Disclosure & Transparency
Impact on Industry
Aspen Global Change Institute

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Abstract

Are Forces Shifting Industry Towards Increased Environment and Social Responsibility?
Economics: Invisible Hand to Eco Footprint

CO2 atmospheric dry molar fraction (ppmv), averaged over a calendar year

Books mentioned:
- The General Theory of Employment, Interest and Money
- Silent Spring
- Natural Capitalism
Rachel Carson – CBS Reports
Historical Context

1960’s/70’s – “Conscious Choices” to Act
   EPA (Kennedy, Nixon)
   Greenpeace, WWF

1980’s – Increasing Awareness & Public Outrage
   Visual (UCC – Bhopal; 3 Mile Island, Chernobyl; Exxon Valdez, ...)
   Corporate Regulatory Impact and Enforcement

1990’s – Business is Responding
   Rio Earth Summit, Kyoto, WBCSD

2000’s – Sustainability Reporting, Transparency

2010’s – COP21, Sustainable Development Goals, ESG
Regulatory Intervention

Environmental Protection Acts
- US Clean Air/Water Act (60’s & 70’s)
- CAA for “Acid Rain” (SO₂ & NOₓ) (90’s GHW Bush)
- EU (1990’s)

“Erin Brockovich”
- Environmental Litigation (CR+6)

Chemical Regulations
- Kyoto, Montreal Protocol, Kigali
- TSCA(US), REACh (EU++), RoHS, ...
- UNFCCC/COP21 Paris Agreement
Industrial Sustainability

Corporate Responsibility

“SP” Relationship
CSR Reporting
  CDP: 7000 Companies (2017)
Positioning Leadership
  Unilever’s Polman
  J&J’s Earthwards®
  GE’s Eco-Magination™
Greening the Supply Chain
Circular Economy
Business Opportunities
Emerging: ESG and Risk
Industry ESG Risk Context

Entities, including businesses, governments and non-profits, face an evolving landscape of environmental, social and governance (ESG)-related risks that can impact their profitability, success and even survival.

<table>
<thead>
<tr>
<th>Table 1: Definitions of ESG</th>
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<tbody>
<tr>
<td><strong>MSCI definition</strong></td>
</tr>
<tr>
<td>Environmental</td>
</tr>
<tr>
<td>Social</td>
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<tr>
<td>Governance</td>
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</tbody>
</table>

Environmental
- What steps is the company taking to insure regulatory environmental compliance?
- How has the company positioned itself for climate risks and resilience?

Social
- What is the company doing to promote worker health and safety?
- Policies around conflict minerals and labor laws?
- Societal role? Military business and weaponry?

Governance
- Policy, goals, and performance
- Board level ownership and flow-down?
- Transparency, public reporting, and assurance?

Enterprize Risk Management, Applying enterprise risk management to environmental, social and governance-related risks, COSO and WBCSD, October 2018
ESG and Business Risk

Table 2.4: Top ten global business risks for 2018

<table>
<thead>
<tr>
<th>Megatrend</th>
<th>Description</th>
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<tbody>
<tr>
<td>Business interruption</td>
<td>Supply chain disruption, factory fires, destroyed shipping containers, cyber incidents</td>
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<tr>
<td>Cyber incidents</td>
<td>New threats such as “cyber hurricanes” and tougher data regulation; a single cyber attack can potentially impact hundreds of companies</td>
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<tr>
<td>Natural catastrophes</td>
<td>Numerous natural catastrophes in 2017 could indicate increases in the future due to the impact of a changing climate</td>
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<tr>
<td>Market developments</td>
<td>Waves of M&amp;A activity, digital revolution, political uncertainty</td>
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<td>Changes in legislation</td>
<td>Changes in global trade agreements, uneven monetary and regulatory conditions between regions</td>
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<tr>
<td>Fire/explosion</td>
<td>Physical damage and business disruption result in losses from fire and explosions</td>
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<td>New technologies</td>
<td>Technological advances, digitalization, interconnectivity and information exchange</td>
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<td>Loss of reputation/brand value</td>
<td>Health and safety incidents, product recalls and data security breaches – exacerbated by social media and interconnected supply chain</td>
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<td>Political risks and violence</td>
<td>Terrorism, threats to transportation infrastructure and locations with large groups of people, increased political activism</td>
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<tr>
<td>Climate change/increasing volatility of weather</td>
<td>Increasing frequency and severity of weather events</td>
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</tbody>
</table>

Adapted from 2018 Allianz Risk Barometer

“Environmental, social, and governance (ESG) factors relevant to a company’s business can provide essential insights into management effectiveness and thus a company’s long-term prospects.”

- Larry Fink
  Chairman and CEO, BlackRock

Enterprise Risk Management, Applying enterprise risk management to environmental, social and governance-related risks, COSO and WBCSD, October 2018
ESG & Industry’s Stakeholders

Investors
Suppliers
Customers
Employees
Insurance
Banking
Gov’t
NGO’s

ESG: Impact on Companies Doing Business in America and Why They Must Care; Bank of America/Merrill Lynch, 2018

We Are Still In declaration in June 2017

Enterprise Risk Management, Applying enterprise risk management to environmental, social and governance-related risks, COSO and WBCSD, October 2018
ESG and The Next Decade

Increasing Transparency and ERM
- Consolidation/Standardization (SASB)
- MNC to SME;
- EU Directive on Non-Financial Reporting; TCFD

Disclosure Labeling: e.g. Real-Estate
- Voluntary to Investment Grade: LEED to performance standards (EPBD)
- Public information

Sustainable Living Standards
- Sub-National Performance Ratings (LEED) for Cities

Government
- Price Signals (Carbon, Water)
- SDGs, Climate and Resiliency Policy/Regulation

“While many companies describe climate-related risks and opportunities, few disclose the financial impact of climate change on the company.”

2018 Status Report: Task Force on Climate-Related Financial Disclosures: Status Report; TCFD, September 2018