7 Essentials of ESG

As of June 30, 2022

Market Insights
7 Essentials of ESG

1. ESG considerations are affecting consumer preferences and public attitudes
2. Policymakers are setting environmental and social goals
3. For some companies this may be a headwind…
4. …but it also creates significant opportunities for those at the forefront of change
5. It’s not just climate, G matters and focus on S is growing
6. ESG is affecting the investment landscape…
7. …and is changing the nature of investment flows

ESG is Environmental, Social, and Governance
ESG considerations are affecting consumer preferences and public attitudes.

“I don’t mind paying more for products that are good for the environment:”

<table>
<thead>
<tr>
<th></th>
<th>Germany</th>
<th>USA</th>
<th>UK</th>
<th>Australia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agree</td>
<td>49.9%</td>
<td>50.1%</td>
<td>16.6%</td>
<td>83.4%</td>
</tr>
<tr>
<td>Disagree</td>
<td>50.1%</td>
<td>49.9%</td>
<td>83.4%</td>
<td>16.6%</td>
</tr>
</tbody>
</table>

Share of market (2018)

- Germany: 16.6%
- USA: 83.4%
- UK: 49.9%
- Australia: 50.1%

Share of market growth (2013-2018)

- Sustainability-marketed products: 49.9%
- Conventional products: 50.1%

Source: IRI, NYU Stern Center for Sustainable Business, YouGov, J.P. Morgan Asset Management. (Left) Respondents identified as being mainly or party responsible for grocery shopping for their household. Survey conducted April 2021. (Right) Products in 36 consumer packaged goods (CPG) categories comprising 40% of the total CPG market in dollars. Data are as of June 30, 2022.
Policymakers are setting environmental and social goals.

**Greenhouse gas emissions targets**
Billions of tons per year, CO2 equivalent

<table>
<thead>
<tr>
<th>Year</th>
<th>China</th>
<th>U.S.</th>
<th>EU</th>
</tr>
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<tbody>
<tr>
<td>'90</td>
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<td>'20</td>
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<td>'30</td>
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<td>'40</td>
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<td>'50</td>
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<tr>
<td>'60</td>
<td></td>
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</tbody>
</table>

**Labor force participation (LFP)**
Ratio of LFP rate of cohort to total LFP rate, June 2022

<table>
<thead>
<tr>
<th>Cohort</th>
<th>LFPR (%)</th>
<th>UR (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Men</td>
<td>67.8</td>
<td>3.6</td>
</tr>
<tr>
<td>Hispanic/Latino</td>
<td>66.5</td>
<td>4.3</td>
</tr>
<tr>
<td>Black</td>
<td>62.2</td>
<td>5.8</td>
</tr>
<tr>
<td>Women</td>
<td>56.8</td>
<td>3.6</td>
</tr>
</tbody>
</table>

For some companies this may be a headwind...

Global energy mix
% of primary energy consumption

Net zero 2050 forecast

Cost of wind, solar, natural gas, nuclear, coal
Mean LCOE*, 2021, dollar per megawatt hour

Source: J.P. Morgan Asset Management; (Left) BP Energy Outlook 2020 (Right) Lazard’s Levelized Cost of Energy Analysis as of October 2021. *LCOE is levelized cost of energy, the net present value of the unit-cost of electricity over the lifetime of a generating asset. It is often taken as a proxy for the average price that the generating asset must receive in a market to break even over its lifetime. Data are as of June 30, 2022.
...but it also creates significant opportunities for those at the forefront of change.

Global investment in energy transition
Billions USD, nominal

- Storage, electrification, carbon capture, other
- Renewable energy

Global electric vehicle sales
Millions, percent

It’s not just climate, G matters and the focus on S is growing.

Market cap of public cybersecurity companies
Billions USD

OECD average current expenditure on health
% of GDP

Published patent applications
Number, thousands

ESG is affecting the investment landscape...

Assets under management of Principles for Responsible Investment signatories

Sustainable investing assets by strategy
2020, percent

Integration 43%
Exclusionary screening 33%
Corporate engagement/shareholder action 18%
Thematic 3%
Best-in-class 2%
Impact 1%

Source: Global Sustainable Investment Alliance, Principles for Responsible Investment, J.P. Morgan Asset Management. (Left) Before 2015 some assets are double-counted. (Right) "Global Sustainable Investment Review 2020." Integrating the systemic and explicit inclusion by investment managers of environmental, social and governance factors into financial analysis. Exclusionary screening: exclusion of certain sectors, companies, countries or other issuers based on activities considered not investable (negative screening) or screening against minimum standards of business or issuer practice based on international norms such as those issued by the UN, ILO, OECD and NGOs (norms-based screening). Corporate engagement and shareholder actions: employing shareholder power to influence corporate behavior, including through direct corporate engagement, filing or co-filing shareholder proposals, and proxy voting that is guided by comprehensive ESG guidelines. Thematic investing in themes or assets specifically contributing to sustainable solutions. Best-in-class investing in sectors, companies or projects selected for positive ESG performance relative to industry peers, and that achieve a rating above a defined threshold. Impact investing: investing to achieve positive, social and environmental impacts - requires measuring and reporting against these impacts, demonstrating the intentionality of investor and underlying asset/Investee, and demonstrating the investor contribution.

Data as of June 30, 2022.
...and is changing the nature of investment flows.

Net flows into mutual funds and ETFs
% share of annual global net flows

Mutual fund and ETF assets under management
% share of global AUM

Source: Morningstar, J.P. Morgan Asset Management. “Sustainable” refers to funds tagged as “Sustainable Investment – Overall” in Morningstar. Morningstar classifies “sustainable investment” as a fund that explicitly indicates any kind of sustainability, impact or ESG strategy in its prospectus or offering documents. Universe for flows and assets under management (AUM) covers all global mutual funds and ETFs in the Morningstar database excluding money market funds and fund of funds. “ETF” refers to exchange-traded fund. Data are as of June 30, 2022.
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