASF’s Green Finance Instruments will be used to finance and/or refinance, in whole or in part, new or existing projects (“Eligible Projects”) from any of the Eligible Green Products/Project Categories as defined below:

GBP/GLP CATEGORY	ELIGIBLE GREEN PRODUCTS / PROJECT CATEGORIES	EU ENVIRONMENTAL OBJECTIVE (TAXONOMY REGULATION) ⁴
Eco-efficient and circular economy products, production technologies and processes	<p>Accelerator Solutions Only the highest level of sustainable products (solutions referred to as “Accelerator”) is eligible. These products have a substantial sustainability contribution in the value chain and no negative impacts on any other relevant sustainability criteria (more information on the selection criteria and processes applicable are available in the Green Finance Framework of BASF).</p>	<p>The project categories contribute mainly to (but not limited to) the following objectives:</p> <p>EU Environmental Objective 1: Article 6: Substantial contribution to Climate Change Mitigation</p> <p>EU Environmental Objective 2: Article 7: Substantial contribution to Climate Change Adaptation</p>
	<p>Carbon Management Carbon Management bundles BASF’s global activities and a long-term research and development program to reduce greenhouse gas emissions. The objective is to achieve the company’s climate protection target and set the course for low-carbon chemical production.</p>	<p>EU Environmental Objective 3: Article 8: Substantial contribution to sustainable use and protection of water and marine resources</p>
	<p>Electric vehicle battery materials and plants Development, manufacturing, acquisition of low carbon transportation components, as for example battery materials.</p>	<p>EU Environmental Objective 4: Article 9: Substantial contribution to Transition to the circular economy, waste prevention and recycling</p>
	<p>Recycling: ChemCycling products and plants Since mechanical recycling is limited, e.g., due to high sorting requirements and decreasing material quality in each cycle, BASF is developing innovative technologies that promote recycling of plastics. This includes research and development on new materials and additives that facilitate recycling processes as well as several chemical recycling processes to create value out of waste. Chemical recycling allows to recycle waste for which there are no recycling solutions or missing capacities today</p>	<p>EU Environmental Objective 5: Article 10: Substantial contribution to pollution prevention and control Including: Article 10.1.c: minimising significant adverse effects on human health and the</p>

⁴ This mapping has been conducted by the issuer. ISS ESG did not conduct a review of the compliance of the proceeds’ categories with the EU Taxonomy and its technical annex for this mandate. The referenced document is: Proposal for a regulation of the European Parliament and of the council on the establishment of a framework to facilitate sustainable investment, COM/2018/353 final, <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52018PC0353>

	and is therefore complementary to mechanical recycling.	environment of the production and use of chemicals. EU Environmental Objective 6: Article 11: Substantial contribution to protection of healthy ecosystems For a full list of indicators for the contributions in the value chain see Appendix in BASF's Green Finance Framework.
Renewable Energy	Provision of capital for the planning, construction, development and installation of renewable energy production and storage units	

BASF has targets in place to steer its product portfolio towards more sustainable businesses:

- Increase sales from Accelerator products to €22 billion in 2025 (€15 billion in 2019)
- BASF intends to stop selling Challenged products within a maximum of five years after classification. Challenged products are not eligible for green financing under this framework.

Opinion: ISS ESG considers the Use of Proceeds description provided by BASF's Green Finance Framework as aligned with the Green Bond Principles and the Green Loan Principles. Environmental expected benefits are transparently displayed and in line with the sustainability strategy of the issuer.

2. Process for Project Evaluation and Selection

Products and projects financed and/or refinanced through the Green Finance Instrument proceeds are evaluated and selected based on compliance with the eligibility criteria by the BASF Sustainability Committee formed by members of Corporate Treasury, Group Reporting & Performance Management, Corporate Sustainability and Investor Relations.

BASF applies internationally recognized environmental requirements, "Do No Significant Harm" as well as minimum safeguards for many of its activities, including those financed with the proceeds of the Green Finance instruments. In the first step, all solutions of a business unit portfolio are subject to a so-called "Check for Basic Sustainability Requirements" to systematically and proactively identify solutions which are likely to be affected by a sustainability issue, either at present or in the foreseeable future. Within this check, each solution in its respective application and region is evaluated based on corporate minimum and stakeholder specific economic, environmental and social criteria. Solutions which are identified as likely to be affected by a sustainability issue are subject to a separate Impact Check for analysing the significance of the sustainability issue in a following step. Solutions which have successfully passed the initial Check for Basic Sustainability Requirements are then, in a second step, subject to a Check for Sustainability Value Contribution which intends to evaluate the solution's sustainability contribution compared to competitive solutions in the same application and region.

In order to define an Accelerator product, BASF uses a method called Sustainable Solution Steering⁵ (SSS) (more information is available in the BASF's Green Finance Framework⁶) which has been assured by an external auditor. The methodology is also adopted by other companies in the chemical industry and known as the Product Portfolio Steering Framework of the World Business Council for Sustainable Development⁷ (WBSCD). The objective of SSS is to provide a fully transparent and consistent evaluation of the sustainability performance of BASF's solutions. It provides the basis for actively steering a portfolio towards a more sustainable profile.

By identifying key drivers and issues in customers' industries, BASF is able to assess the sustainability contribution of each of its products in its specific application.

With its approach BASF evaluates the entire value chain considering industry- and region-specific views in the markets. BASF strives to achieve a balance between the three dimensions of sustainability:

- Economy, e.g., potential cost savings for customers through the use of BASF products
- Environment, e.g., ensuring standards are met, developing environmentally sound solutions
- Society, e.g., enhancing safety in production, use or end-of-life, stakeholder perception of solutions

BASF is evaluating the criteria for chemicals in the EU Taxonomy for sustainable activities and evaluates a translation matrix with its own Sustainable Solution Steering method.⁸

In addition to its Sustainable Solution Steering Methodology, BASF has a long-standing expertise in taking Life-Cycle considerations into account when assessing products or processes. BASF established this holistic method already in 1996 and was one of the first companies in the chemical industry to do so. The Eco-Efficiency Analysis was most recently validated by NSF International in 2016. The Eco-Efficiency Analysis follows ISO 14040:2006 and 14044:2006 for environmental life cycle assessments. The assessment of life cycle costs and aggregation to an overall Eco-Efficiency is based on ISO 14045:2012.

Opinion: ISS ESG considers the Process for Project Evaluation and Selection description provided by BASF's Green Finance Framework as aligned with the Green Bond Principles and the Green Loan Principles. The criteria for evaluation and selection are well defined and publicly available. The issuer also defined Do No Significant Harm criteria and minimum social safeguards criteria which aligns with best market practices.

3. Management of Proceeds

BASF intends to allocate the proceeds from the Green Finance Instruments to an Eligible Green Project Portfolio, selected in accordance with the use of proceeds criteria and evaluation and selection process presented above.

⁵ <https://www.basf.com/global/en/who-we-are/sustainability/we-drive-sustainable-solutions/sustainable-solution-steering.html>

⁶ www.basf.com/green-bond.html

⁷ <https://www.wbcsd.org/Programs/Circular-Economy/Factor-10/Sector-Deep-Dives/Resources/Chemical-Industry-Methodology-for-Portfolio-Sustainability-Assessments>

⁸ https://ec.europa.eu/info/publications/sustainable-finance-teg-taxonomy_en

Over time, BASF will strive to achieve a level of allocation for the Eligible Green Project Portfolio which matches or exceeds the balance of net proceeds from its outstanding Green Finance Instruments.

Activated eligible green assets shall qualify for refinancing without a specific look-back period, provided that at the time of issuance they follow the relevant eligibility criteria. Eligible green capital expenditures and operational expenditures shall qualify for refinancing with a maximum three-year look-back period before the issuance year of the Green Finance Instrument.

Whilst any Green Finance Instrument net proceeds remain unallocated, BASF will hold and/or invest, at its own discretion, in its treasury liquidity portfolio, in cash or other short term and liquid instruments or pay back a portion of its outstanding indebtedness, the balance of net proceeds not yet allocated to the Eligible Product Portfolio.

Opinion: *ISS ESG finds that Management of Proceeds proposed by BASF's Green Finance Framework is well aligned with the Green Bond Principles, as all the proceeds are appropriately tracked and the framework transparently describes the process regarding temporary investments for unallocated proceeds.*

4. Reporting

BASF will make and keep readily available reporting, covering the allocation of net proceeds to the Eligible Green Project Portfolio and, wherever feasible, reporting on the impact of the Eligible Green Project Portfolio, at least at the category level. Reporting will take place in line with BASF's general annual reporting cycle until net proceeds of Green Finance Instrument have been fully allocated.

BASF intends to provide aggregated reporting for all of BASF's Green Financing Instruments and other potential sustainable financings outstanding. BASF will align, on a best effort basis, the reporting with the portfolio approach described in "Handbook – Harmonized Framework for Impact Reporting (June 2019)."

Allocation Reporting

The allocation report may provide:

- Allocation per Green Eligible Project Category
- Balance amount of unallocated net proceeds
- Portion of financing and refinancing (the split between new and existing projects)
- Break-down of what is financed/refinanced

Impact Reporting

The impact report may provide:

- Brief description of the Eligible Projects and their contribution to the EU Environmental Objectives
- Environmental impact metrics per Eligible Green Project Category, depending on data availability

GBP/GLP CATEGORY	POTENTIAL IMPACT REPORTING INDICATORS
Eco-efficient and circular economy adapted products, production technologies and processes	<p>Accelerator Solutions</p> <ul style="list-style-type: none"> • Case studies of Accelerator solutions • Amount or percentage of sales of Accelerator solutions • CO₂ (or other greenhouse gas) emissions avoided/reduced (tons of CO₂e) through the use of BASF products <p>Carbon Management</p> <ul style="list-style-type: none"> • Case study of research outcome of Carbon Management <p>Recycling: ChemCycling products and plants</p> <ul style="list-style-type: none"> • Tons of waste recycled <p>Electric vehicle battery materials and plants</p> <ul style="list-style-type: none"> • Number of electrical vehicles supplied with battery materials
Renewable Energy	CO ₂ (or other greenhouse gas) emissions avoided/reduced (tons of CO ₂ e).

Opinion: ISS ESG finds that the reporting proposed by BASF’s Green Finance Framework is in line with the Green Bond Principles. The contemplated allocation reporting is transparent in terms of level, frequency, scope and duration, and detailed examples of information reported is available both for allocation and impact.

External review

BASF commissioned ISS ESG to provide a pre-issuance Second Party Opinion on the sustainability quality of its Green Finance Framework and Asset Pool.

PART II: SUSTAINABILITY QUALITY OF THE ASSET POOL

A. Accelerator Solutions

As a Use of Proceeds category, accelerator solutions have a significant contribution to the SDGs 2 “Zero hunger”, 3 “Good health and well-being”, 6 “Clean water and sanitation”, 7 “Affordable and clean energy”, 8 “Decent work and economic growth”, 9 “Industry, innovation and infrastructure”, 11 “Sustainable communities and cities”, 12 “Responsible consumption and production”, 13 “Climate action” and 15 “Life on land”⁹.

The table below presents the findings of an ISS ESG assessment of the environmental and social risk management associated with this project category against ESG KPIs.

ASSESSMENT AGAINST ISS ESG KPI

A.1. Environmental and social benefits of accelerator solutions

- ✓ The financing of solutions linked to a challenged or disputed societal issue (e.g. fossil fuels and combustibles, tobacco and armament) is excluded under this framework.

A.2. Environmental and social aspects of accelerator solutions

- ✓ For 100% of accelerator solutions, appropriate product safety is ensured (e.g. regarding eco-toxicity).
- ✓ For 100% of accelerator solutions, appropriate management of substances of concerns is in place (e.g. testing and monitoring).

A.3. Energy efficiency of production facilities and processes

- ✓ For 100% of production facilities and processes related to accelerator solutions, high energy efficiency standards are in place (e.g. certified energy management systems DIN EN ISO 50001, resources and energy savings procedures).

A.4. Environmental and social standards of production facilities and processes

- ✓ For 100% of production facilities and processes related to accelerator solutions, comprehensive environmental management system is in place.
- ✓ For 100% of production facilities and processes related to accelerator solutions, operational safety is ensured.
- ✓ For 100% of production facilities and processes related to accelerator solutions, high labour, health and safety standards are in place (e.g. ILO core conventions).

Controversy assessment

ISS ESG did not identify any relevant controversies related to accelerator solutions that could be attributed to the issuer.

⁹ The SDG contribution assessment of the ‘Accelerator solutions’ category has been conducted by BASF and has been reviewed by a specialized external verifier. ISS ESG assessed the BASF’s SDG contribution assessment contribution as credible and robust.

B. Carbon Management

As a Use of Proceeds category, carbon management have a significant contribution to the SDGs 7 “Affordable and clean energy” and 13 “Climate action”¹⁰.

The table below presents the findings of an ISS ESG assessment of the environmental and social risk management associated with this project category against ESG KPIs.

ASSESSMENT AGAINST ISS ESG KPI

B.1. Climate protection strategy

- ✓ The issuer conducted an appropriate and externally verified inventory of GHG emission and has defined ambitious targets and actions plans for GHG emission reductions.

A.2. Working conditions

- ✓ For 100% of the issuer’s operation, high labour, health and safety standards are in place (e.g. ILO core conventions).

Controversy assessment

ISS ESG did not identify any relevant controversies related to carbon management and climate strategy that could be attributed to the issuer.

C. Electric vehicle battery materials and plants

As a Use of Proceeds category, electric vehicle battery products and plants have a limited contribution to the SDGs 7 “Affordable and clean energy” and 13 “Climate action”¹¹.

The table below presents the findings of an ISS ESG assessment of the environmental and social risk management associated with this project category against ESG KPIs.

ASSESSMENT AGAINST ISS ESG KPI

C.1. Environmental benefits of products

- ✓ Internal combustion engines and related products and components are excluded from financing under this framework.

¹⁰ ISS ESG used its proprietary methodology to assess the contribution of the Use of Proceeds category Carbon Management to the SDGs.

¹¹ ISS ESG used its proprietary methodology to assess the contribution of the Use of Proceeds category Electric vehicle battery materials and plants to the SDGs

C.2. Environmental aspects of products

- ✓ For 100% of products, comprehensive life-cycle assessments have been conducted.
- For 100% of products, measures are in place to reduce the emission intensity of end products (e.g. electric or hybrid vehicles) such as light-weight material for emission reduction. However, no information is available on the emission intensity of the end products.

C.3. Social aspects of products

- ✓ For 100% of products, product safety is ensured (e.g. testing and monitoring).

C.4. Energy efficiency of production facilities and processes

- ✓ For 100% of production facilities and processes, high energy efficiency standards are in place (e.g. certified energy management systems DIN EN ISO 50001, resources and energy savings procedures).

C.5. Environmental and social standards of production facilities and processes

- ✓ For 100% of production facilities and processes, comprehensive environmental management system is in place.
- ✓ For 100% of production facilities and processes, operational safety is ensured.
- ✓ For 100% of production facilities and processes, high labour, health and safety standards are in place (e.g. ILO core conventions).

C.6. Sustainable standards for supply chain

- ✓ For 100% of products, measures are in place to ensure sustainable value chain for the production of battery materials.

Controversy assessment

ISS ESG did not identify any relevant controversies related to battery products that could be attributed to the issuer. Due to a lack of information, ISS ESG could not conduct an asset-specific controversy screening for this project category.

D. Chemical recycling products and plants

As a Use of Proceeds category, chemical recycling products and plants have a significant contribution to the SDGs 12 “Responsible consumption and production”¹².

The table below presents the findings of an ISS ESG assessment of the environmental and social risk management associated with this project category against ESG KPIs.

ASSESSMENT AGAINST ISS ESG KPI

D.1. Environmental benefits of products

- ✓ The issuer ensures to achieve equal material quality and energy efficiency through chemical recycling than mechanical recycling. Chemical recycling activities do not exclude waste stream that could also be recycled mechanically but focus primarily on waste which cannot be recycled mechanically.
- ✓ Chemical recycling in the purpose of fuel combustion is excluded from financing under this framework.

D.2. Environmental and social aspects of recycled feedstocks

- ✓ For 100% of recycled feedstocks, product safety is ensured (e.g. customer support and protection).
- ✓ For 100% of recycled feedstocks, appropriate management of substances of concerns is in place (e.g. feedstock testing and monitoring).

D.3. Energy efficiency of production facilities and processes

- ✓ For 100% of production facilities and processes, high energy efficiency standards are in place (e.g. certified energy management systems DIN EN ISO 50001, resources and energy savings procedures).

D.4. Environmental and social standards of production facilities and processes

- ✓ For 100% of production facilities and processes, comprehensive environmental management system is in place.
- ✓ For 100% of production facilities and processes, operational safety is ensured.
- ✓ For 100% of production facilities and processes, high labour, health and safety standards are in place (e.g. ILO core conventions).

Controversy assessment

ISS ESG did not identify any relevant controversies related to chemical recycling that could be attributed to the issuer. Due to a lack of information, ISS ESG could not conduct an asset-specific controversy screening for this project category.

¹² ISS ESG used its proprietary methodology to assess the contribution of the Use of Proceeds category Chemical recycling products and plants and plants to the SDGs

E. Renewable Energy

As a Use of Proceeds category, renewable energy contemplated for this issuance have a limited contribution to the SDGs 7 “Affordable and clean energy” and 13 “Climate action”¹³.

The table below presents the findings of an ISS ESG assessment of the environmental and social risk management associated with this project category against ESG KPIs.

ASSESSMENT AGAINST ISS ESG KPI

E.1. Site selection

- ✓ The renewable energy project is not located in key biodiversity areas (e.g. Natura 2000).
- ✓ The renewable energy project underwent an Environmental Impact Assessment at planning stage.

E.2. Environmental and social aspects of renewable energy production and storage devices

- ✓ For 100% of storage devices, life-cycle assessments have been conducted.
- ✓ For 100% of storage devices, measures for recycling at end-of-life are in place. The renewable energy project is subject to appropriate measures regarding take back and recycling at end-of-life.
- ✓ In line with the EU RoHS directive, all hazardous materials are integrated in the assets in a way that allows separation for recycling purpose.

E.3. Devices development and installation standards

- ✓ For 100% of assets, comprehensive environmental management system is in place.
- ✓ For 100% of assets, operational safety is ensured.
- ✓ For 100% of assets, high labour, health and safety standards are in place (e.g. ILO core conventions).

Controversy assessment

ISS ESG did not identify any relevant controversies related to renewable energy that could be attributed to the issuer. Due to a lack of information, ISS ESG could not conduct an asset-specific controversy screening for this project category.

¹³ ISS ESG used its proprietary methodology to assess the contribution of the Use of Proceeds category Renewable Energy to the SDGs

PART III: ASSESSMENT OF BASF'S ESG PERFORMANCE

The ISS ESG Corporate Rating provides a rating and then designates a company as 'Prime¹⁴' or 'Not Prime' based on its performance relative to the industry sector. It is also assigned a Decile Rank, indicating this relative industry group performance, with 1 indicating a high relative ESG performance, and 10 a low relative ESG performance.

COMPANY	STATUS	Rating	DECILE RANK
BASF SE	PRIME	B-	1

This means that the company performed well in terms of sustainability, both compared against others in the industry and in terms of the industry-specific requirements defined by ISS ESG. In ISS ESG's view, the securities issued by the company therefore all meet the basic requirements for sustainable investments.

As of 19.05.2020, this rating places BASF 12th out of 169 companies rated by ISS ESG in the Chemicals sector.

Key Challenges facing companies in term of sustainability management in this sector are:

- Chemical and product safety
- Climate protection and energy efficiency
- Alternative raw materials
- Facility and transport safety
- Worker safety and accident prevention

In all key issues, BASF rates above the average for the sector. A very significant outperformance was achieved in "Chemical and product safety", "Alternative raw materials" and "Facility and transport safety".

The company is facing a severe controversy related to an alleged failure to prevent depletion of biodiversity (bees) in several countries due to the use of fipronil, an insecticide. According to the European Food Safety Authority and the International Union for Conservation of Nature, this insecticide poses risks to bees and other pollinators. BASF has reportedly dismissed concerns on its product's safety, arguing that existing precautionary measures are sufficient. In 2017, the company announced that due to economic reasons it would not seek to renew the permit to use fipronil for seed treatment in the European Union (EU) and the permit expired in September 2017. As of March 2020, the insecticide continues to be used for crop protection outside the EU, most notably in South Africa and Brazil, where allegations of linkages to bee death continue.

Details on the rating of the issuer can be found in Annex 1.

¹⁴ Prime is only awarded to the top sector performers, often less than 10% of companies within the respective sector.

DISCLAIMER

1. Validity of the SPO: For BASF's first issuance following the SPO release date.
2. ISS ESG uses a scientifically based rating concept to analyse and evaluate the environmental and social performance of companies and countries. In doing so, we adhere to the highest quality standards which are customary in responsibility research worldwide. In addition, we create a Second Party Opinion (SPO) on bonds based on data from the issuer.
3. We would, however, point out that we do not warrant that the information presented in this SPO is complete, accurate or up to date. Any liability on the part of ISS ESG in connection with the use of these SPO, the information provided in them and the use thereof shall be excluded. In particular, we point out that the verification of the compliance with the selection criteria is based solely on random samples and documents submitted by the issuer.
4. All statements of opinion and value judgements given by us do not in any way constitute purchase or investment recommendations. In particular, the SPO is no assessment of the economic profitability and credit worthiness of a bond but refers exclusively to the social and environmental criteria mentioned above.
5. We would point out that this SPO, in particular the images, text and graphics contained therein, and the layout and company logo of ISS ESG and ISS-ESG are protected under copyright and trademark law. Any use thereof shall require the express prior written consent of ISS. Use shall be deemed to refer in particular to the copying or duplication of the SPO wholly or in part, the distribution of the SPO, either free of charge or against payment, or the exploitation of this SPO in any other conceivable manner.

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ANNEX 1: ISS ESG Corporate Rating

The following pages contain extracts from BASF's 2020 ISS ESG Corporate Rating.

ESG Corporate Rating

BASF SE

Industry	Chemicals	Status	Prime
Country	Germany	Rating	B-
ISIN	DE000BASF111	Prime Threshold	B-
		Decile Rank	1



Absolute Rating



The assessment of a company's sustainability performance is based on approximately 100 criteria, selected specifically for each industry. A company's failure to disclose, or lack of transparency, regarding these matters will impact a company's rating negatively

Decile Rank



Low relative performance

High relative performance

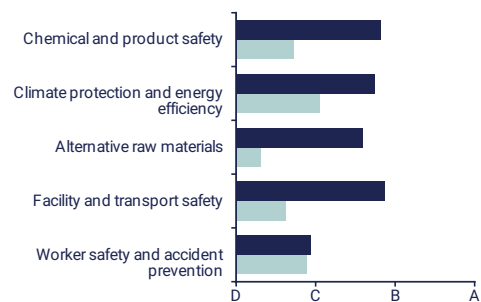
Indicates decile rank relative to industry group. A decile rank of 1 indicates a high relative ESG performance, while a 10 indicates a lower relative ESG performance.

Industry Leaders

Company name (in alphabetical order)	Country	Grade
Clariant AG	CH	B-
Evonik Industries AG	DE	B-
Koninklijke DSM N.V.	NL	B-

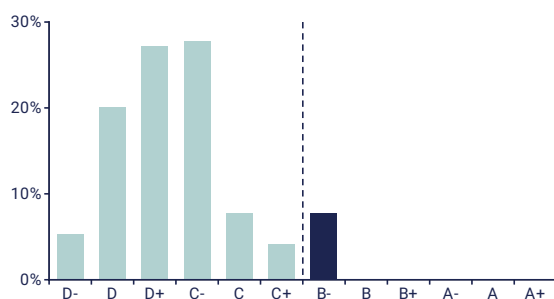
Legend: ■ Industry ■ Company --- Prime

Key Issue Performance

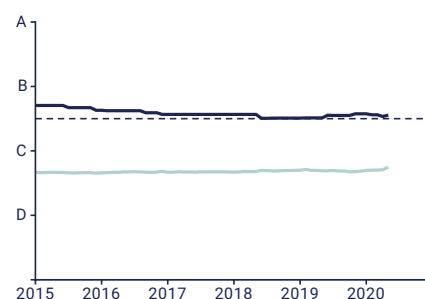


Distribution of Ratings

169 companies in the industry



Rating History



BASF SE

Analyst Opinion

Sustainability Opportunities

BASF is a highly diversified chemical company with a portfolio divided into the segments Chemicals, Materials, Industrial Solutions, Surface Technologies, Nutrition & Care and Agricultural Solutions. For chemical companies such as BASF, potential opportunities lie in the use of renewable or recycled resources to generate feedstock for chemical synthesis and downstream products. BASF has a general approach towards the promotion of alternative raw materials and there are some initiatives regarding the commercial production of bio-based chemical intermediates as well as chemical recycling of plastics. In 2018, around 5.3% of the raw materials purchased worldwide were from renewable resources (e.g. palm oil and its derivatives). Further, appropriate measures to ensure sustainable sourcing practices have been implemented. However, BASF currently does not present a comprehensive strategy to shift its raw material base towards alternative raw materials. Apart from that, environmentally favorable products such as solutions for the wind energy industry represent only a minor part of BASF's product portfolio. In addition, the company holds a majority stake in the joint venture Wintershall DEA, which comprises the former oil and gas businesses of BASF and LetterOne.

Sustainability Risks

From an environmental perspective, BASF has implemented adequate structures and measures to manage its risks regarding process, facility and transport safety. Although the company has a clear climate strategy including reduction targets, the latter have not been verified to be in line with the emission reductions required to limit global warming to 2°C. BASF has also implemented measures to promote a sustainable chemicals management. However, it does not present an adequate strategy to reduce and substitute substances of concern. Additionally, its agricultural segment includes the production of pesticides which have been associated with negative environmental impacts such as declining bee populations. Moreover, pesticides represent a health risk in many countries as safe application and disposal often cannot be guaranteed. From a social perspective, the company's management also presents an ambiguous picture. Although the company has implemented a group-wide health and safety management system that also covers contractors to a certain extent, there have been several fatal accidents in recent years.

Governance Opinion

BASF's shareholder structure is dispersed (as at March 31, 2020). Regarding the company's governance structure, the majority of its board of directors, including its chairman, Jürgen Hambrecht, are considered independent (as at November 25, 2019). The board has set up committees in charge of audit, remuneration and nomination. While the nomination committee members are all independent, this only holds for half of the audit committee and remuneration committee members. The company discloses its remuneration policy for executives, including long-term components, which could incentivize sustainable value creation.

Regarding the governance of sustainability, there is no indication that a board committee tasked with the oversight of sustainability issues is in place. However, sustainability performance objectives are to some extent integrated into the variable remuneration of members of the executive management team. BASF has further established a group-wide code of ethics covering issues such as corruption, antitrust, conflicts of interest and insider dealings in detail. There are adequate procedures to ensure compliance with the code (e.g. employee training).

BASF SE

Methodology - Overview

The ESG Corporate Rating methodology was originally developed by Institutional Shareholder Services Germany (formerly oekom research) and has been consistently updated for more than 25 years.

ESG Corporate Rating - The ESG Corporate Rating universe, which is currently expanding from more than 8,000 corporate issuers to a targeted 10,000 issuers in 2020, covers important national and international indices as well as additional companies from sectors with direct links to sustainability and the most important bond issuers that are not publicly listed companies.

The assessment of a company's social & governance and environmental performance is based on approximately 100 environmental, social and governance indicators per sector, selected from a pool of 800+ proprietary indicators. All indicators are evaluated independently based on clearly defined performance expectations and the results are aggregated, taking into account each indicator's and each topic's materiality-oriented weight, to yield an overall score (rating). If no relevant or up-to-date company information with regard to a certain indicator is available, and no assumptions can be made based on predefined standards and expertise, e.g. known and already classified country standards, the indicator is assessed with a D-.

In order to obtain a comprehensive and balanced picture of each company, our analysts assess relevant information reported or directly provided by the company as well as information from reputable independent sources. In addition, our analysts actively seek a dialogue with the assessed companies during the rating process and companies are regularly given the opportunity to comment on the results and provide additional information.

Analyst Opinion - Qualitative summary and explanation of the central rating results in three dimensions:

- (1) Opportunities - assessment of the quality and the current and future share of sales of a company's products and services, which positively or negatively contribute to the management of principal sustainability challenges.
- (2) Risks - summary assessment of how proactively and successfully the company addresses specific sustainability challenges found in its business activity and value chain, thus reducing its individual risks, in particular regarding its sector's key issues.
- (3) Governance - overview of the company's governance structures and measures as well as of the quality and efficacy of policies regarding its ethical business conduct.

Controversial Business Practices - The assessment of companies' sustainability performance in the ESG Corporate Rating is informed by a systematic and comprehensive evaluation of companies' ability to prevent and mitigate ESG controversies. ISS ESG conducts research and analysis on corporate involvement in verified or alleged failures to respect recognized standards for responsible business conduct through Norm-Based Research.

Norm-Based Research is based on authoritative standards for responsible business conduct such as the UN Global Compact, the OECD Guidelines for Multinational Enterprises, the UN Guiding Principles for Business and Human Rights and the Sustainable Development Goals.

As a stress-test of corporate disclosure, Norm-Based Research assesses the following:

- Companies' ability to address grievances and remediate negative impacts
 - Degree of verification of allegations and claims
 - Severity of impact on people and the environment, and systematic or systemic nature of malpractices
- Severity of impact is categorized as Potential, Moderate, Severe, Very severe. This informs the ESG Corporate Rating.

Decile Rank - The Decile Rank indicates in which decile (tenth part of total) the individual Corporate Rating ranks within its industry from 1 (best – company's rating is in the first decile within its industry) to 10 (lowest – company's rating is in the tenth decile within its industry). The Decile Rank is determined based on the underlying numerical score of the rating. If the total number of companies within an industry cannot be evenly divided by ten, the surplus company ratings are distributed from the top (1 decile) to the bottom. If there are Corporate Ratings with identical absolute scores that span a division in decile ranks, all ratings with an equal decile score are classified in the higher decile, resulting in a smaller number of Corporate Ratings in the decile below.

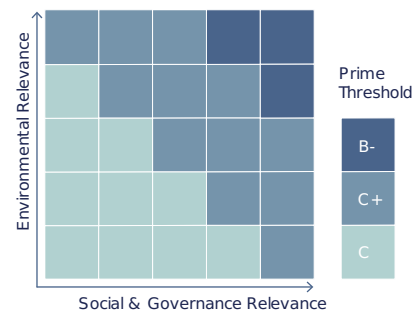
Distribution of Ratings - Overview of the distribution of the ratings of all companies from the respective industry that are included in the ESG Corporate Rating universe (company portrayed in this report: dark blue).

BASF SE

Methodology - Overview

Industry Classification - The social and environmental impacts of industries differ. Therefore, based on its relevance, each industry analyzed is classified in a Sustainability Matrix.

Depending on this classification, the two dimensions of the ESG Corporate Rating, the Social Rating and the Environmental Rating, are weighted and the sector-specific minimum requirements for the ISS ESG Prime Status (Prime threshold) are defined (absolute best-in-class approach).



Industry Leaders - List (in alphabetical order) of the top three companies in an industry from the ESG Corporate Rating universe at the time of generation of this report.

Key Issue Performance - Overview of the company's performance with regard to the key social and environmental issues in the industry, compared to the industry average.

Major Shareholders & Ownership Summary - Overview of the company's major shareholders at the time of generation of this report. All data as well as the categorisation system for the investor types is based on information from S&P Capital IQ.

Rating History - Development of the company's rating over time and comparison to the average rating in the industry.

Rating Scale - Companies are rated on a twelve-point scale from A+ to D-:

A+: the company shows excellent performance.

D-: the company shows poor performance (or fails to demonstrate any commitment to appropriately address the topic).

Overview of the range of scores achieved in the industry (light blue) and indication of the grade of the company evaluated in this report (dark blue).

Sources of Information - A selection of sources used for this report is illustrated in the annex.

Status & Prime Threshold - Companies are categorized as Prime if they achieve/exceed the sustainability performance requirements (Prime threshold) defined by ISS ESG for a specific industry (absolute best-in-class approach) in the ESG Corporate Rating. Prime companies are sustainability leaders in their industry and are better positioned to cope with material ESG challenges and risks, as well as to seize opportunities, than their Not Prime peers. The financial materiality of the Prime Status has been confirmed by performance studies, showing a continuous outperformance of the Prime portfolio when compared to conventional indices over more than 14 years.

ANNEX 2: Methodology

ISS ESG Green Bond KPIs

The ISS ESG Green Bond KPIs serves as a structure for evaluating the sustainability quality – i.e. the social and environmental added value – of the use of proceeds of BASF’s Green Bond.

It comprises firstly the definition of the use of proceeds category offering added social and/or environmental value, and secondly the specific sustainability criteria by means of which this added value and therefore the sustainability performance of the assets can be clearly identified and described.

The sustainability criteria are complemented by specific indicators, which enable quantitative measurement of the sustainability performance of the assets and which can also be used for reporting.

To review the KPIs used in this SPO, please contact Federico Pezzolato (details below) who will send them directly to you.

Asset evaluation methodology

ISS ESG evaluates whether the assets included in the asset pool match the eligible project category and criteria listed in the Green Bond KPIs.

All percentages refer to the amount of assets within one category (e.g. wind power). Additionally, the assessment “no or limited information is available” either indicates that no information was made available to ISS ESG or that the information provided did not fulfil the requirements of the ISS ESG Green Bond KPIs.

The evaluation was carried out using information and documents provided to ISS ESG on a confidential basis by BASF (e.g. Due Diligence Reports). Further, national legislation and standards, depending on the asset location, were drawn on to complement the information provided by the issuer.

Assessment of the contribution and association to the SDG

The 17 Sustainable Development Goals (SDGs) were endorsed in September 2015 by the United Nations and provide a benchmark for key opportunities and challenges toward a more sustainable future. Using a proprietary method, ISS ESG identifies the extent to which BASF’s Green Bond contributes to related SDGs and has a positive association with their respective sub-targets.

About ISS ESG SPO

ISS ESG is one of the world's leading rating agencies in the field of sustainable investment. The agency analyses companies and countries regarding their environmental and social performance.

As part of our Sustainable (Green & Social) Bond Services, we provide support for companies and institutions issuing sustainable bonds, advise them on the selection of categories of projects to be financed and help them to define ambitious criteria.

We assess alignment with external principles (e.g. the ICMA Green / Social Bond Principles), analyse the sustainability quality of the assets and review the sustainability performance of the issuer themselves. Following these three steps, we draw up an independent SPO so that investors are as well informed as possible about the quality of the bond / loan from a sustainability perspective.

Learn more: <https://www.isscorporatesolutions.com/solutions/esg-solutions/green-bond-services/>

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