Bayer AG
Pharmaceuticals    Germany    ETR:BAYN

ESG Risk Rating

28.6
Updated Apr 20, 2021

Medium Risk

-11.4

Momentum

NEGL
0-10
LOW
10-20
MED
20-30
HIGH
30-40
SEVERE
40+

ESG Risk Rating Category Distribution

Negligible 20% Low 36% Medium 28% High 15% Severe 68%

ESG Risk Rating Ranking

UNIVERSE

RANK PERCENTILE
(1st = lowest risk) (1st = lowest risk)

Global Universe 7191/13843 52nd
Pharmaceuticals 126/847 16th
Pharmaceuticals Subindustry 26/415 7th

Peers Comparison

Peers (Market cap $56.1 - $74.5bn)

<table>
<thead>
<tr>
<th></th>
<th>Exposure</th>
<th>Management</th>
<th>ESG Risk Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Merck KGaA</td>
<td>49.8</td>
<td>65.0 Strong</td>
<td>19.6 Low</td>
</tr>
<tr>
<td>2. Daiichi Sankyo Co Ltd</td>
<td>47.8</td>
<td>46.7 Average</td>
<td>27.0 Medium</td>
</tr>
<tr>
<td>3. Takeda Pharmaceutical Co., Ltd.</td>
<td>51.2</td>
<td>48.0 Average</td>
<td>28.3 Medium</td>
</tr>
<tr>
<td>4. Bayer AG</td>
<td>61.9</td>
<td>57.2 Strong</td>
<td>28.6 Medium</td>
</tr>
<tr>
<td>5. Chugai Pharmaceutical Co., Ltd.</td>
<td>47.4</td>
<td>36.8 Average</td>
<td>31.1 High</td>
</tr>
</tbody>
</table>
Bayer AG

Pharmaceuticals | Germany | ETR:BAYN

ESG Risk Analysis
Exposure refers to the extent to which a company is exposed to different material ESG issues. Our exposure score takes into consideration subindustry and company-specific factors such as its business model.

Exposure
61.9 -4.1
High
Beta = 1.29

Beta = 1.29

Bayer’s ESG exposure is driven by the unique features of its business model, namely its agrochemical business. By acquiring Monsanto in July 2018, Bayer inherited certain risks typical of agrochemical companies. Therefore, Bayer not only increased its exposure to Emissions, Effluents and Waste, and Occupational Health and Safety, but it also acquired a controversy related to Monsanto’s non-selective herbicide, Roundup, which has negative impacts on stakeholders and poses severe risks. This idiosyncratic issue, Social Impact of Products, which contributes 13% of Bayer’s overall exposure, significantly increases legal (exponentially increasing the trend of liability lawsuits filed against Bayer), regulatory (uncertainty around glyphosate licensing in the EU) and operational risks (Roundup is estimated to account for 8% of FY2020 revenues).

The company's overall exposure is high and is significantly above subindustry average. Product Governance, Occupational Health and Safety and Emissions, Effluents and Waste are notable material ESG issues.

Management
57.2 +15.2
Strong

Momentum

The chairman of Bayer’s board of management acts as the chief sustainability officer and the company reports that 20% of executives’ Long-Term Incidents are linked to sustainability goals. Regarding its ESG issues, 51% of Bayer’s production sites have been externally certified according to credible quality and safety standards, adding an extra layer of assurance to its quality management system. Bayer also has a strong programme regarding environmental and health and safety management systems. Concerning Roundup, Bayer does not intend to discontinue the product, but it invested 13% of its FY2019 sales to find viable substitutes for the product, and it currently has a new herbicide at Phase 3 development. Also, there are concerns as to whether Bayer’s stewardship programme will be sufficient to manage the mounting legal and operational risks related to glyphosates.

The company's overall management of material ESG issues is strong.
## Material ESG Issues

ESG Issues regarded material for the company.

<table>
<thead>
<tr>
<th>Issue Name</th>
<th>Exposure Score</th>
<th>Exposure Category</th>
<th>Management Score</th>
<th>Management Category</th>
<th>ESG Risk Rating Score</th>
<th>ESG Risk Rating Category</th>
<th>Contribution to ESG Risk Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Impact of Products</td>
<td>8.0</td>
<td>High</td>
<td>0.0</td>
<td>Weak</td>
<td>8.0</td>
<td>Severe</td>
<td>27.9%</td>
</tr>
<tr>
<td>Significant Events</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Product Governance</td>
<td>10.5</td>
<td>High</td>
<td>76.3</td>
<td>Strong</td>
<td>4.1</td>
<td>Medium</td>
<td>14.3%</td>
</tr>
<tr>
<td>Business Ethics</td>
<td>6.3</td>
<td>Medium</td>
<td>44.6</td>
<td>Average</td>
<td>3.6</td>
<td>Low</td>
<td>12.7%</td>
</tr>
<tr>
<td>Corporate Governance</td>
<td>9.0</td>
<td>High</td>
<td>62.0</td>
<td>Strong</td>
<td>3.4</td>
<td>Low</td>
<td>12.0%</td>
</tr>
<tr>
<td>Emissions, Effluents and Waste</td>
<td>5.9</td>
<td>Medium</td>
<td>61.8</td>
<td>Strong</td>
<td>2.6</td>
<td>Low</td>
<td>9.1%</td>
</tr>
<tr>
<td>Access to Basic Services</td>
<td>6.3</td>
<td>Medium</td>
<td>59.4</td>
<td>Strong</td>
<td>2.6</td>
<td>Low</td>
<td>8.9%</td>
</tr>
<tr>
<td>Human Capital</td>
<td>6.0</td>
<td>Medium</td>
<td>70.7</td>
<td>Strong</td>
<td>2.0</td>
<td>Negligible</td>
<td>6.9%</td>
</tr>
<tr>
<td>Occupational Health and Safety</td>
<td>3.9</td>
<td>Low</td>
<td>67.1</td>
<td>Strong</td>
<td>1.4</td>
<td>Negligible</td>
<td>4.9%</td>
</tr>
<tr>
<td>Bribery and Corruption</td>
<td>6.0</td>
<td>Medium</td>
<td>88.8</td>
<td>Strong</td>
<td>0.9</td>
<td>Negligible</td>
<td>3.3%</td>
</tr>
<tr>
<td>Overall</td>
<td>61.9</td>
<td>High</td>
<td>57.2</td>
<td>Strong</td>
<td>28.6</td>
<td>Medium</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

### Events Overview

Identify events that may negatively impact stakeholders, the environment, or the company’s operations.

**Category (Events)**

- **⚠️ Severe (1)**
  - Social Impact of Products

- **⚠️ High (0)**

- **⚠️ Significant (0)**

- **⚠️ Moderate (2)**
  - Anti-Competitive Practices
  - Quality and Safety
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Events Overview
Identify events that may negatively impact stakeholders, the environment, or the company's operations.

<table>
<thead>
<tr>
<th>Category</th>
<th>(Events)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Low (9)</strong></td>
<td></td>
</tr>
<tr>
<td>Access to Basic Services</td>
<td>Accounting and Taxation</td>
</tr>
<tr>
<td>Business Ethics</td>
<td>Emissions, Effluents and Waste</td>
</tr>
<tr>
<td>Intellectual Property</td>
<td>Labour Relations</td>
</tr>
<tr>
<td>Lobbying and Public Policy</td>
<td>Marketing Practices</td>
</tr>
<tr>
<td>Occupational Health and Safety</td>
<td></td>
</tr>
<tr>
<td><strong>None (2)</strong></td>
<td></td>
</tr>
<tr>
<td>Animal Welfare</td>
<td>Bribery and Corruption</td>
</tr>
</tbody>
</table>
Risk Decomposition

Exposure

Company Exposure 61.9

The company's sensitivity or vulnerability to ESG risks.

Management

Manageable Risk 58.1
Manageable Risk Factor 93.9 %

Material ESG risk that can be influenced and managed through suitable policies, programmes and initiatives.

Managed Risk 33.2

Material ESG risk that has been managed by a company through suitable policies, programmes or initiatives.

Management Gap 24.8

Measures the difference between material ESG risk that could be managed by the company and what the company is managing.

Unmanageable Risk 3.8

Material ESG risk inherent in the products or services of a company and/or the nature of a company's business, which cannot be managed by the company.

ESG Risk Rating

Overall Unmanaged Risk 28.6

Material ESG risk that has not been managed by a company, and includes two types of risk: unmanageable risk, as well as risks that could be managed by a company through suitable initiatives but which may not yet be managed.

Momentum Details

Risk Rating Momentum -11.4

Low 0-10 2021 ▼ 28.6 (-11.4)
Medium 10-20 2020 ▲ 40.0
High 20-30
Severe 30-40

Exposure Momentum -4.1

Low 0-35 2021 ▼ 61.9 (-4.1)
Medium 35.55 2020 ▲ 65.9
High 55+

Management Momentum +15.2

Strong 100-50 2021 ▼ 57.2 (+15.2)
Average 50-25 2020 ▲ 42.0
Weak 25-0
**Beta (Beta, β)**
A factor that assesses the degree to which a company’s exposure deviates from its subindustry’s exposure on a material ESG issue. It is used to derive a company-specific issue exposure score for a material ESG issue. It ranges from 0 to 10, with 0 indicating no exposure, 1 indicating the subindustry average, and 10 indicating exposure that is ten times the subindustry average.

**Corporate Governance Pillar**
A pillar provides a signal about a company’s management of a specific Corporate Governance issue.

**ESG Risk Category**
Companies' ESG Risk Rating scores are assigned to five ESG risk categories in the ESG Risk Rating:

- **Negligible risk**: enterprise value is considered to have a negligible risk of material financial impacts driven by ESG factors
- **Low risk**: enterprise value is considered to have a low risk of material financial impacts driven by ESG factors
- **Medium risk**: enterprise value is considered to have a medium risk of material financial impacts driven by ESG factors
- **High risk**: enterprise value is considered to have a high risk of material financial impacts driven by ESG factors
- **Severe risk**: enterprise value is considered to have a severe risk of material financial impacts driven by ESG factors

Note that because ESG risks materialize at an unknown time in the future and depend on a variety of unpredictable conditions, no predictions on financial or share price impacts, or on the time horizon of such impacts, are intended or implied by these risk categories.

**ESG Risk Rating Score (Unmanaged Risk Score)**
The company's final score in the ESG Risk Rating; it applies the concept of risk decomposition to derive the level of unmanaged risk for a company.

**Event Category**
Sustainalytics categorizes events that have resulted in negative ESG impacts into five event categories: Category 1 (low impact); Category 2 (moderate impact); Category 3 (significant impact); Category 4 (high impact); and Category 5 (severe impact).

**Event Indicator**
An indicator that provides a signal about a potential failure of management through involvement in controversies.

**Excess Exposure**
The difference between the company’s exposure and its subindustry exposure.

**Exposure**
A company or subindustry’s sensitivity or vulnerability to ESG risks.

**Idiosyncratic Issue**
An issue that was not deemed material at the subindustry level during the consultation process but becomes a material ESG issue for a company based on the occurrence of a Category 4 or 5 event.

**Manageable Risk**
Material ESG risk that can be influenced and managed through suitable policies, programmes and initiatives.

**Managed Risk**
Material ESG Risk that has been managed by a company through suitable policies, programmes and initiatives.

**Management**
A company’s handling of ESG risks.

**Management Gap**
Refers to the difference between what a company has managed and what a company could possibly manage. It indicates how far the company's performance is from best practice.

**Management Indicator**
An indicator that provides a signal about a company’s management of an ESG issue through policies, programmes or quantitative performance.

**Material ESG Issue**
A core building block of the ESG Risk Rating. An ESG issue is considered to be material within the rating if it is likely to have a significant effect on the enterprise value of a typical company within a given subindustry.

**Subindustry**
Subindustries are defined as part of Sustainalytics' own classification system.

**Unmanageable Risk**
Material ESG Risk inherent from the intrinsic nature of the products or services of a company and/or the nature of a company’s business, which cannot be managed by the company if the company continues to offer the same type of products or services and remains in the same line of business.

**Unmanaged Risk**
Material ESG risk that has not been managed by a company, and includes two types of risk: unmanageable risk, as well as risks that could be managed by a company through suitable initiatives, but which may not yet be managed (management gap).