기후행동 컨퍼런스 2018

CLIMATE ACTION CONFERENCE 2018

[발표자료집]
Presentation II

What does TCFD mean for Korean Companies to be sustainable?

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What does TCFD mean for Korean Companies?

October 10, 2018
New Demand for Carbon by

- Government: Carbon Pricing, 58%
- NGO: RE100
- Investor: Stranded Assets, $2.2B
New Demand for Carbon by

- Government: Carbon Pricing, 58%
- NGO: RE100
- Investor: Stranded Assets, $2.2B
ING to assess $600bn loan portfolio based on climate impact

Dutch lender becomes first big bank to adopt policy pressing clients to meet Paris goals

Last month...

ING, the Dutch bank, will start assessing its $600bn lending portfolio based on climate impact, a first step in shifting the entire portfolio to align with the emissions reductions required by the Paris climate agreement.

The policy, the first of its kind for a big bank, will include putting pressure on clients whose businesses do not conform with the climate goals of the agreement.

“We will try to look at the entire portfolio and make sure that over time it aligns with Paris,” Isabel Fernandez, head of wholesale banking, said.

Source: Financial Times, Sep 17, 2018

GEPS, First Korean Pension Funds to Join CDP

* CDP runs the global disclosure system for investors to manage their environmental impacts.

Source: Joongang Daily, Sep 17, 2018
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I. TCFD?
II. Financial Impact
III. Suggestions
I. TCFD?
Background & Mission

Following a request from G20 Finance Ministers and Central Bank Governors, in December 2015, the Financial Stability Board established the Task Force on Climate-related Financial Disclosures ("TCFD") to

- Promote more informed investment, credit, and insurance underwriting decisions; and
- Enable stakeholders to understand better the concentrations of carbon-related assets in the financial sector and the financial system’s exposures to climate-related risks.

“Increasing transparency makes markets more efficient, and economics more stable and resilient.”

– Michael R. Bloomberg, Chair

- Recognizing impacts of climate change on finance, the Bank of Korea published an article on June 28, 2018, which analyzed physical and transition risks associated with climate change.
Focus on Financial Impacts

Transition Risks
- Policy and Legal
- Technology
- Market
- Reputation

Physical Risks
- Acute
- Chronic

Opportunities
- Resource Efficiency
- Energy Source
- Products/Services
- Markets
- Resilience

Risks
- Strategic Planning Risk Management
- Financial Impact

Opportunities
- Resource Efficiency
- Energy Source
- Products/Services
- Markets
- Resilience

Income Statement
- Cash Flow Statement
- Balance Sheet

Revenues
- Expenditures

Assets & Liabilities
- Capital & Financing
Disclosure Recommendations

**Governance**
The organization’s governance around climate-related risks and opportunities (e.g., whether the Board of Directors is directly involved)

**Strategy**
The actual and potential impacts of climate-related risks and opportunities on the organization’s businesses, strategy, and financial planning (e.g., how this assessment is incorporated into existing business strategies)

**Risk Management**
The processes used by the organization to identify, assess, and manage climate-related risks (e.g., whether proper processes are established)

**Metrics and Targets**
The metrics and targets used to assess and manage relevant climate-related risks and opportunities (e.g., whether such metrics and targets are influential)
Knowledge Hub (https://www.tcfdhub.org)

TCFD Knowledge Hub
Find the resources you need to understand and implement the TCFD recommendations.

Start searching for resources below, or click here to learn about the TCFD recommendations. You can also click on the four themes below for more detail on the recommendations.

Governance
Disclose the organization's governance around climate-related risks and opportunities.

Strategy
Disclose the actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning where such information is material.

Risk Management
Disclose how the organization identifies, assesses, and manages climate-related risks.

Metrics & Targets
Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material.
Knowledge Hub (for all sectors)

Guidance for All Sectors

Organizations should provide the following information:

- a description of what they consider to be the relevant short, medium, and long-term time horizons (taking into consideration the useful life of the organization's assets or infrastructure) and the fact that climate-related issues often manifest themselves over the medium and longer terms;
- a description of the specific climate-related issues for each time horizon (short, medium, and long-term) that could have a material financial impact on the organization;
- a description of the processes (and/or the procedures) used to determine which risks and opportunities could have a material financial impact on the organization;

Organizations should also consider providing a description of their risks and opportunities by sector and/or geography, as appropriate. In describing climate-related issues, organizations should refer to Tables 1 and 2.

A) Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term.

B) Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning.

C) Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.

Building on recommended disclosure (A), organizations should discuss how identified climate-related issues have affected their businesses, strategy, and financial planning.

Organizations should consider including the impact on their businesses and strategy in the following areas:

- Products and services
- Supply chain and/or value chain
- Aesthetics and market strategies
- Investment in research and development
- Operations (including types of operations and location of facilities)

Organizations should describe how climate-related issues serve as an input to their financial planning process, the time periods used, and how these risks and opportunities are prioritized.

Organizations' disclosures should reflect a holistic picture of the interdependencies among the factors that affect their ability to create value over time. Organizations should also consider including in their disclosures the impact on financial planning in the following areas:

- Operating costs and revenues
- Capital expenditures and capital allocation
- Acquisitions or investments
- Access to capital

If climate-related scenarios were used to inform the organization's strategy and financial planning, such scenarios should be described.

Organizations should describe how resilient their strategies are to climate-related risks and opportunities, taking into consideration a transition to a low-carbon economy (consistent with a 2°C or lower scenario) and where relevant to the organization, scenarios consistent with increased physical climate-related risks.

Organizations should consider discussing:

- whether the organization believes that their strategies may be affected by climate-related risks and opportunities;
- how their strategies might change to address such potential risks and opportunities; and
- the climate-related scenarios and associated time horizons considered.

Refer to Section D of the Final Report for information on applying scenarios to forward-looking analysis.

Kim & Chang
Knowledge Hub (for a sector)

A) Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term.

B) Describe the impact of climate-related risks and opportunities on the organization’s businesses, strategy, and financial planning.

C) Describe the resilience of the organization’s strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.

For Banks:
Banks should describe significant concentrations of credit exposure to carbon-related assets. Additionally, banks should consider disclosing their climate-related risks (transition and physical) in their lending and other financial intermediary business activities.

For Non-Financial Groups:
Organizations should consider discussing how climate-related risks and opportunities are integrated into their (1) current decision making and (2) strategy formulation, including planning assumptions and objectives around climate change mitigation, adaptation, or opportunities.
TCFD Knowledge Hub (Archive)

Case Studies
Search through the case studies to learn more about how organizations are using the TCFD recommendations.

- AP2’s climate report based on TCFD’s recommendations – The Second Swedish National Pension Fund (G, S, R, M)
- Collaborating and communicating climate risk – Landsec (S)
- Reporting on 2 and 4 degree scenarios analysis – Unilever (S, R)
While climate change affects nearly all economic sectors, the level of exposure and the impact of climate-related risks differ by sector, industry, geography, and organization.

Furthermore, the financial impacts of climate-related issues on each business are not always clear because of

- Limited knowledge of climate-related issues within business;
- Tendency to focus mainly on short-term risks without paying adequate attention to risks that may arise in a long term; and
- Difficulties in quantifying climate-related risks.

✓ In Korea, all climate-related tasks are generally done by a designated team within company. Also, the issues are rarely reflected to corporate strategy.
Actual Application - Auto

BMW, Daimler and Toyota named as most climate-friendly car manufacturers

Bubble size: Larger bubble size = stronger performance on climate governance & strategy

Source: Independent, 2018
II. Financial Impact
## Financial Impact by TCFD’s sector criteria

<table>
<thead>
<tr>
<th>Sector</th>
<th>Energy</th>
<th>Transportation</th>
<th>Materials &amp; Buildings</th>
<th>Agriculture, Food &amp; Forest Products</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industries</td>
<td>• Oil &amp; gas</td>
<td>• Air freight</td>
<td>• Metals &amp; mining</td>
<td>• Beverages</td>
</tr>
<tr>
<td></td>
<td>• Coal</td>
<td>• Passenger air transportation</td>
<td>• Chemicals</td>
<td>• Agriculture</td>
</tr>
<tr>
<td></td>
<td>• Electric utilities</td>
<td>• Maritime transportation</td>
<td>• Construction materials</td>
<td>• Packaged foods &amp; meats</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Rail transportation</td>
<td>• Capital goods</td>
<td>• Paper &amp; forest products</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Trucking services</td>
<td>• Real estate management &amp; development</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Automobiles &amp; components</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No. of affected</td>
<td>53</td>
<td>162</td>
<td>344</td>
<td>74</td>
</tr>
<tr>
<td>companies/businesses</td>
<td>(whose financial information is available via search system)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Total cost of emissions</td>
<td>KRW 1,354.3 billion</td>
<td>KRW 97.8 billion</td>
<td>KRW 1,308.2 billion</td>
<td>KRW 50.3 billion</td>
</tr>
<tr>
<td>reduction (20%)*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ratio of emissions reduction</td>
<td>3.2%</td>
<td>0.1%</td>
<td>0.8%</td>
<td>0.3%</td>
</tr>
<tr>
<td>cost to sales</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average cost of emissions</td>
<td>KRW 25.6 billion</td>
<td>KRW 0.6 billion</td>
<td>KRW 3.8 billion</td>
<td>KRW 0.7 billion</td>
</tr>
<tr>
<td>reduction by company</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expected reduction in</td>
<td>KRW 120-260 billion</td>
<td>KRW 10 billion or less</td>
<td>KRW 19-39 billion</td>
<td>KRW 10 billion or less</td>
</tr>
<tr>
<td>corporate value per company</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effect on operating margin</td>
<td>9.0% (\rightarrow) 5.8% ((-35.3%))</td>
<td>4.6% (\rightarrow) 4.5% ((-2.7%))</td>
<td>4.3% (\rightarrow) 3.5% ((-19.4%))</td>
<td>4.8% (\rightarrow) 4.4% ((-6.8%))</td>
</tr>
<tr>
<td>(reduction rate)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Reduction in permitted carbon emissions is expected to greatly affect the energy sector and materials & buildings sector.
# Disclosure Regulations

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Whether compulsory</td>
<td>Voluntary disclosure</td>
<td>Compulsory</td>
<td>Compulsory</td>
<td>Compulsory</td>
</tr>
<tr>
<td>Companies subject to disclosure</td>
<td>Companies listed on the securities market</td>
<td>Among companies required to submit annual business reports, companies subject to management under the Framework Act on Low Carbon, Green Growth, companies certified for green technology/industry and green companies under the Environmental Technology and Industry Support Act</td>
<td>Green companies under the Environmental Technology and Industry Support Act, public institutions prescribed by Presidential Decree and companies having significant environmental effects</td>
<td>Companies subject to management under the Framework Act on Low Carbon, Green Growth</td>
</tr>
<tr>
<td>Matters to be disclosed</td>
<td>Matter related to information on green management</td>
<td>Matters regarding designation and removal of companies subject to management, matters regarding GHG emissions and energy use, certified matters regarding green technology/industry, and matters regarding designation of green companies</td>
<td>1. Goals and major action plans for environment protection, resource saving, pollutant emissions reduction, etc. 2. Matters regarding development and utilization of products/services for environmental management 3. Matters regarding results of environmental management 4. Matters regarding green management under Article 2(7) of the Framework Act on Low Carbon, Green Growth</td>
<td>GHG emissions status, energy use, etc.</td>
</tr>
<tr>
<td>Disclosure via</td>
<td>DART, securities information terminal and securities market magazines</td>
<td>Annual business report (DART)</td>
<td>Environmental information disclosure and verification system</td>
<td>Website of relevant authority for each sector or the central integrated GHG information management system</td>
</tr>
<tr>
<td>Limits</td>
<td>Only few cases of disclosure as disclosure is voluntary; not applicable to unlisted companies</td>
<td>Difficult to estimate risks for companies simply based on GHG emissions information.</td>
<td>Disclosure media are not well known to general users of disclosed financial information (shareholders, creditors, regulatory authorities, etc.). Difficult to convert into monetary value</td>
<td></td>
</tr>
</tbody>
</table>

Kim & Chang
## Gap analysis - TCFD Recommendation vs. the Best Case in Korea

<table>
<thead>
<tr>
<th>GSRM</th>
<th>TCFD Recommendations</th>
<th>Best Case in Korea</th>
<th>Considerations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Governance</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• a. Describe the board’s oversight</td>
<td>-</td>
<td>-</td>
<td>• The board’s responsibilities should be specified</td>
</tr>
<tr>
<td>• b. Describe management’s role in assessing and managing risks and opportunities.</td>
<td>Company-wide energy committee</td>
<td>Environmental management committee</td>
<td>• Internal reporting lines must be established.</td>
</tr>
<tr>
<td><strong>Strategy</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• a. Describe risks and opportunities identified over the short, medium, and long term.</td>
<td>Review of short-term financial/product manufacture risks and expand business portfolio through medium/long term R&amp;D</td>
<td>-</td>
<td>• Need medium-long term strategic approach</td>
</tr>
<tr>
<td>• b. Describe the impacts on the businesses, strategy, and financial planning.</td>
<td>Establishment of counterstrategies in relation to carbon credits</td>
<td>Energy &amp; environment business office established management counterstrategies against climate change.</td>
<td>• Need to establish detailed scenarios and review financial modeling methods, etc</td>
</tr>
<tr>
<td>• c. Describe the organization’s resilience</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td><strong>Risk Management</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• a. Describe processes for identifying and assessing climate-related risks.</td>
<td>Operation of internal systems such as continuous monitoring</td>
<td>-</td>
<td>• Need risk management system reflecting climate change in the medium/long term</td>
</tr>
<tr>
<td>• b. Describe processes for managing climate-related risks.</td>
<td>Explanation of the organization’s process by dividing it into visions, goals, missions, key challenges and relevant fields</td>
<td>Identify risks and opportunities : report to environmental and company-wide management committees</td>
<td>• Need to review modifying the organization’s structure</td>
</tr>
<tr>
<td>• c. Describe how above processes are integrated into the overall risk management.</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td><strong>Metrics &amp; Targets</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Disclose the metrics used to assess climate-related risks and opportunities</td>
<td>Establish target of reducing GHG by 23% from BAU by 2020</td>
<td>Continuously manage CO2 emissions per ton of products</td>
<td>• Need to secure in advance expertise to assess feasibility and appropriateness of the metrics</td>
</tr>
<tr>
<td>• b. Disclose Scope 1, Scope 2 (and Scope 3 GHG emissions) and related risks.</td>
<td>Disclose</td>
<td>-</td>
<td>• Need for a new compensation system for assessment of climate-related performance</td>
</tr>
<tr>
<td>• C. Describe the targets used and performance against targets.</td>
<td>Establish target of reducing GHG by 23% from BAU by 2020</td>
<td>Establish target of reducing GHG per ton generated from factories by 9% compared to 2007-2009 average by 2020</td>
<td>-</td>
</tr>
</tbody>
</table>
III. Suggestions
Takeaways (1/2)

- **As the demand** for financial institutions and companies to disclose their counterstrategies against climate change is becoming **more specific and urgent**, financial institutions and companies need to set priorities differently from the past.

- While the recommendations from the global gurus of **TCFD under G20 must be used** as a foundation for financial institutions and companies to establish countermeasures, they **must be customized depending on country/industry/organization**.

- Korea is the second country to introduce the **emission trading scheme**, and it is expected **to cause decrease in operating profit and corporate value** of all covered Korean companies in a greater or less degree.

- **As environment-related disclosures in Korea are mostly voluntary**, neither the disclosed information nor the number of companies making disclosure is **sufficient**. Information disclosed in sustainability reports is **not standardized** and therefore does not serve as an objective standard to assess risks and opportunities.

- In Korean financial institutions or companies, countermeasures against climate change are either **only handled by a single department or neglected by the board** even though they should be an organization-wide issue.
Therefore, each organization needs to take following measures:

- **Establish governance, strategies, risk management and targets** not limited to one-time projects but covering a longer term based on the recommendations/methods of TCFD.
- Establish an internal countermeasure process engaging the entire organization rather than a single department.
- Improve discussions by specifying R&R of the board and management, and divide R&R by internal working-level department.
- Secure a continuous management system by connecting achievements to a proper compensation system.
- Provide consistent training to employers/employees to improve their awareness of climate change including changes in external environments/demands of interested parties.
- **Disclose relevant achievements** through sustainability reports and other various global initiatives as part of shareholder engagement.
- Implement the foregoing after customizing them based on the organization’s own status.
Thank you