Ready for Climate?

“Climate transition” & what it means for companies

DIRK Conference, 2021

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Climate Action in Context

The Current Situation

The Climate Action Wave

ESG & Climate Readiness

About IHS Markit
The heat is on…the capital market landscape is changing….

Shell
Hague Watershed Ruling!
Shell ordered to reduce CO₂ emissions by 45% from 2019 levels by 2030

CHEVRON
Investors directed the oil giant to deepen emission cuts

ExxonMobil
Shareholders elected at least two board members who pledged more aggressive action on climate change

Deutsche Bank
Countermotion at Deutsche Bank: “Understanding of sustainability is stuck in the 90ies”

IEA
Net Zero by 2050 Roadmap…setting out more than 400 milestones ...
No new exploration!

EU ESG Regulation
SFDR, NFRD, CSRD etc. will have a global impact on companies and investors irrespective of origin.

US EXECUTIVE ORDER
Biden directs agencies to analyze and mitigate the risk Climate Change poses to homeowners and consumers, businesses and workers, and the Financial System and Federal Government Itself
The Climate Action Context

“…Climate risk is investment risk”

Larry Fink, Blackrock, 2021
Last years were leap forward in net-zero emissions targets by countries…

Countries’ net-zero emissions pledges and share of global

Top ten world’s largest GHG emitters (2019/20)

<table>
<thead>
<tr>
<th>Rank</th>
<th>Country</th>
<th>Share of GHG emissions</th>
<th>Share of Global GDP</th>
<th>Net-zero target</th>
<th>Pledge year</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>China</td>
<td>26%</td>
<td>16%</td>
<td>Yes</td>
<td>2020</td>
</tr>
<tr>
<td>2</td>
<td>USA</td>
<td>12%</td>
<td>25%</td>
<td>No</td>
<td>2021</td>
</tr>
<tr>
<td>3</td>
<td>India</td>
<td>7%</td>
<td>3%</td>
<td>No</td>
<td>n/a</td>
</tr>
<tr>
<td>4</td>
<td>EU27</td>
<td>7%</td>
<td>18%</td>
<td>Yes</td>
<td>2018</td>
</tr>
<tr>
<td>5</td>
<td>Indonesia</td>
<td>5%</td>
<td>1%</td>
<td>No</td>
<td>n/a</td>
</tr>
<tr>
<td>6</td>
<td>Russia</td>
<td>4%</td>
<td>2%</td>
<td>No</td>
<td>n/a</td>
</tr>
<tr>
<td>7</td>
<td>Brazil</td>
<td>3%</td>
<td>2%</td>
<td>Yes</td>
<td>2020</td>
</tr>
<tr>
<td>8</td>
<td>Japan</td>
<td>3%</td>
<td>6%</td>
<td>Yes</td>
<td>2019</td>
</tr>
<tr>
<td>9</td>
<td>Canada</td>
<td>2%</td>
<td>2%</td>
<td>Yes</td>
<td>2019</td>
</tr>
<tr>
<td>10</td>
<td>Iran</td>
<td>2%</td>
<td>0.3%</td>
<td>No</td>
<td>n/a</td>
</tr>
</tbody>
</table>
…and ESG & climate regulation at an all time high…

Global rise of climate legislation

Some prominent examples of climate laws

- UK: Climate Change Act (2008)
- Mexico: General Law on Climate Change (2012)
- Switzerland: CO₂ Act (rev 2013)
- China: 12th and 13th Five Year Plan (2011 / 2016)
- Kenya: Climate Change Act (2016)
- Sweden: Climate Act (2017)
- New Zealand Climate Change Response (Zero Carbon) Act
- EU Sustainable Finance Regulation, Taxonomy, NFRD/CSRD

- EU regulation will have a global impact irrespective of origin
- Public and private companies affected by EU NFRD
- Financial Market Participants (incl. Investors, insurers etc) affected by SFDR, EU taxonomy, Climate Benchmarks etc. driving transparency
  - Info on sustainability & climate risk in all investment products
  - Details on ESG integration, principal adverse impacts (PAI) in 06/21

Source: IHS Markit, Grantham Research Institute of Climate Change
…with financial markets continuing to driving change on climate transition
…forcing Oil & Gas companies to commit to net-zero targets…

Announcements of oil company GHG emissions reduction and net-zero commitments

- **BP**: Net zero by 2050 (scope 1, 2, 3); 50% cut in carbon intensity (scope 3)
- **Equinor**: Reduce carbon intensity 50% by 2050 (scope 1, 2, 3); carbon neutral by 2030 (scope 1, 2)
- **Eni**: 80% reduction in net emissions by 2050 (scope 1, 2, 3); net zero by 2030 (scope 1, 2) from upstream; net zero for Eni group by 2040 (scope 1, 2)
- **OMV**: Reduce carbon intensity of operations at least 30% by 2025; net zero by 2050
- **TOTAL**: Net zero by 2050 (scope 1, 2); net zero in Europe (scope 1, 2, 3); 60% reduction in carbon intensity globally (scope 3)
- **Range Resources**: Reduce GHG emissions intensity 15% by 2025; net zero GHG emissions by 2025
- **Petrobras**: Reduction in absolute emissions in upstream of 25% by 2030 (scope 1, 2)
- **ExxonMobil**: Reduce intensity of upstream emissions 15–20% by 2025 (scope 1, 2)
- **Conoco**: Aspire to Net zero by 2050
- **Pioneer**: Reduce GHG emissions intensity 35–45% by 2030; net zero for operations by 2050
- **CNPC**: Goal of net zero by 2050

Source: Company reports, IHS Markit Energy and Climate Scenarios
...and putting pressure on companies and the financial system...

Worst banks since Paris Alignment (2016-2020)

JPMORGAN CHASE $317 B
CITI $238 B
WELLS FARGO $223 B
BANK OF AMERICA $199 B
RBC $160 B
MUGF $148 B
BARCLAYS $146 B
MIZUHO $124 B
BNP PARIBAS $121 B
TD $121 B
SCOTIABANK $114 B
MORGAN STANLEY $111 B

JPMORGAN CHASE LEADS BY 33%

Insurance Ranking to underwriting & investment (2021)

<table>
<thead>
<tr>
<th>Rank</th>
<th>Issuer</th>
<th>Rating</th>
<th>Score</th>
<th>Governance</th>
<th>Climate Change Policies</th>
<th>Climate Change Financing</th>
<th>Biodiversity Investments</th>
<th>Biodiversity Underwriting</th>
<th>Human Rights</th>
<th>Human Rights Reporting</th>
<th>Total score (100)</th>
<th>Country</th>
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<tbody>
<tr>
<td>1</td>
<td>AXA</td>
<td>A</td>
<td>47.5%</td>
<td>29%</td>
<td>23%</td>
<td>28%</td>
<td>29%</td>
<td>36%</td>
<td>36%</td>
<td>32%</td>
<td>93%</td>
<td>France</td>
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<tr>
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<td>Allianz</td>
<td>A</td>
<td>44.8%</td>
<td>22%</td>
<td>22%</td>
<td>28%</td>
<td>32%</td>
<td>40%</td>
<td>39%</td>
<td>34%</td>
<td>90%</td>
<td>Germany</td>
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<tr>
<td>3</td>
<td>Aviva</td>
<td>A</td>
<td>43.3%</td>
<td>21%</td>
<td>21%</td>
<td>28%</td>
<td>29%</td>
<td>35%</td>
<td>35%</td>
<td>32%</td>
<td>89%</td>
<td>United Kingdom</td>
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<tr>
<td>4</td>
<td>NN Group</td>
<td>B</td>
<td>34.3%</td>
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<td>25%</td>
<td>28%</td>
<td>30%</td>
<td>36%</td>
<td>36%</td>
<td>32%</td>
<td>87%</td>
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<td>5</td>
<td>Degardins</td>
<td>B</td>
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<td>23%</td>
<td>23%</td>
<td>28%</td>
<td>29%</td>
<td>35%</td>
<td>35%</td>
<td>31%</td>
<td>85%</td>
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<td>Generali</td>
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<td>22%</td>
<td>28%</td>
<td>29%</td>
<td>35%</td>
<td>35%</td>
<td>31%</td>
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<td>7</td>
<td>Zurich</td>
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<td>21%</td>
<td>28%</td>
<td>29%</td>
<td>35%</td>
<td>35%</td>
<td>31%</td>
<td>83%</td>
<td>Switzerland</td>
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<tr>
<td>8</td>
<td>Swiss Re</td>
<td>CC</td>
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<td>21%</td>
<td>21%</td>
<td>28%</td>
<td>29%</td>
<td>35%</td>
<td>35%</td>
<td>31%</td>
<td>82%</td>
<td>Switzerland</td>
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<td>9</td>
<td>Munich Re</td>
<td>CC</td>
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<td>21%</td>
<td>28%</td>
<td>29%</td>
<td>35%</td>
<td>35%</td>
<td>31%</td>
<td>82%</td>
<td>Germany</td>
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<td>Achmea</td>
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<td>23.0%</td>
<td>21%</td>
<td>21%</td>
<td>28%</td>
<td>29%</td>
<td>35%</td>
<td>35%</td>
<td>31%</td>
<td>82%</td>
<td>Netherlands</td>
</tr>
</tbody>
</table>

“…Deutsche Bank’s understanding of sustainability is stuck in the 90ies. The bank is clinging to fossil business. For example, Deutsche Bank is arranging Wintershall DEA’s upcoming IPO. While scientific evidence clearly indicates a need to phase out fossil fuel extraction, Wintershall DEA is planning to increase its oil and gas production by 30%. The list of Deutsche Bank’s fossil fuel customers is long and contains illustrious names such as ExxonMobil, Glencore and Chevron.”

Source: ShareAction, Ran.org, bankingonclimate 2021
“Money talks. If we can deploy capital and the power of financial markets, we can ensure companies make the transition needed to cap global warming.”

CALPERS PENSION, 2021

The Current Situation
Changing climate landscape: the key developments

Capital market dynamics are changing rapidly

Shift to ESG & passive
- Largest inflows to index, ETF & passive mandates
- ESG investments at record high
- Active fund managers also applying passive strategies

Increased ESG sensitivity
- Cross-asset ESG integration
- Focus on investment & voting discretion
- Increased relevance on ESG data, external third-parties
- Sector & industry specific focus

Focus on climate transition and climate governance
- Climate change & decarbonisation most significant ESG-driver
- Environmental & social aspects change asset allocation & stewardship
- Regulators & industry pressure

Active Ownership & pressure to change
- “Mandate for change”
- Engagement & Voting (see ExxonMobil)
- Climate Governance
- Activism incl. public engagement

Source: IHS Markit.
### Increased ESG & carbon portfolio sensitivity of top institutional investors

<table>
<thead>
<tr>
<th>Rank</th>
<th>Firm Name</th>
<th>Total Global Equity $M</th>
<th>% Holding DAX</th>
<th>ESG Sensitivity</th>
<th>Portfolio Decarbonisation Indicator (FY2020)</th>
<th>UNPRI</th>
<th>CA100+ Net-Zero Alliance</th>
<th>IIGCC</th>
<th>TPI</th>
<th>Orientation</th>
<th>Country</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>Blackrock Group</td>
<td>4,495,549.31</td>
<td>9.96%</td>
<td>High</td>
<td>5.00%</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Passive</td>
<td>USA</td>
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<tr>
<td>2</td>
<td>The Vanguard Group, Inc.</td>
<td>4,291,361.64</td>
<td>5.39%</td>
<td>High</td>
<td>5.10%</td>
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<td>No</td>
<td>Passive</td>
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<tr>
<td>3</td>
<td>Norges Bank Investment Management</td>
<td>949,098.65</td>
<td>4.05%</td>
<td>High</td>
<td>7.10%</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>NOR</td>
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<td>4</td>
<td>DWS Investment GmbH</td>
<td>137,885.82</td>
<td>3.05%</td>
<td>High</td>
<td>4.10%</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>GER</td>
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<tr>
<td>5</td>
<td>State Street Global Advisors</td>
<td>1,717,344.22</td>
<td>2.79%</td>
<td>Medium</td>
<td>4.30%</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>USA</td>
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<tr>
<td>6</td>
<td>Amundi Asset Management S.A.</td>
<td>155,052.86</td>
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<td>9.20%</td>
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<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>FRA</td>
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<td>7</td>
<td>Fidelity Management &amp; Research</td>
<td>1,248,536.73</td>
<td>1.58%</td>
<td>Medium</td>
<td>3.30%</td>
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<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>USA</td>
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<tr>
<td>8</td>
<td>Deka Investment GmbH</td>
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<td>High</td>
<td>6.60%</td>
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<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
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<td>The Capital Group</td>
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<td>Medium</td>
<td>4.40%</td>
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<td>No</td>
<td>No</td>
<td>No</td>
<td>USA</td>
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<tr>
<td>10</td>
<td>Union Investment Privatfonds GmbH*</td>
<td>85,443.44</td>
<td>5.16%</td>
<td>High</td>
<td>9.40%</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Active</td>
<td>GER</td>
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<td>11</td>
<td>Allianz Global Investors GmbH</td>
<td>80,227.49</td>
<td>1.46%</td>
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<td>5.20%</td>
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<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>GER</td>
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<tr>
<td>12</td>
<td>Harris Associates, L.P.</td>
<td>91,769.19</td>
<td>1.27%</td>
<td>Medium</td>
<td>3.80%</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>USA</td>
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<tr>
<td>13</td>
<td>Lyxor Asset Management SAS</td>
<td>42,140.19</td>
<td>1.06%</td>
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<td>8.20%</td>
<td>Yes</td>
<td>No</td>
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<td>Yes</td>
<td>No</td>
<td>FRA</td>
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<tr>
<td>14</td>
<td>Baillie Gifford &amp; Company</td>
<td>298,251.98</td>
<td>0.96%</td>
<td>High</td>
<td>5.80%</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>UK</td>
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<tr>
<td>15</td>
<td>Legal &amp; General Investment Management</td>
<td>300,830.14</td>
<td>0.94%</td>
<td>High</td>
<td>8.80%</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Passive</td>
<td>UK</td>
</tr>
</tbody>
</table>

### Orientation
- **Passive, 37.70%**
- **Active, 62.30%**

### Region
- **USA, 36.00%**
- **EU, 18.80%**
- **GER, 14.80%**
- **UK, 19.50%**
- **ROW, 1.18%**
- **APAC, 3.18%**
- **Scandi, 6.20%**

### ESG Sensitivity
- **Low, 10%**
- **Medium, 57.10%**
- **High, 33.80%**

### Rating Provider
- **MSCI, 28.00%**
- **Sustainalytics, 35.00%**
- **MSCI & Sustainalytics, 13.00%**
- **N/A, 13.00%**

Source: IHS Markit ESG Research, BDC, 2021, Morningstar, Refinitiv, Sustainalytics
“...Calsters invests in several activist funds...Last year, we started wondering if we could create change at companies by blending the tools available to traditional activists – not least replacing board directors when necessary – with our stewardship priorities, including on climate”

CALSTRS PENSION, 2021
...leading to record high engagement & stewardship action – Say on Climate

<table>
<thead>
<tr>
<th>Company Name</th>
<th>Country</th>
<th>Catalyst</th>
<th>Industry</th>
<th>Resolution Text</th>
<th>Resolution Detail</th>
<th>% Voted</th>
<th>% Voted</th>
<th>ISS</th>
<th>Glass Lewis</th>
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<tbody>
<tr>
<td>Aena SME SA</td>
<td>SPA</td>
<td>TCI</td>
<td>Infrastructure</td>
<td>Advisory Vote on Company's Climate Action Plan</td>
<td>Say on Climate</td>
<td>96%</td>
<td>4%</td>
<td>For</td>
<td>Against</td>
</tr>
<tr>
<td>BP PLC</td>
<td>UK</td>
<td>Follow This</td>
<td>Oil &amp; Gas</td>
<td>Approve Shareholder Resolution on Climate Change Targets</td>
<td>Climate Change Report</td>
<td>21%</td>
<td>79%</td>
<td>Against</td>
<td>Against</td>
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<tr>
<td>Ferrovial SA</td>
<td>SPA</td>
<td>TCI</td>
<td>Infrastructure</td>
<td>Advisory Vote on the Company’s Climate Strategy Report</td>
<td>Say on Climate</td>
<td>98%</td>
<td>2%</td>
<td>For</td>
<td>Against</td>
</tr>
<tr>
<td>Atos SE</td>
<td>FRA</td>
<td>Technology</td>
<td>Opinion on Company Ambition to Decarbonisation</td>
<td>Say on Climate</td>
<td>97%</td>
<td>3%</td>
<td>For</td>
<td>Abstain</td>
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<tr>
<td>Barclays PLC</td>
<td>UK</td>
<td>Market Forces</td>
<td>Financials</td>
<td>Approve Market Forces Requisitioned Resolution</td>
<td>Climate Change Report</td>
<td>14%</td>
<td>86%</td>
<td>Mixed</td>
<td>Against</td>
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<td>UK</td>
<td>Industrials</td>
<td>Advisory Vote on Climate Action Transition Plan</td>
<td>Say on Climate</td>
<td>94%</td>
<td>6%</td>
<td>For</td>
<td>For</td>
<td></td>
</tr>
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<td>Follow This</td>
<td>Oil &amp; Gas</td>
<td>Approve the Shell Energy Transition Strategy</td>
<td>Say on Climate</td>
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<td>12%</td>
<td>For</td>
<td>For</td>
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<td>Vinci SA</td>
<td>FRA</td>
<td>Construction</td>
<td>Approve Company’s Environmental Transition Plan</td>
<td>Say on Climate</td>
<td>98%</td>
<td>2%</td>
<td>For</td>
<td>For</td>
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<tr>
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<td>SWI</td>
<td>Consumer</td>
<td>Advisory Vote on Nestle’s climate roadmap</td>
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<td>97%</td>
<td>3%</td>
<td>For</td>
<td>Against</td>
<td></td>
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<tr>
<td>Unilever Plc</td>
<td>UK</td>
<td>Consumer</td>
<td>Advisory Vote on Climate Transition Plan</td>
<td>Say on Climate</td>
<td>99%</td>
<td>1%</td>
<td>For</td>
<td>For</td>
<td></td>
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<td>Aviva Plc</td>
<td>UK</td>
<td>Financials</td>
<td>Approve Climate Financial Related Disclosures</td>
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<td>0%</td>
<td>For</td>
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<td>Total SE</td>
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<td>Oil &amp; Gas</td>
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<td>&lt;10%</td>
<td>Mixed</td>
<td>For</td>
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<td>ShareAction</td>
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<td>Phase out the financing of coal-fired power and thermal coal</td>
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<td>For</td>
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<td>GER</td>
<td>Urgewald</td>
<td>Financials</td>
<td>Countermotion Discharge of Board (Climate-strategy failures)</td>
<td>Say on Climate</td>
<td>&gt;95%</td>
<td>&lt;5%</td>
<td>n.a</td>
<td>n.a</td>
</tr>
<tr>
<td>Equinor</td>
<td>NOR</td>
<td>Follow This</td>
<td>Oil &amp; Gas</td>
<td>Net Zero Strategy &amp; Scope 3</td>
<td>Say on Climate</td>
<td>39%</td>
<td>61%</td>
<td>For</td>
<td>Against</td>
</tr>
<tr>
<td>ExxonMobil</td>
<td>USA</td>
<td>Engine No.1</td>
<td>Oil &amp; Gas</td>
<td>Board Election</td>
<td>Say on Climate</td>
<td>n.a</td>
<td>n.a</td>
<td>For</td>
<td>For</td>
</tr>
<tr>
<td>Chevron</td>
<td>USA</td>
<td>Oil &amp; Gas</td>
<td>Net Zero Strategy &amp; Scope 3</td>
<td>Say on Climate</td>
<td>61%</td>
<td>39%</td>
<td>For</td>
<td>For</td>
<td></td>
</tr>
<tr>
<td>ConocoPhillips</td>
<td>USA</td>
<td>Follow This</td>
<td>Oil &amp; Gas</td>
<td>Net Zero Strategy &amp; Scope 3</td>
<td>Say on Climate</td>
<td>58%</td>
<td>42%</td>
<td>For</td>
<td>For</td>
</tr>
<tr>
<td>RioTinto</td>
<td>UK</td>
<td>Metals &amp; Mining</td>
<td>Emission Reduction &amp; Lobbying</td>
<td>Say on Climate</td>
<td>99%</td>
<td>1%</td>
<td>For</td>
<td>For</td>
<td></td>
</tr>
<tr>
<td>IBM</td>
<td>USA</td>
<td>Technology</td>
<td>Diversity, Equity, Inclusion</td>
<td>Social</td>
<td>Say on Climate</td>
<td>94%</td>
<td>6%</td>
<td>For</td>
<td>For</td>
</tr>
</tbody>
</table>

“We are members of the Net Zero Asset Manager initiative. We encourage companies to adopt Paris aligned strategies and targets in order to reduce their impact on the climate and manage the energy transition. XYZ lags behind global peers in this regard and is exposed to significant risks as a result. It is of critical importance that the company’s accounts and underlying assumptions reflect the anticipated impacts of the energy transition.”
Engagement, stewardship & activism on “climate action”

Exxon Mobil (AGM 26 May 2021)

“The Vanguard funds supported two dissident director nominees to join Exxon’s board. The funds also supported two shareholder proposals related to lobbying. We voted in support of two shareholder proposals, one calling for a report on lobbying payments and policies and the other for a climate lobbying report aligned with the Paris Agreement goals.”

The Vanguard Group

“We continue to be concerned about Exxon’s strategic direction and the anticipated impact on its long-term financial performance and competitiveness. In our view, the Board would benefit from the addition of diverse energy experience to augment existing skillsets. As a result, BIS supported three of the four directors nominated by Engine No. 1.”

The Blackrock Group

“It does not seem that Exxon has materially improved its disclosures on its indirect lobbying activities through trade associations despite the controversies related to Exxon’s lobbying activities and seemingly strong S/H support for more disclosure. These activities are significant: ExxonMobil belongs to the American Fuel amp; Petrochem Manufacturers, American Petroleum Institute, Business Roundtable, Chamber of Commerce, Consumer Energy Alliance, and National Association of Manufacturers, which altogether spent $122 M on lobbying for 2019.

Norges Bank Investment

“Despite Exxon’s recent recognition of climate change risk, there are lingering questions about the extent of its commitment in the area. Exxon continues to make “strategy decisions on what appear to be overly optimistic demand and technology assumptions, and does not provide shareholders with enough information to fully understand how prepared it actually is for an energy transition.”

ISS
The capital market spiral driving the ESG, climate & climate action dynamic

- **Engagement focus**
  - Active & passive investors are pressured to decarbonize and have to report on “change” by their asset owners

- **Ensuring strong climate plans**
  - CA100+ Net zero benchmark scores companies on short, medium & long term GHG reduction targets
  - Capital allocation targets in line with GHG targets
  - Remuneration plans to include climate change targets
  - TCFD aligned climate disclosures
  - Paris-agreement aligned lobbying position

- **Active Ownership, Stewardship & Voting**
  - Challenge the executive & supervisory boards on strategy, targets, “qualification” to tackle physical and transition risks
  - Transparency (data, targets, KPIs) and climate transition report e.g. for banks
    - Loan book and “financed emissions”
    - Emissions disclosure requirement for new/loans & underwriting
    - Policies on client decarbonization plans incl. escalation cycle
    - Report absolute emissions (1,2,3) and emissions intensity of financing
...And this will unlikely stop because...

**Market Pressure**

High scrutiny for non-compliance
- Asset managers are scrutinized in their approach in their fight for sustainability capital by asset owners, media and public
- Checks and balances what they “say” vs. “what they do” also with legal implications in several markets, especially driven by retirement and pension funds

**Evidence of Financial Materiality**

From non- to extra-financial
- Academic & industry studies indicate that ESG doesn’t negatively affect performance
- More signs for positive ESG correlation to:
  - Equity multiples,
  - Performance, Valuation, volatility, (re-)financing & reputational risk

**Regulation**

Unprecedented regulatory burden
- Regulation for both the companies but also investors and asset owners grew exponentially
- +1,700 climate related initiatives, directives and regulations globally, many of which cross-border (incl. China, EU, JPN, US)

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Source: IHS Markit, Schroders, MSCI, right.based.on.science, BAML, InfluenceMap 2020
“...Investors concerned about climate change and sustainability have never been better organized nor have they had more success”

The Economist, 2020

ESG & Climate Readiness
Assessing Paris Alignment: A complex web of organizations and methodologies

- Science Based Targets Initiative (SBTI)
  - General req’ts
  - O&G methodology (in progress)
  - Financials methodology (Oct 2020)
  - Other sectors

- CA100+
  - Net Zero Company Benchmark

- Transition Pathway Initiative (TPI)
  - General guidelines (June 2019)
  - O&G methodology (Oct 2020)

- TCFD

- CDP

- CT(I)

- IEA

- WBCSD / WRI

- IPCC (IMAC)

- CDSB

- LSE GRI

- NGFS

- PCAF

- CDP = Carbon Disclosure Project
- CT(I) = Carbon Tracker (Initiative)
- IEA = International Energy Agency
- WRI = World Resources Institute
- PCAF = Partnership for Carbon Accounting Financials
- TCFD = Task Force on Climate-related Financial Disclosures
- WBCSD = World Business Council for Sustainable Development
- CDSB = Climate Disclosure Standards Board
- IPCC = UN Intergovernmental Panel on Climate Change
- IMAC = Integrated Assessment Modelling Consortium
- GRI = Global Reporting Initiative
- LSE GRI = London School of Economics Grantham Research Inst.
- NGFS = Network for Greening the Financial System
- CA100+ = Climate Action 100+

*Source & Copyright: IHS Markit, example featuring organizational web regarding Paris alignment, TCFD, SBTI, decarbonization with focus on energy sector, 2021
... and learn how the capital market ESG ecosystem evaluates you...
..and what specific ESG integration your investors use to become more sustainable....

<table>
<thead>
<tr>
<th>Motivation</th>
<th>Avoid</th>
<th>Advance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Approach</strong></td>
<td><strong>Screening</strong></td>
<td><strong>ESG</strong></td>
</tr>
<tr>
<td><strong>Strategy</strong></td>
<td>Excludes objectionable companies or industries</td>
<td>Investments based on E,S,G or SDG integration</td>
</tr>
<tr>
<td><strong>Integration</strong></td>
<td>Respective impact of screen (often ratings)</td>
<td>Broad vs. specific exposures (e.g. water)</td>
</tr>
<tr>
<td><strong>Examples</strong></td>
<td>• Customized to asset owner demand, e.g.</td>
<td>Strategies that capitalize from long-term trends:</td>
</tr>
<tr>
<td></td>
<td>• Controversial weapon</td>
<td>• Green Revenues</td>
</tr>
<tr>
<td></td>
<td>• Tobacco</td>
<td>• Transition status</td>
</tr>
<tr>
<td></td>
<td>• Thermal Coal</td>
<td>• Clean Energy</td>
</tr>
<tr>
<td></td>
<td>• UNGC violations</td>
<td>• Green Technology</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Diversity &amp; Inclusion</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Governance</td>
</tr>
</tbody>
</table>
...and the ESG DNA of your institutional investors

- **Monitoring vs making an impact:** AGI differentiates between normal research and monitoring meetings undertaken as an active manager, and instances where AGI actively seeks to hold boards and management accountable or make an impact. The latter are classified and reported as engagement meetings. The team’s key focus areas in the past year are on the DNA chart (further details on next slide).

- **Transparency:** Allianz Group believes in increased transparency on sustainability matters and, at the start of 2021, it committed to using the World Economic Forum Stakeholder Capitalism Metrics.

- **Low-carbon transition:** Allianz Group has committed to reaching net-zero greenhouse gas emissions in its proprietary investment portfolio by 2050. It collaborates with other asset owners through the U.N.-convened Net-Zero Asset Owner Alliance (AOA) to support companies in their low-carbon transition by advocating for ambitious decarbonisation strategies and financing.

- **First intermediate net-zero target:** Allianz Group aims to reduce its greenhouse gas emissions in listed equities and corporate bonds by 25% by 2025 compared to the 2019 level. All of its real estate investments will be in line with scientifically based 1.5-degree pathways in terms of total emissions by 2025.

- **Renewable power:** through the RE100 initiative, Allianz Group has committed to minimising the environmental impacts of its business operations and working towards sourcing 100% renewable power for its group-wide operations by 2023.

- **Human rights:** in the German context, Allianz adheres to the National Action Plan for Business and Human Rights which is based on the U.N. Guiding Principles on Business and Human Rights. If an issuer in its listed investment portfolio is flagged for human rights issues by its external ESG data provider, AGI prioritises this issuer for a systematic engagement.

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"Net-Zero Asset Owner Alliance members must enhance their investment process such that all decision-making reflects emission effects. This way we start out by truly changing ourselves and then work with other companies to achieve change and real world impact."

Günther Thallinger, ESG Board Chair, Allianz SE & U.N. Net-Zero Asset Owner Alliance
…so that you can define your ESG profile accordingly

**ESG Integration Strategy Examples**

**DWS’s responsible investing process: The ESG Engine**

DWS developed a proprietary software system called “ESG Engine” in direct response to growing data and analytic expertise in the sphere of responsible investing. It combines the different perspectives and approaches of seven leading external data providers, it has become the centerpiece of DWS commitment to integrating ESG into their investment process for all liquid assets across Active, Passive and Alternatives.

1. Fully integrated – the signals from the ESG Engine are available to the entire platform and comprehensively considered when making investment decisions.
2. 360° view – draws on the expertise of seven leading external providers of ESG data (ISS ESG, MSCI, ISS ESG, RepRisk, Sustainalytics, and Trucost).
3. Multi-faceted analysis – covers ethical concerns as well as risk and opportunities.
4. Exclusion screening – rules out companies associated with activities that do not meet specific ESG criteria.
6. Corporate best-in-class rating – our so-called “SynRating” ranks corporations against their peers and identifies the true leaders and laggards of ESG.
7. Climate impact profiling – provides expert evaluation of numerous environmental factors, including carbon footprint, use of fossil fuels, carbon ratings and use of natural resources.
8. Sovereign norms-based screening – benefits from high flexibility to use similar screening approaches to gauge what would be responsible investments in around 200 sovereign nations.
9. Sovereign best-in-class rating – identifies nations leading in ESG and introduces a deliberate focus on societal freedom.
10. UN Sustainable Development Goals (SDGs) – identity corporations whose products and services contribute to a better world.
11. ESG of portfolios, funds, indices and ETFs – Our ESG Fund Rating methodology identifies true ESG funds.
Dare to data! Key metrics for board members to review & communicate with…

<table>
<thead>
<tr>
<th>Economic Metrics</th>
<th>Energy Use Metrics</th>
<th>Social License to Operate I: Metrics</th>
<th>Social License to Operate II: Safety, Spills, Waste, Water</th>
<th>Diversity &amp; Governance Metrics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply chain: Supplier spend ($bn)</td>
<td>Production Energy Intensity (Gj/boe)</td>
<td>Volume of Flared Vented hydrocarbons (mmcf); Cogen capacity</td>
<td>Safety: Fatalities, Recordable incident rate, Lost time incident rate, Illness rate, hours worked, Safety data sheets</td>
<td>Female Employees</td>
</tr>
<tr>
<td>Total social investment ($ mm/$bn)</td>
<td>Operated direct energy use (‘000 Gj)</td>
<td>Scope 1, Scope 2, Scope 3 ...operated direct by hydrocarbons / source, operated indirect (mmtionnes CO₂e, %)</td>
<td>Spills: Hydrocarbon &amp; non-hydrocarbon spills; E&amp;P Discharges</td>
<td>Minority Employees</td>
</tr>
<tr>
<td>Nitrogen Oxide (NOx ) taxes</td>
<td>Operated indirect energy use (‘000 Gj)</td>
<td>Operated / Equity GHG emissions intensity</td>
<td>Waste: Solid &amp; liquid, hazardous and non-hazardous waste</td>
<td>%International workforce</td>
</tr>
<tr>
<td>Environmental Reserve ($mm)</td>
<td>Net purchased electricity by primary energy source (‘000 MWh)</td>
<td>Air Emissions...SO₂ intensity, NOX intensity, VOC, VOC intensity</td>
<td>Water: Groundwater, Municipal water, Surface water, Total freshwater, % Reused/recycled</td>
<td>Independent Board Members</td>
</tr>
<tr>
<td>Environmental fines &amp; penalties – operated ($ mm)</td>
<td>Green e-certified renewable energy certificates (‘000 MWh)</td>
<td></td>
<td></td>
<td>Female Board Members</td>
</tr>
<tr>
<td>Environmental expenditures – remediation ($mm)</td>
<td></td>
<td></td>
<td></td>
<td>Minority Board Members</td>
</tr>
</tbody>
</table>

**Diversity & Governance Metrics**

- Female Employees
- Minority Employees
- %International workforce
- Independent Board Members
- Female Board Members
- Minority Board Members
- International / Age Diversity of Board
- ESG-linked Compensation
- EITI country presence
What we recommend....

1. Take control
   - Take control of your own ESG story and drive it
   - Internally and externally
   - Do not chase rating improvement or index inclusion

2. Dare to data
   - Data is the biggest driver for capital allocation
   - Transparency, disclosure, reporting, intelligence is key for all parties

3. Do not assume
   - ESG is big. Probably the biggest megatrend we are facing. But it is also a blackbox, so even some of the portfolio managers and analysts will not know what is running in the background, let alone converse with your CEO about it
   - Just because people are not talking about you, or raise concerns, doesn’t mean they are not there.
   - It is a risk, but it is also a huge opportunity for you in investor relations

4. Investment
   - Know the material drivers for your company, as they chance and are very dynamic
   - Climate change, climate risk
   - Diversity, equity & inclusion
   - Biodiversity

5. Governance
   - Governance is how you feel it
   - Remuneration incl. ESG KPI’s
   - Board diversity
   - Engagement (board & management). Do you still split your ESG story out in your presentation decks?
About IHS Markit
ESG Advisory Capabilities for IR, Board & Executives

Phase 1: Analysis

- Diagnostics
  - Disclosure Benchmarking & Gap Analysis (1,2)
  - Industry & Sector Analysis
  - Forward-looking Materiality Assessment
  - ESG DNA Top Holders
  - ESG Ownership Benchmarking & Analytics (3,5)
  - Perception Analysis
  - ETF ESG Analysis
  - Board/IR/Ex Strategy Program (4)

Phase 2: Implementation

- Design
  - ESG Data Kit Design & Messaging
  - Climate Scenario Analysis
  - AGM / Agenda Risk Analysis (ESG, Rem, Climate)
  - ESG Supply Chain & Schema

- ESG Market Engagement & Alignment (Pay, Climate, KPI) (3,5)

Phase 3: Institutionalize

- Execution
  - AGM Engagement
  - Strategic Review
  - Proxy Solicitation
  - ESG Targeting
  - AGM Engagement
  - Strategic Review
  - Proxy Solicitation
  - ESG Targeting

- Recommendations

- BDC ESG
- SID /GMI
- ESG Ownership Benchmarking & Analytics (3,5)
- Perception Analysis
- ETF ESG Analysis
- Board/IR/Ex Strategy Program (4)
- Climate Scenario Analysis
- AGM / Agenda Risk Analysis (ESG, Rem, Climate)
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- ESG Market Engagement & Alignment (Pay, Climate, KPI) (3,5)
- AGM Engagement
- Strategic Review
- Proxy Solicitation
- ESG Targeting
- AGM Engagement
- Strategic Review
- Proxy Solicitation
- ESG Targeting
- Recommendations

- Vulnerability Assessment (2,3,5,7)
Our ESG strategy is focused on 5 key product families
Our Data Driven Approach & Resources for ESG & Sustainable Finance

**Climate Risk Model**
A capability to structure, measure & model liabilities for portfolios & investment vehicles that are increasingly required to calculate future scenarios.

**Environmental Credits**
We provide a global carbon & water credit registry & primary auction platform for national & regional governments.

**Emissions Research**
Understanding the impact of emissions on 115 countries and creating accurate scope 1, 2 & 3 analysis for key industries.

**Deep Green Industrial Research**
Deep technical, product & operationally focused ESG research for key industries. This includes transition pathway analysis and facilities ownership/geo location data.

**ESG Data Model Design**
Open framework that enables users to design, implement & maintain their own unique ESG schema to help develop commercial advantage.

**ESG Data Platform**
Multi user platform containing 14 leading ESG frameworks mapped & cross referenced with the ability to host custom ESG schemas & data in an analytics enabled environment.

**ESG Regulatory Solutions**
EU SFDR model enabled versus IHS Markit ESG schema & cross referenced to other NGO frameworks or bespoke client schemas.

**ESG Company & Country Data**
Company & Country ESG across 211 countries, 41 country subthemes & metrics/country. 22 sub themes & metrics per company as well as Emissions data, & Green Revenues¹ metrics all with underlying data exposed.

**ESG and Sustainable Finance Solutions**

**Strategic ESG Advisory**
Strategic advisory for issuers covering ESG strategy, disclosure & reporting, communication & capital markets engagement.

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We provide a global carbon & water credit registry & primary auction platform for national & regional governments.

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Two rectangles:
- 1. Green Revenues and underlying data wef Jan 2022
- 2. Agriculture
- 3. Automotive
- 4. Chemicals
- 5. Energy
- 6. Maritime-Trade
### ESG, Climate & Sustainability

- **Andreas Posavac, Executive Director**
  - Andreas is responsible for IHS Markit’s M&A, ESG and Governance Advisory Group. He is responsible for the overall strategy of the group, with a focus on advisory services for corporates and their executive teams, IR and sustainability.

- **Sabrina Zhang, Director**
  - Sabrina leads our APAC ESG advisory business and helps companies with climate and ESG strategic consulting projects. She built CDP’s China business and has experience at MSCI.

- **Kevin Bourne, Managing Director**
  - Kevin leads our Sustainable Finance team and is focused on building our ESG, Climate and ESG data infrastructure. He has experience building data models, schema’s and scores for the LSE and previously worked with HSBC, London Stock Exchange, FTSE as well as Citi in ESG & Sustainability executive roles.

- **Susan Farrell, Vice President**
  - Susan is a Vice President with the Climate & Sustainability team at IHS Markit. She is a specialist in scenario planning and low carbon energy transitions. Her principal expertise lies in the analysis of different outcomes and net-zero targets to inform strategy and investments.

### ESG & Governance Advisory

- **Christine Chow, Executive Director**
  - Christine is responsible for IHS Markit’s Global Corporate Governance Advisory and ESG Integration. She has 24 years investment management, research & consulting experience, with a focus on ESG, technology and sustainability.

- **Angelika Horstmeier, Director**
  - Angelika is responsible for IHS Markit’s EMEA Governance Advisory Group. She leads our European governance advisory business with a strategic focus on governance and ESG best practice. She joined from D.F.King.

- **Reza Eftekhari, Director**
  - Reza leads IHS Markit’s Activism Defence and M&A team in Europe, with special focus on the UK market. Reza is closely looking at ESG and Climate related engagement and its influence on transactions and activism. Reza joined from Morrow Sodali, Georgeson & D.F. King.

- **Benoit Belliat, Associate Director**
  - Benoit joined IHS Markit from ISS Governance Research and leads the special team focused on proxy advisors, remuneration analytics and board evaluations. He is a remuneration expert and focuses on governance and ESG related best practice, with focus on say-on-pay and purpose.

- **Yura Ahn, Senior Associate**
  - Yura is a Senior Associate in our APAC ESG and Corporate Governance advisory group, with a focus on Korean issuers. Her focus is on ESG and Corporate Governance Research as well as shareholder advisory on engagement and AGM preparation. She joined from KGGS.

### ESG & Governance Advisory

- **Greg Wallace, Executive Director**
  - Greg leads our sustainable finance research practice and is a quantitative expert, modelling our ESG data products, including our ESG scores and ESG reporting repository on a company, sovereign and fund level.

- **Kazuhiko Tahara, Director**
  - Kazuhiko is in charge of our Japan ESG advisory solutions, advising Japanese corporates on ESG, Governance and Activism risks and best practice disclosure and engagement. He joined from Daiwa Asset Management.

- **Cherry Chu, Senior Associate**
  - Cherry is a Senior Associate in our APAC ESG and Corporate Governance advisory group. She focuses ESG profiling, targeting & analytics as well as ESG research & newsflow analysis.

### ESG Market Intelligence

- **Qian Chen, Executive Director**
  - Qian leads our market perception and sentiment research group, assessing market sentiment and vulnerability status for +500 corporates. The group conducts materiality assessment and ESG / Sustainability focus studies.

- **Martin Raitlton, Director**
  - Martin runs the market intelligence advisory desks, leading the surveillance, tracking, profiling and capital insights portfolio. His team focuses ESG profiling, targeting & analytics as well as ESG research & newsflow analysis.

- **Soffia Alarcon, Director**
  - Soffia is a climate change expert with 12+ years of experience helping governments and businesses mobilize climate finance, adopt low carbon technologies, account their GHG emissions and reductions and therefore become more resource efficient to drive global economic decarbonization.

- **Christopher Stroh, Director**
  - Chris leads the special situations group, with a quantitative and fundamental approach to understanding investor sensitivities, shareholder behaviour with a focus on research, ESG sensitivity as well as mergers, transactions and complex situations.
IHS Markit’s ESG Advisory Teams – Resources & Thought Leadership