We believe that the banking industry has not successfully integrated climate change risk into its long-term strategic planning or understood the implications of this game-changing phenomenon for its business operations.

Environmental concerns—and those relating to climate change in particular—have been at the forefront of investors’ minds. Sectors with obvious climate impact, like energy and transportation, have received the most attention. Banking, however, has not been seen as an industry with a significant environmental footprint, and as a result its climate impact has mostly escaped scrutiny.

Yet climate change is fundamentally altering the landscape in which banks operate. The finance industry’s assets, more than almost any other’s, are distributed across sectors, making them uniquely vulnerable to the economic and political uncertainty caused by climate change. Climate change is also creating new risks for the businesses banks finance, and society’s responses to it—new regulations for businesses, adaptations to a transformed environment—will further alter the situation.

A bank’s greenhouse gas footprint is significantly larger than that of their operational activities alone. A full picture would include a bank’s lending, underwriting and direct and indirect ownership in companies, particularly high-carbon assets.

Banks must begin to consider the level of environmental risk in their lending models, so they can develop strategic management plans that take this risk into account and to also fully avail themselves of climate related business opportunities. For banks involved in industries—like coal—that have high greenhouse gas emissions embedded in their products, environmental impact assessments are particularly important.

Key environmental risks that we have identified as major concerns are:

- Inadequate credit risk assessment and loan pricing due to unpredictable or extreme weather.
- Changing regulatory environments
- Legal risk
- Reputational risks arising from shifts in consumer sentiment
- Uncertain demand for high carbon fuels
- Misalignment of banker incentives

The industry has begun to develop environmental risk-management protocols to try to quantify these risks—key examples are the Equator Principles and the Carbon Principles—but for now, their application is limited. More comprehensive strategies must be developed to manage environmental risk.

We call on investors to better assess the embedded climate risks in their financial holdings while supporting the critical role that banks must play in transitioning to a low carbon economy. Investors should identify best practices and seek out the banks that use them, while encouraging the development of strategic management plans to address climate change risk, capture new market opportunities, and increase data collection and reporting.
Financing Climate Change: Carbon Risk in the Banking Sector

July 2014

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“Investors’ collective influence is a powerful tool. It should be used to encourage banks to change their behavior, and to lead the way towards a more sustainable and safer climate future.”
A Call to Action for Banks

As investors, we must understand and assess long-term risks to our portfolios. Boston Common calls upon banks and the financial industry as a whole to:

- **Recalibrate risk management to integrate climate change considerations.**

  Climate risk is one of many risks that banks face, and it, like the others, should be integrated into risk management committee deliberations and compliance practices. Investors expect banks to apply stress tests to their portfolios in terms of credit risk and revenue streams. Banks must also be prepared to respond to shifts in consumer behavior caused by changes in local weather or the global climate. This requires reassessment of the pricing of loans that are vulnerable to the vicissitudes of climate change, whether from increased property risk, vulnerability of the business model, or increased incidences of negative regional weather events. Even insured banking products may become vulnerable as that insurance may undervalue potential climate events.

- **Drive financial innovation and seek new opportunities.**

  Climate change creates risk, it also creates opportunity. Banks should seek opportunities to finance, underwrite, and invest in new products and services. Providing investment capital, new services, and expertise are all areas in which new business opportunities abound; other growing fields include climate change mitigation and adaptation. Climate change also presents opportunities to build client loyalty and demonstrate bank leadership.

- **Develop a long-term climate strategy.**

  Investors need to understand a bank’s overall environmental vision and the strategy for its implementation. Banks must move beyond anecdotes about individual projects and instead provide company-wide assessments of its exposure to and management of climate change risks.

  Banks need to measure and disclose the climate change risk profile of their assets, including the carbon footprint of their lending operations. They should establish policy implementation mechanisms, monitoring systems, appropriate leadership structures, and employee education and training programs.

  To more effectively respond to long-term risks, banker compensation needs be aligned with long-term goals, not just with short-term benefits. Finally, Boards should be mandated to oversee the integration of climate change considerations.
Embedded Climate Change Risks in the Banking Sector

Long-term investors must carefully consider the risk of climate change when analyzing the financial services sector. We urge banks to recalibrate their risk management practices, to take into account the following potential challenges:

- Inadequate credit risk assessment and loan pricing due to unpredictable and extreme weather
- Changing regulatory environments
- Legal risks
- Reputational risks arising from shifts in consumer sentiment
- Uncertain demand for high-carbon fuels
- Alignment of banker incentives

Risk assessments and model projections have a tendency to underestimate the downside of investments, an effect that is even more pronounced for risks that derive from a changing climate. Confronting the challenges of climate change is key to creating a healthy and stable future for the industry.

Inadequate Credit Risk Assessment and Loan Pricing

Actuarial assumptions are built into the risk assessments that banks use when making lending and financing decisions. However, these assessments do not generally take into account key climate-related risks such as regulatory change, shifting consumer behavior, and extreme weather. Despite their inadequacies, the assessments inform the assignment of risk tranches, the determination of the overall beta of loan portfolios, and the selection of information included in bond disclosures.

Indirectly, they are also key inputs in loan rates and statements of expected yield. They support many aspects of a bank’s valuation and prediction processes and, when inaccurate, can undermine successful product development and negatively affect a bank’s operations and financial performance.

One example of a significant risk not commonly considered in traditional actuarial assessments is the possibility that much of the world’s fossil fuel will not be consumed. Several climate reports suggest that if we are to keep the earth’s surface temperature from rising more than 2°C—the threshold at which significant and dangerous climate change is expected to occur—we cannot burn all of the planet’s remaining fossil fuel. Estimates of exactly how much must remain unused differ; an August 2012 report from the Carbon Tracker Initiative argued that the figure is 20%, while the International Energy Agency (IEA) puts the figure at 33%. Even if we believe that such severe restrictions will not be imposed due to a lack of political will, it remains likely that not all the fossil fuel currently known to exist will ultimately be consumed. Yet current estimates of many companies’ value (especially energy companies’), and of the correlated risks of providing financing to them, are based on the assumption that most reserves will be fully exploited. If this does not come to pass, and fossil fuel assets become stranded as we transition to a low-carbon economy, industry participants may be less able to repay their loans to banks. Scenario planning needs to incorporate the significant probability of poor outcomes.

1 http://www.carbontracker.org/
Changing Regulatory Environment

Discussions around climate change policy and restrictions on greenhouse gas emissions have been underway for more than three decades. The drawn-out nature of the process has led some to mistakenly discount the potential for future regulations. In fact, although international climate protocols are not yet realized, real shifts have occurred in regional policies. In 2000, fewer than 50 climate laws existed; by 2013, there were almost 500. And in 2013 alone, over 30 countries passed new national legislation aimed at regulating or restricting carbon emissions.

These laws and others to come are likely to impact the value of carbon-intensive assets. Among the countries in which regulatory shifts have either occurred or will take place are China, Japan, the United Kingdom, Brazil, South Korea, Nigeria, and Bangladesh. In the U.S., the Obama Administration announced new carbon emission limits on existing electric power plants, supplementing earlier proposed rules on new facilities. The European Union recently proposed rules that will cut carbon emissions by 40% by 2030, from a 1990 baseline; they are an extension of the existing effort to cut emissions by 20% by 2020. The law is expected to be finalized in early 2015.

Legal Risks

History has shown, from asbestos to tobacco, that public health concerns went unaddressed for decades, although dramatic shifts in regulation occurred as a result of changes first in scientific consensus, and then in public sentiment. When assessing high carbon investments, it is helpful for banks and investors to consider the experience of the tobacco industry. Through 1998’s Master Settlement Agreement, U.S. states successfully extracted $207.5 billion from the tobacco industry for damages caused by its products. If a legal precedent is established by this settlement, then we can perhaps expect states to seek to have their costs of adapting to climate change paid for by high-carbon industries.

Reputational Risks

Increasing consumer awareness of banks’ role in financing high-carbon projects may heighten consumers’ scrutiny of the industry. Organizations like Rainforest Action Network, Energy Action Coalition, Earth Quaker Action Team, SumOfUs, urgewald, and BankTrack are already leading grassroots protest movements to oppose lending to the coal industry. The campaigns are global and multigenerational, cutting across economic, cultural, and social divides. Protest targets to date include Bank of America, HSBC, PNC Financial, and the Royal Bank of Scotland.

Protests and changing consumer sentiment can have an acute impact on retail banks, as they can lead to account closures and declines in new business. Additionally, morale and recruitment can suffer at banks known to be active funders of high-carbon projects.

Although most banks have not yet begun to take significant action, they are becoming more aware of these kinds of reputational risks. Of the 94 financial sector respondents to the CDP’s questionnaire for the Global 500 Climate Change Report 2013, more than half viewed reputation and changing consumer behavior related to climate change as presenting significant risks and opportunities.

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5 http://www.nytimes.com/2013/09/21/us/politics/obama-administration-carbon-limits.html?_r=0

6 https://oag.ca.gov/tobacco/msa
Banking on Coal: a Risky Business

We are concerned that banks that lend to or underwrite coal producers and related businesses are exposing their loan books to considerable climate-related risk.

One major source of risk in the coal industry is a projected decline in global use of this notably dirty energy source. Internationally, both requirements and incentives for renewable energy use are continually increasing; in the U.S., more than 26 states have binding energy efficiency targets. Greenhouse gas regulations currently pending in the EU require that 27% of its energy comes from renewable sources by 2030. In China, air pollution is affecting the outlook for coal: last year, construction of new coal-fired power plants was banned in the regions surrounding Beijing, Shanghai, and Guangzhou, while coal use restrictions were established elsewhere in the country. Taken together, these developments suggest a very uncertain demand trajectory for high-carbon projects in general and coal projects in particular. In 2013, the International Energy Agency’s World Energy Outlook predicted a decline in coal use in China and the US, the world’s largest markets. A recent World Bank report showed a flattening trend for coal use even under “business as usual” scenarios.⁷

The risks associated with coal financing are as highly concentrated as the financing itself. “Banking on Coal,” a study published by an international coalition of NGOs, found that from 2005 to mid-2013, €118 billion were invested in the coal mining industry. 71% of the funds came from only 20 banks. The top three were: Citibank (€7.29 billion), Morgan Stanley (€7.23 billion) and Bank of America (€6.56 billion).⁸

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⁸ http://www.banktrack.org/show/news/banking_on_coal_undermining_ourclimate
Uncertain Demand

As the cost of renewable energy falls, these alternatives will become increasingly affordable relative to fossil fuels. The field of energy provision will become more competitive, complex, and uncertain. Credit risk assessments that assume that energy sector participants will maintain their monopolistic or oligopolistic pricing power are likely to prove inaccurate; they may underestimate the risk of higher loan defaults. Boston Common is concerned that lenders to, and investors in, high-carbon industries are exposing themselves to large systemic tail risks resulting from shifts in public policy; these are unlikely to have been properly discounted in historically-based loan loss default models.

Alignment of Banker Incentives

Unfortunately, banks’ internal structures and incentive systems can work against their own interests when it comes to projects involving long-term risk, especially climate-related risk, which can be difficult to assess. Compliance-, risk-, and sustainability-oriented departments are empowered to restrict lending or financing that is in conflict with overall corporate objectives. Yet underwriting opportunities, particularly M&As and IPOs, are initiated in other departments by bankers who may have short-term, personal incentives to see a deal go through. Their remuneration is often aligned with origination fees and transaction revenues, which creates a deal-driven culture. The cost to an employee’s career, if he is forced to walk away after pursuing a transaction, can be significant. Establishing responsibility for assessing environmental risks in a separate department and only conducting these risk assessments after a deal has been crafted can create internal conflict within a bank and lead to sub-optimal allocation of capital.

Because an underwriting transaction moves quickly off a bank’s balance sheet, the future value of relationships with the corporate clients involved may be overestimated, while potential changes in the physical or regulatory environment may be discounted. This can result in the underestimation of risk associated with these engagements. Before a banker has invested years of effort, and perhaps even offered loans at sweetened rates in order to maintain client relationships, the parent bank should determine if these actions are in line with its long-term strategy.

Where is Climate Change Risk in Your Portfolio?

Not all of a bank’s exposure to climate change risk is visible on its balance sheet. In most countries, banks still provide the majority of loans to corporations and are therefore directly exposed to risks from high-carbon industries. Banks in countries with more developed capital markets, like the U.S., have largely been disintermediated. In such markets, investors increasingly finance companies directly, causing underwritten loans to appear in their portfolios as either corporate bonds or securitized bank loans. This mechanism removes embedded climate change risk from banks' balance sheets, and transfers it to investors. When an investor estimates a bank’s exposure to climate change risk, then, it is not enough to look for it in current holdings alone. Investors should also examine the bank’s transaction revenues and credit guarantees.

It is generally easier to assess a bank’s exposure to climate-related risks in emerging markets, as high-carbon extraction projects are often located in these countries. Increasingly, investors are becoming concerned about banks’ exposure to these projects. When evaluating project risk, they may apply a discount to the estimated valuation or charge a higher price for capital; both cases lead to lower returns for shareholders.
Climate Change Risk Across Sectors

Investors’ concerns about climate change have focused most on the coal, oil, and gas sectors. However, shifts in climate and weather variability will impact the entire economy, and climate risk must be assessed across industries and throughout businesses’ entire supply chains. Damage to both private and public infrastructure can be expected from rising sea levels, floods, and droughts.

Highly water-dependent industries face significant risks. Water scarcity is already fraught with issues in many regions of the world, and climate change will only make conditions more extreme by exacerbating present drought conditions and creating uncertain precipitation elsewhere. The implications for industries like agriculture, energy, tourism, and manufacturing, which rely heavily on water, will be significant. Boston Common is working with companies throughout its investment portfolio, from Apache to VF Corporation, to encourage increased disclosure of water management systems.

Climate change is also likely to have a significant impact on businesses in which capital spending assumes an extended lifespan. For example, cement manufacturing, an industry with high greenhouse gas emissions, anticipates a 40-50 year lifespan for its plants. Expectations for petroleum refineries are comparable. Future shifts in regulation and consumption habits should also be considered risks to industries with long-term capital spending and substantial R&D investments, such as automobile manufacturing.

How Banks Are Responding to Climate Change

Existing Disclosure Frameworks

Unfortunately, investors have little public data to help them accurately assess a bank’s climate change management strategy. What is available is often anecdotal or project-specific and may not accurately reflect a company’s overarching climate strategy. Among the existing sources, the Equator Principles and the Carbon Principles are the two climate change-related protocols most frequently adopted by banks to evaluate carbon risks in financing decisions.

Banks that sign on to these protocols must undertake environmental and social impact analyses. They must disclose greenhouse gas emissions estimates for all finance projects that release more than 100,000 metric tons of carbon dioxide annually. Although these protocols are valuable, they are also limited: the Equator Principles apply only to project-specific financing, which, according to BankTrack, accounts for less than 1% of coal industry financing; the Carbon Principles apply only to US electric power companies. Boston Common is working to develop better tools; we are a member of the United Nations Environment Programme Finance Initiative’s (UNEP FI) working group tasked with creating a new Greenhouse Gas Protocol. The effort aims to build consensus around Scope 3 emissions calculations for the financial services industry.

The information in this document should not be considered a recommendation to buy or sell any security. The securities discussed do not represent an account’s entire portfolio and may represent only a small portion of an account’s holdings. It should not be assumed that any securities transactions we discuss were or will prove to be profitable. Past performance does not guarantee future results. All investments involve risk, including the risk of losing principal.
Good Practices

Many financial institutions, both public and private, and national governments have implemented policies that aim to curtail financing for high-emissions projects.

- HSBC’s Energy Sector Policy stipulates that it will not provide financial services to new coal-fired power plants whose carbon intensity exceeds 850g CO₂/kWh in developing countries and 550g CO₂/kWh in developed countries.⁹

- The Co-operative Bank’s Ethical Policy states that it “will not finance any business whose core activity contributes to global climate change, via the extraction or production of fossil fuels (oil, coal and gas), with an extension to the distribution of those fuels that have a higher global warming impact (e.g. tar sands and certain biofuels).”¹⁰

- Credit Suisse states that it will not provide financing to mountain top removal mining projects or to mining projects that dispose of tailings in riverine or shallow sea environments.¹¹

- The Overseas Private Investment Corporation (OPIC) has set a goal to reduce portfolio emissions of greenhouse gases by 30% by 2018 and 50% by 2023.¹²

- Wells Fargo uses carbon “shadow pricing” to help it more accurately calculate the true cost of high-carbon investments.¹³

- China’s Industrial Bank states that it incorporates environmental issues into its overall strategic planning. It has developed a green credit implementation plan with dedicated departments, training, and public advocacy.¹⁴

- Many governments have withdrawn support for public financing of new coal plants built abroad. These include Denmark, Finland, Iceland, Norway, Sweden, the United Kingdom, and the United States. They have all committed to ending public financing for coal, although exceptions for “rare circumstances” are allowed.¹⁵

Sources for bank disclosures related to climate change are the CDP (formerly the Carbon Disclosure Project) questionnaire and the disclosure framework known as the Global Reporting Initiative (GRI). While both are valuable sources of data, they are designed to cover greenhouse gas emissions and climate strategies across all industries, and therefore do not request some data unique to the banking sector. As a result, they can’t provide the depth of disclosure investors need to assess a bank’s exposure to climate change risk.


Banking Opportunities

“Banking & Climate Change: Opportunities and Risks” analyzed the climate change strategies of more than 100 banks worldwide. This report, and CDP’s 2011 Financial Sector Report, identified numerous promising business opportunities. Among them were:

- **Commercial banking**

  Providing investment capital for clean technology and climate mitigation solutions is one potential growth area. Providing services and financial products that help society mitigate and/or accommodate climate change, like leasing structures for clean technologies and mortgages for sustainable buildings, are another.

- **Investment banking**

  Investment banking is well positioned to benefit from climate change. The adoption of new technologies will be a boon to primary markets, while secondary ones may profit from climate change regulations, which will provide the necessary infrastructure required for carbon trading markets to function. Innovative financing structures can help advance the market for renewable power and fuels, as they have done in the past for markets like housing. New business opportunities related to renewable energy (wind, solar, biomass) will develop and global trading in a variety of new climate-related markets is likely to increase. Among the examples provided in the reports are IPOs for renewable energy companies, development of weather derivatives, emission trading services, and the provision of climate change management consulting. New markets are also expected for green funds and other sustainability-oriented investments.16, 17

Opportunities: Capturing Climate Change-Related Financial Innovation

Although climate change involves considerable risk, it also presents substantial new revenue opportunities for banks. In our opinion, the opportunity set for banks consists of the development of new, innovative leasing and lending products that are centered around the prevention and moderation of greenhouse gas emissions (i.e., efficiency), the production of renewable energy, and the adaptation to climate change.

Banks and their shareholders stand to benefit from successful investments in new technologies that curb or help the world adapt to climate change. Regional banks can help enable economic transitions in areas that are highly impacted by weather variability or by the decline of carbon-intensive industries.

Many banks see their expertise in complex, controversial topics as a key asset in building customer loyalty and demonstrating leadership. JPMorgan Chase has conducted a multi-stakeholder analysis of the sustainability risks associated with hydraulic fracturing and provides guidance to clients on best practice techniques. The company issues detailed risk assessments and questionnaires to clients to evaluate their commitment to and capacity to manage environmental and social issues.

Initiatives to reduce emissions can also reduce operating costs, spur innovation, and increase efficiency. All banks have an incentive to reduce waste in any form, fiscal or carbon; such efforts increase the chances that their loans will be repaid and the products they underwrite honored.

16 “Banking & Climate Change: Opportunities and Risks”

17 Financial Sector Report, CDP 2011
Conclusion

The financial services industry is the global economy’s largest sector by market capitalization, and climate change is fundamentally altering its landscape. Investors should be deeply concerned that climate events, from drought to increased weather variability to a warmer climate overall, will impact banks’ business operations, harming their future share value. Boston Common calls upon banks and the financial industry as a whole to reduce the sector’s vulnerability to climate change.

Recalibrate risk management to integrate climate change considerations:

- Conduct regular stress tests that model the effects of adverse climate events
- Rebalance portfolios in view of potential risks from climate change
- Consider the legal and reputational implications of investments
- Reassess loan pricing with an eye to changes in consumer behavior, including potential shifts in demand for high-carbon fuels

Develop a long-term climate strategy:

- Measure and disclose total carbon footprint
- Align banker compensation with long-term goals
- Incorporate climate change considerations into Board oversight mandates

Understanding and measuring embedded climate risk is critical for long term-oriented investors. We must urge banks to develop strategic climate management plans, seize new market opportunities, and improve data collection and reporting.

Investors’ collective influence is a powerful tool. It should be used to encourage banks to change their behavior, and to lead the way towards a more sustainable and safer climate future.

Drive financial innovation and seek new opportunities:

- Increase energy efficiency
- Produce more renewable energy
- Develop adaptive responses to climate change
For nearly two decades, the Boston Common team has engaged global banks, regional development banks, the International Finance Corporation (IFC), and the World Bank to proactively address the environmental and social risks associated with project financing, lending, and investment. We have opposed financing of highly controversial dam projects like the Three Gorges Dam in China (Bank of America) and the Maheshwar Dam in India (HypoBank) and have argued for banks to reduce their exposure to carbon-intensive industries such as coal mining (ABN-AMRO and PNC Financial).

In 2004, we co-convened a roundtable with the World Bank on its revised performance standards for project finance. The next year, we asked the IFC to incorporate a climate change strategy within the new performance standards adopted by banks that are signatories to the Equator Principles. We have worked with banks, notably Deutsche Bank and Standard Chartered, to adopt these protocols and to employ them in financial transactions (HSBC Holdings). We have urged US banks, including PNC Financial and JPMorgan Chase, to adopt sector-specific guidance related to carbon-intensive industries. In fact, thanks in part to our advocacy, Citigroup is a founding signatory to the Carbon Principles.

While sector-specific guidelines can be somewhat limited in their implementation and do not always address a bank’s overall exposure to climate change risks, they do have value. We have recommended the adoption of sector-specific guidance for high-impact industries like new and existing coal-fired power plants, oil sands operations, hydraulic fracturing, mining (including mountaintop removal), and agriculture (Deutsche Bank, HSBC, Mitsubishi UFG Financial [MUFG], ORIX, Standard Chartered, and Citigroup). We have also encouraged banks to improve their overall transparency with regard to climate change risk by improving their CDP disclosure and moving to Scope Three emissions analysis (ORIX and MUFG). In 2012, in line with the recommendations in this report, we expanded our dialogues with PNC Financial and JPMorgan Chase to focus on their assessments of their exposure and contribution to climate change risks throughout their lending and financing operations.

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Boston Common Asset Management

is an investment manager and a leader in global sustainability initiatives. We specialize in long-only equity and balanced strategies and pursue long-term capital appreciation by seeking to invest in diversified portfolios of high quality, socially responsible stocks. Through rigorous analysis of financial, environmental, social, and governance (ESG) factors we identify what we believe are attractively valued companies for investment. As shareholders, we urge portfolio companies to improve transparency, accountability, and attention to ESG issues. Our focus is global; we manage U.S. and international portfolios to meet the needs of institutional and individual investors. We are independent, employee-owned, and field a seasoned, close-knit team of professionals.