7 Essentials of ESG

As of June 30, 2022
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:”  
% of adults

<table>
<thead>
<tr>
<th>Country</th>
<th>Agree</th>
<th>Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germany</td>
<td></td>
<td></td>
</tr>
<tr>
<td>USA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>UK</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Australia</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Growth of sustainability-marketed products

- Share of market (2018)
  - Germany: 16.6%
  - USA: 83.4%
  - UK: 50.1%
  - Australia: 49.9%
- Share of market growth (2013-2018)
  - Sustainability-marketed products: 50.1%
  - Conventional products: 49.9%

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

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

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

*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

- China
- U.S.
- Europe
- Rest of World
- Market Share

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**

<table>
<thead>
<tr>
<th>Year</th>
<th>06</th>
<th>07</th>
<th>08</th>
<th>09</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
<th>15</th>
<th>16</th>
<th>17</th>
<th>18</th>
<th>19</th>
<th>20</th>
<th>21</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trillions</td>
<td>$0</td>
<td>$0</td>
<td>$20</td>
<td>$40</td>
<td>$60</td>
<td>$80</td>
<td>$100</td>
<td>$120</td>
<td>$140</td>
<td>$160</td>
<td>$180</td>
<td>$200</td>
<td>$220</td>
<td>$240</td>
<td>$260</td>
<td></td>
</tr>
</tbody>
</table>

**Sustainable investing assets by strategy**

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

Source: Global Sustainable Investment Alliance, Principles for Responsible Investment, J.P. Morgan Asset Management.

*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 as of June 30, 2022.
J.P. Morgan Asset Management – Risks & disclosures

The Market Insights program provides comprehensive data and commentary on global markets without reference to products. Designed as a tool to help clients understand the markets and support investment decision-making, the program explores the implications of current economic data and changing market conditions.

For the purposes of MiFID II, the JPM Market Insights and Portfolio Insights programs are marketing communications and are not in scope for any MiFID II / MiFIR requirements specifically related to investment research. Furthermore, the J.P. Morgan Asset Management Market Insights and Portfolio Insights programs, as non-independent research, have not been prepared in accordance with legal requirements designed to promote the independence of investment research, nor are they subject to any prohibition on dealing ahead of the dissemination of investment research.

This document is a general communication being provided for informational purposes only. It is educational in nature and not designed to be taken as advice or a recommendation for any specific investment product, strategy, plan feature or other purpose in any jurisdiction, nor is it a commitment from J.P. Morgan Asset Management or any of its subsidiaries to participate in any of the transactions mentioned herein. Any examples used are generic, hypothetical and for illustration purposes only. This material does not contain sufficient information to support an investment decision and it should not be relied upon by you in evaluating the merits of investing in any securities or products. In addition, users should make an independent assessment of the legal, regulatory, tax, credit, and accounting implications and determine, together with their own financial professional, if any investment mentioned herein is believed to be appropriate to their personal goals. Investors should ensure that they obtain all available relevant information before making any investment. Any forecasts, figures, opinions or investment techniques and strategies set out are for information purposes only, based on certain assumptions and current market conditions and are subject to change without prior notice. All information presented herein is considered to be accurate at the time of production, but no warranty of accuracy is given and no liability in respect of any error or omission is accepted. It should be noted that investment involves risks, the value of investments and the income from them may fluctuate in accordance with market conditions and taxation agreements and investors may not get back the full amount invested. Both past performance and yields are not reliable indicators of current and future results.

J.P. Morgan Asset Management is the brand for the asset management business of JPMorgan Chase & Co. and its affiliates worldwide.

To the extent permitted by applicable law, we may record telephone calls and monitor electronic communications to comply with our legal and regulatory obligations and internal policies. Personal data will be collected, stored and processed by J.P. Morgan Asset Management in accordance with our privacy policies at https://am.jpmorgan.com/global/privacy.

This communication is issued by the following entities:

In the United States, by J.P. Morgan Investment Management Inc. or J.P. Morgan Alternative Asset Management, Inc., both regulated by the Securities and Exchange Commission; in Latin America, for intended recipients’ use only, by local J.P. Morgan entities, as the case may be. In Canada, for institutional clients’ use only, by JPMorgan Asset Management (Canada) Inc., which is a registered Portfolio Manager and Exempt Market Dealer in all Canadian provinces and territories except the Yukon and is also registered as an Investment Fund Manager in British Columbia, Ontario, Quebec and Newfoundland and Labrador. In the United Kingdom, by JPMorgan Asset Management (UK) Limited, which is authorized and regulated by the Financial Conduct Authority; in other European jurisdictions, by JPMorgan Asset Management (Europe) S.à r.l. In Asia Pacific (“APAC”), by the following issuing entities and in the respective jurisdictions in which they are primarily regulated: JPMorgan Asset Management (Asia Pacific) Limited, or JPMorgan Funds (Asia) Limited, or JPMorgan Asset Management Real Assets (Asia) Limited, each of which is regulated by the Securities and Futures Commission of Hong Kong; JPMorgan Asset Management (Singapore) Limited (Co. Reg. No. 197601586K), this advertisement or publication has not been reviewed by the Monetary Authority of Singapore; JPMorgan Asset Management (Taiwan) Limited; JPMorgan Asset Management (Japan) Limited, which is a member of the Investment Trusts Association, Japan, the Japan Investment Advisers Association, Type II Financial Instruments Firms Association and the Japan Securities Dealers Association and is regulated by the Financial Services Agency (registration number “Kanto Local Finance Bureau (Financial Instruments Firm) No. 330”), in Australia, to wholesale clients only as defined in section 781A and 781G of the Corporations Act 2001 (Commonwealth), by JPMorgan Asset Management (Australia) Limited (ABN 55143832080) (AFSL 376919). For all other markets in APAC, to intended recipients only.

For U.S. only: If you are a person with a disability and need additional support in viewing the material, please call us at 1-800-343-1113 for assistance.

Copyright 2022 JPMorgan Chase & Co. All rights reserved

Google assistant is a trademark of Google Inc.

Amazon, Alexa and all related logos are trademarks of Amazon.com, Inc. or its affiliates.

Prepared by: Meera Pandit.

Unless otherwise stated, all data are as of June 30, 2022 or most recently available.

09r3212007204036