Adapting to Climate Change: A Guide for the Financial Services Industry

Tiffany Finley, Associate, Advisory Services
Ryan Schuchard, Manager, Climate and Energy

This guide is part of a BSR industry series. For additional climate adaptation briefs, please visit www.bsr.org/adaptation.

Contents and Methodology

This brief covers:

Reporting on Risks and Opportunities: A synopsis based on reporting of climate risk in 2009 by 163 financial services companies to the Carbon Disclosure Project (CDP).

Current Practices: An outline of actions related to climate change adaptation based on reporting from the CDP, interviews, and other publications.

Emerging Practices: Synthesis of company disclosures, literature, reviews, and input from climate change professionals through interviews.

This primer on climate change adaptation summarizes how companies in the financial services (FS) industry are reporting on climate change risks and opportunities, and highlights current and emerging best practices and guidance for FS companies on how to develop a proactive approach to climate change adaptation.

This brief aims to provide a general overview and recommendations that can be applied across various subsectors within the FS industry, including banking, insurance, and asset management.

Introduction

The increasing physical impacts of climate change, bringing warmer temperatures, increased water scarcity, and more frequent and severe weather events,[1] pose immediate and long-term threats that will ripple throughout the FS sector's operations as well as the investments made on behalf of FS clients. The sector plays a critical role in enabling adaptation efforts, which can provide it with opportunities for new services and innovative partnerships. Yet without an accurate understanding of the risks, protecting assets and making strategic investments will become increasingly difficult.

Public responses in 2009 from FS companies to the Carbon Disclosure Project indicate that knowledge levels of climate change's risks are highly varied, and integrating these risks into decision-making is uncommon. Furthermore, examples of strategic investments, partnerships, and new product offerings to meet the needs of a changing world are limited. Even more concerning is divestment in assets seen as vulnerable to uncertain future climate events, which has the potential to be detrimental to communities and people if it becomes a larger trend.

Therefore, proactive and responsible adaptation should concern the financial services sector for the following reasons:

» The physical risks of climate change, and their consequences, pose immediate and long-term threats to operations. For instance, increasing blackouts due to temperature changes and severe weather could result in loss of critical data and disruptions to client services.

» Company and client investments require risk screening that includes climate change on a localized level, as it can differ significantly by geography and sector. It should be complemented with opportunity screening, particularly in markets previously classified only as high risk.

[1] Intergovernmental Panel on Climate Change, "Climate Change 2007 Impacts, Adaptation, and Vulnerability," Cambridge University Press, 2007. http://www.ipcc.ch/publications_and_data/publications_ipcc_fourth_assessment_report_wg2_report_impacts_adaptation_and_vulnerability.htm

Mitigation refers to actions taken to reduce greenhouse gas emissions, which are primarily driven by energy use.

Adaptation refers to activities that reduce harm or risk of harm, or realize benefits associated with climate variability and climate change.

» FS companies have a distinct opportunity to not only provide desired solutions to climate change issues, but also incentives and strategic funding for adaptation measures. New areas for insurance coverage such as rainfall insurance in India, where there is a strong fear of drought, and weather derivatives and climate information products are a few among many new opportunities.[2]

Our analysis shows that while there is a growing understanding of climate-related risks, there are far fewer examples of investments in actions to adapt to these risks, resulting in many opportunities for leadership. Financial services' unique position as an enabler of adaptation furthers the importance of the sector's active management of climate change through financing mechanisms. Based on company-reported risks, opportunities, and actions, this brief will help FS companies identify material climate risks and opportunities, and develop practical approaches for climate-change preparation.

Reporting on Risks and Opportunities

Carbon Disclosure Project Highlight: Of 163 disclosures from financial services companies in 2009, 55 percent indicated that climate change represents physical risk to the company, and 52 percent responded that physical impacts of climate change present opportunity.

Source: BSR Analysis

Key:
Risks
Opportunities

The following is an analysis of FS sector disclosures in 2009 regarding climate change risks and opportunities to the Carbon Disclosure Project (CDP), one of the largest repositories of company reporting on climate change.[3] Our review of company responses revealed common trends in reported risks and opportunities, which are grouped and summarized in the three areas below, and accompanied by examples of companies that provided those responses.

Note that while company names are provided as examples, they do not constitute a comprehensive list of all companies that provided similar responses.

1. DISRUPTION TO OWNED ASSETS AND OPERATIONS

Data centers and office locations, among other FS-sector-owned assets, face significant threats from the physical impacts of climate change.

Impacts	Reporting Companies
Company locations, including owned real estate and infrastructure, face immediate and long-term risks from climate change. For example, rising sea levels may flood offices, resulting in business disruptions and loss of assets.	Banco de Galícia y Buenos Aires, American Express, Canadian Imperial Bank of Commerce, Citigroup Inc., HSBC, JPMorgan Chase & Co.
Heat waves and extreme weather, including hurricanes, can keep employees from physically and remotely accessing their workplaces, resulting in reduced employee productivity and severe threats to business reliability.	AGF Management Ltd., Franklin Resources, Intesa Sanpaolo, National Australia Bank Group
Resource scarcity, rising energy costs, and extreme weather will create business disruptions for FS companies. For example, blackouts will result in data security threats and outages, disrupting company and client access to information.	Bank of America, Scotiabank, BNP Paribas, Capital One Financial Corp., Credit Suisse, Itaú Unibanco

[2] UNEP Finance Initiative's Innovative Financing for Sustainability, "Adaptation and Vulnerability to Climate Change: The Role of the Finance Sector," (2006). http://www.unepfi.org/fileadmin/documents/CEO_briefing_adaptation_vulnerability_2006.pdf
[3] For more information about the Carbon Disclosure Project, visit www.cdproject.net.

In the US, only seven of 104 insurers listed in New York identify climate change as a relevant risk for their shareholders.

"We must adopt vigorous measures to adapt to climatic change even as we strive to cut emissions. Adaptation is a vital complement to mitigation."

Source: United Nations Environment Programme (UNEP)

Adaptation can reduce impacts by a factor of 10 to 100, often for little cost, for example by designing hurricane resistance into infrastructure and buildings.

In the Pacific Cook Islands, one study showed that reconfiguring runoff channels would generate a benefit-to-cost ratio of 280-to-152.

Even with a very infrequent occurrence, this would be economically justifiable. The high degree of uncertainty about the exact timing and strength of impacts means that flexibility through resilient infrastructure and economic diversification are essential.

Source: United Nations Environment Programme (UNEP)

2. INVESTMENT PORTFOLIO EXPOSURE

FS company investments, including client investments, face serious risks of business disruption and increased costs due to rising sea levels, diminishing value of land and real estate due to changing weather patterns, and an increase in claims, while investments in resilience efforts provide new opportunities for FS companies.

Impacts	Reporting Companies
Sector-specific assets—including energy, agriculture, water, transportation, tourism, real estate, and information and communications technology—will face rising costs and service disruptions due to the physical impacts of climate change. For example, flooding, temperature fluctuations, and changing monsoon cycles are expected to drive farming to new regions, leaving some current farming communities without viable farmland.	Morgan Stanley & Co, Ameriprise Financial, Bank of Montreal, Credit Suisse, Intesa Sanpaolo, Bankinter, Commonwealth Bank of Australia, UBS
Investments and assets in geographies with increased levels of vulnerability to climate change, including Africa and its risk of famine and drought, as well as coastal regions at risk of rising seas, may create a large financial burden and credit risk for companies. With 25 percent of the world's population living in coastal zones, and 12 of 16 megacities located on coastal land, this poses a significant risk.	Banco Santander, KBC Group, Barclays
Underwriter costs will rise due to an increase in claims for property, housing, and life insurance.	Canadian Western Bank, Commonwealth Bank of Australia, Lloyds Banking Group
Investment in adaptation measures for community resilience to climate change is creating new markets.	Barclays, Banca Monte dei Paschi di Siena

3. INVESTOR AND PUBLIC CONFIDENCE

Investors and the public alike expect the FS sector to be a leader in knowledge, foresight, accountability, and citizenship. FS companies run the risk of divestment and damage to their reputations for lack of action or poor follow-through regarding climate change.

Impacts	Reporting Companies
Poor corporate citizenship, including misalignment between reporting and actions, damages FS companies' reputations, resulting in divestment in FS companies and eventually impacting credibility with rating agencies and the general public.	AGF Management Ltd., the Macquarie Group, Ameriprise Financial, Legg Mason
Divestments run the risk of hurting poor or vulnerable communities and ecosystems, resulting in public outcry and even regulation when not managed properly.	Ameriprise Financial, Banca Monte dei Paschi di Siena, Legg Mason, Swedbank
FS companies are attracting and retaining clients and employees through the demonstration of climate change knowledge and preparedness.	Absa Group, Ameriprise, Banco Santander, Deutsche Bank

These responses indicate a broad awareness of the risks that climate change poses to FS company assets, investments, clients, and reputation. The majority of efforts are focused on risk identification and management, overshadowing the larger opportunity for new products and services, as well as the key role the finance sector plays in disaster relief. More limited was reported proactive work in new markets, including developing countries where microfinance and microinsurance are key drivers for change and adaptation, as well as new climate-related product offerings. A handful of companies highlighted client retention and an increase in new clients based on the depth of their climate-change knowledge and client-facing tools, a benefit expected to increase as investors become more knowledgeable about risks.

It is important to note that this list is not a perfect representation of all real risks and opportunities. Climate reporting is new; reporting standards are coalescing, detailed guidance is scant, and reporting is uneven among companies. Also, because it is difficult to attribute a given weather event to climate change, it can be challenging to distinguish risks and opportunities that are specifically related to the phenomenon.

Current Practices

About Adaptive Practices
Based on the identified risks and opportunities, companies report pursuing a range of adaptive responses, which are included in this section.

Adaptive practices are grouped by two types:

- **Value Protection**: Ensuring resilience of physical assets and planning responses to maintain business as usual.
- **Value Creation:** Devising solutions that contribute to the ability to pursue new revenue-generating opportunities and help suppliers, stakeholders, and customers adapt to a changing climate.

In response to these risks and opportunities, companies are pursuing a range of adaptive practices to stay ahead of current and expected climate change disruptions. In some cases, these practices are intended to ***protect value*** of existing assets and systems. In others, practices seek to ***create value*** through innovation and meet new needs that stem from the effects of climate change.

The following examples of practices and innovations are drawn primarily from the 2009 CDP responses, and supplemented by publicly available information and conversations with a few companies.

VALUE *PROTECTION*
These practices provide examples of how companies are promoting resilience of physical assets and current investments—the companies' as well as clients'—through risk assessment and education.

1. **Business continuity planning with scenario modeling:** FS companies are continually evolving and reassessing risks to their assets and their clients' assets, in relation to ability to pay claims and the profitability of investments. Through scenario modeling, in which extensive mapping is conducted based on various resource scarcities, rising sea levels, temperature changes, and extreme weather scenarios, relative levels of risk are identified for planning and investment purposes.
   - » **Royal Bank of Scotland Group** has conducted a comprehensive survey entailing flood risks of all real estate the company owns in the U.K. to identify the level of risk for each location. It integrated these findings into the company's long-term planning process, as well as its immediate next steps for disaster recovery and improved scenario analysis.
   - » **Comerica Inc.** reviews climate scientists' GIS maps and modeling data of increasing risks of precipitation, flooding, storm activity, sea level rise, drought, water scarcity, and wildfires to identify high-risk areas for site assessment and recovery planning.
   - » **The Australia and New Zealand Banking Group** has integrated its risk analysis into site selection and business continuity planning. This has allowed it to tailor its planning and insurance to the specific risks of each region and location, such as flooding, storm, and cyclone damage in the Pacific.

2. **Promoting company and client investments in low-risk sectors and geographies:** FS companies are building risk assessments and safeguards into their financial assets and those of their clients. To date, these include vendor selection criteria, client selection criteria, social and environmental risk assessments, and subsequent policies for engagement.
    - **Henderson Group** has created a Responsible Property Investment strategy to shift real estate investments away from risky sites and toward climate-resilient areas and properties. It also integrates the need to address key issues at high-risk locations.
    - **Vontobel Group** developed a specific Climate Protection Index to standardize risk assessments and benchmarks for identifying the relative risk of each investment to aid decision-making.
    - **Bank of America, Citigroup, Credit Suisse, JPMorgan Chase, Morgan Stanley, and Wells Fargo** co-created the Carbon Principles to address the need for a shared approach to evaluating and addressing the risks of financing for electric power projects for banks and their power clients.[4]
3. **Company and client climate risk education:** Companies are finding an immediate need to educate their analysts about climate risk, and an increasing need to provide client climate risk education as well. There are a variety of approaches in use, including workshops, advisory notes, training, and assessment tools.
    - **Deutsche Bank** has developed an entire division of asset management, Deutsche Bank Climate Change Advisors, set on building up green investments complemented by internal objectives for carbon neutrality by 2013.
    - **Nedbank** provides workshops for large clients and suppliers to highlight the physical and commercial risks and opportunities that climate change creates for their specific businesses and interests.

VALUE *CREATION*

These practices offer examples of how companies are creating solutions that contribute to the ability to pursue new revenue-generating opportunities by helping suppliers, stakeholders, and customers adapt to a changing climate.

The World Bank found that about a quarter of its portfolio of project finance clients is subject to a significant degree of climate risk, but only 2 percent of them consider it in the project design documents.

Source: United Nations Environment Programme (UNEP)

1. **Energy and sustainability operational investments:** FS companies are increasingly investing in corporate energy reduction programs, employee education programs, investments in energy management programs, and sustainable building certifications for internal operations to reduce costs and improve brand reputation.
    - **Lloyds Banking Group** created an Energy Bible for internal use containing detailed guidance on energy consumption and emissions reductions that eliminated 1,190 tons of CO_2 emissions annually, saving the company GBP 220,600 every year, nearly double the company's initial investment.
    - **Credit Agricole,** among several other companies, is reducing emissions and embedding sustainable building standards into its planning and real estate considerations. This consideration for new and existing spaces has translated into investments in HQE and THPE in France, which are similar to LEED ratings in the United States, and BREEAM in the U.K.

[4] To learn more about the Carbon Principles, see: http://www.carbonprinciples.com.

2. **Solutions for sectors with high climate-change risks:** Companies are recognizing that sectors with high risks also offer great opportunities for investment in adaptation for resilience, including agriculture, tourism, infrastructure, pharmaceuticals, and water. The FS sector is also making strategic investments and conducting/investing in outreach through disaster-response channels to support communities in dire need of assistance due to the impacts of climate change.

   » **Citigroup** is actively identifying new markets that will be affected by shifts in agriculture and the physical risks of climate change, including water and pharmaceuticals. Within the pharmaceuticals sector, Citigroup has identified an increased need for products due to spreading disease vectors.

   » **The Canadian Imperial Bank of Commerce** is investing in infrastructure and construction efforts due to a perceived increase in the need to repair or replace existing infrastructure, including highways, docks, airports, sewer systems, and buildings, to increase their resilience to climate change.

   » **Axa Re** contracted with the World Food Programme to provide weather derivatives for disaster relief protection in Ethiopia. The agreement allotted US$7 million for a severe drought, as indicated by agreed-upon weather stations, securing payment for Ethiopian farmers should drought strike.

3. **Investments in emerging financial markets:** Outside of areas in immediate need of financial support for adaptation, there are several newly emerging markets that FS companies are engaging with and already seeing increases in market share.

   » **Goldman Sachs** has made a goal to be a leading U.S. wind energy developer and generator after acquiring Horizon Wind Energy. In addition, the company is making US$1 billion available to invest in renewable energy and energy-efficiency projects.[5]

   » **Deutsche Bank** is researching agriculture's future in new locations based on the projected effects of climate change. The company plans to provide guidance for customers currently investing in agriculture or expressing interest in investment.

Recommendations

As indicated by CDP responses, public reports, and current partnerships, the FS sector is increasingly acknowledging the risks related to climate change, yet many companies lack protective measures as well as the frame to view new opportunities. **Therefore, there is much more to be explored if the industry is to play its full role in the proactive and responsible management of climate change adaptation.**

Current science clearly indicates the significant chance that climate change will be far more disruptive than companies report being prepared for. Moreover, many needs are only recently becoming evident, and these may present new and evolving risks and opportunities for the finance sector and its clients. Due to the magnitude of the underlying risks and opportunities, traditional risk assessment and management techniques may not be adequate to address the rising degree of unpredictability and severity of climate change impacts. With a distinct ability

[5] Goldman Sachs Environmental Policy Framework, http://www2.goldmansachs.com/citizenship/environment/environmental-policy-framework.pdf.

to lead society, through investments and financing, toward adaptation and resilience, the FS sector can play a key role in enabling society to appropriately adapt to climate change.

For these reasons, BSR recommends that FS companies establish climate change adaptation strategies that contain the following key components.

1. Develop risk and opportunity assessment mechanisms. At minimum, FS companies should establish a process for a thorough risk and opportunity assessment for their internal operations and company and client investments that explicitly measures risks related to climate change. Leading companies are creating more holistic strategies that integrate societal issues and extensive layers of environmental assessment points. Services and collaborations—such as insurance pricing, the Equator Principles,[6] the Carbon Principles, market investments, and analyst training to identify risks and opportunities posed by climate change—are increasingly being integrated into company processes.

2. Identify and engage in strategic partnerships. Connecting sectors, geographies, and communities vulnerable to climate change with financing opportunities is one of the FS sector's key roles. The example of Axa Re partnering with the World Food Programme to provide weather derivatives in case of drought highlights the sector's ability to safeguard vulnerable communities. Larger collaborative efforts, such as the UNEP Finance Initiative and the Carbon Principles, work to create a common understanding and a shared framework for climate-related risks and opportunities. Yet the FS sector still has a wealth of opportunities to partner across its own sector as well as through multi-sector engagements to create far-reaching adaptation solutions.

3. Develop products with incentives for climate change adaptation. The industry has a distinct advantage in guiding investments and development of climate resilient sectors and geographies. Through strategic investments and products, complemented with incentives, FS companies can lead innovation and adaptation for a better-prepared society. A potential nexus for investments lays in the overlap between disaster response, climate change adaptation, and economic incentives.

It is important that each FS company views these recommendations through the lens of its specific product and service mix. An insurance company's climate adaptation strategy will be different from that of a retail bank. Yet the sector's potential to be an enabler of adaptation globally pertains to all aspects of financial services.

For more tools on managing climate change adaptation, visit: www.bsr.org/adaptation.

[6] Equator Principles http://www.equator-principles.com/