



Financial implications of climate-related risks

Climate change has already begun to impact the world's inhabitants, ecosystems, economies and capital markets, and it will continue to pose a material threat in the future unless meaningful intervention takes place. Meaningful intervention could slow and potentially even reverse the effects of climate change, but it would require a widespread and coordinated effort to reduce human emissions of greenhouse gases.

Climate change is materializing

Generally, companies and investors view climate change and related issues as long-term risks that align with the long-term outlook of most climate-change policies; for example, the most recent special report of the U.N.'s Intergovernmental Panel on Climate Change (IPCC) describes a pathway to bring net emissions to zero by mid-century.¹ While the most significant impacts of climate change will likely play out over the long term, we have already begun to see material impacts. Thus, while the impact of climate change on capital markets will vary considerably by asset class and investment time-frame, it can pose material risks to investors in the near term. At RBC Global Asset Management (RBC GAM), we believe that integrating environmental, social, and governance (ESG) concerns into their investment process can enhance the long-term performance of their investments.

For example, there is growing evidence that climate change is aggravating natural weather patterns and causing temperatures to rise. As drastic weather variability materializes and temperatures rise, so too does the risk of physical asset loss. By considering the scope and location of a company's operations, investors can determine whether their physical assets and infrastructure are vulnerable to unstable near-term weather patterns such as hurricanes, prolonged droughts and intense heat waves.

PG&E bankruptcy

Throughout 2017 and 2018, wildfires devastated wide swaths of land in California. The "Camp Fire," which broke out in November 2018, became the deadliest, most destructive wildfire in the state's history. It caused more than 85 casualties, destroyed 14,000 homes, scorched an area the size of Chicago, and caused approximately US\$7 billion in damages.² As a result of the Camp Fire, the Pacific Gas and Electric Corporation (PG&E), California's largest utility company at the time, now faces an estimated US\$30 billion in potential liabilities from hundreds of lawsuits alleging carelessness and negligence, as well as health-and-safety code violations.

PG&E filed for protection under Chapter 11 of U.S. bankruptcy law in January 2019. The company's shares plummeted 90% from their September 2017 record highs, and the company's debt rating was cut from "investment-grade" status to "junk." With less than US\$2 billion of insurance coverage and no national program for wildfire damages recovery, PG&E will most likely finance its US\$30 billion in liabilities via debt restructuring through Chapter 11.^{3,4}

Climate change played a significant role in the Camp Fire disaster by creating an environment conducive to recurrent wildfires. During the summer of 2018, California experienced significantly higher-than-average temperatures⁵, combined with below-average precipitation⁶, making it one of the driest summers on record. Paired with the alleged negligence of PG&E⁷, these weather conditions resulted in one of the most destructive wildfires in California's history⁸.

Taking another look at PG&E, some facts are clear. First, this wasn't the company's first time filing Chapter 11 – PG&E shook financial markets when it filed for bankruptcy protection in April 2001, becoming the largest utility company to do so up to that time⁹. Second, the Camp Fire was not the first wildfire facilitated by the company's alleged negligence¹⁰ – PG&E contributed to other major wildfires dating back several years. In 2017, for example, the company was found at fault for starting three wildfires in California.¹¹

The potential liability faced by PG&E in the aftermath of the Camp Fire catastrophe highlights how important it is for investors and companies to be aware of the material ESG risks faced by a business and to adequately manage these risks.

Including climate risks and opportunities in financial disclosures

Financial market participants are increasingly demanding disclosure on how climate change may affect companies' assets, strategic execution, operations and financing. This includes information about the potential physical impact of climate change, such as intensifying water stress, heat waves and extreme weather events including floods and hurricanes. In June 2017, these increasing demands were highlighted by the recommendations of the Financial Stability Board's Task Force on Climate-related Financial Disclosures (TCFD), which advocates for the inclusion of information about climate-related risks and opportunities in corporate reporting and financial disclosures.

The TCFD's recommendations were designed to promote alignment across a variety of existing disclosure regimes, frameworks and initiatives, including those focused on both financial and non-financial reporting. Two of the most comprehensively referenced organizations throughout the TCFD recommendations – the Climate Disclosure Standards Board (CDSB) and the Sustainability Accounting Standards Board (SASB) – are already well aligned with the TCFD's recommendations.

The disclosures currently provided by companies and countries is often insufficient for investors to fully understand and assess the risks and opportunities resulting from climate-related issues, but we are encouraged by the efforts of the TCFD, which we believe will help companies provide investors with consistent, material climate-related disclosure that is comparable across sectors, industries and countries.

As engaged long-term investors, RBC GAM encourages their investee companies to provide more robust climate-related disclosures. Material disclosures will differ by company and asset class, but they often include information on how the board oversees climate-related issues, and the setting of long-term greenhouse gas emission-reduction targets. They may also recommend that investee companies complete the CDP's (formerly the Carbon Disclosure Project)¹² questionnaire, as this accomplishes many of the TCFD's recommendations.

RBC GAM's strategy around climate change

RBC GAM recognizes that climate change is one of the most pressing issues of our time and affects almost all sectors and industries. There is strong scientific evidence that climate change is caused by human activities including fossil fuel combustion, deforestation and other changes in land use, as described in the aforementioned special report of the U.N.'s IPCC. Accordingly, in 2018, we updated our *Approach to Responsible Investment* to communicate their focus on climate-related investment risks and opportunities as part of their ESG integration efforts.

As demonstrated by the case of PG&E, investors are already vulnerable to climate-related risks. As a result, investors should not only focus on long-term risks – climate-related risks and opportunities spanning the entire investment horizon must be considered. We believe that by taking a thoughtful approach and integrating a broad range of potential climate-related factors into the investment process, we are better positioned to evaluate companies' exposure to these factors, as well as their awareness and management of material climate-related issues.

The latest Stewardship in action – 2018 CGRI Annual Report, available at www.rbcgam.com/cgri, highlights RBC GAM's approach to voting on climate-related proposals and updates to their Proxy Voting Guidelines on climate change related proposals.

¹ IPCC special report, "Global Warming of 1.5°C" chapter 2 (Mitigation pathways compatible with 1.5°C in the context of sustainable development) www.ipcc.ch/sr15

² Insurance Information Institute, "Facts + Statistics : Wildfires" www.iii.org/fact-statistic/facts-statistics-wildfires

³ United States Securities and Exchange Commission, "Form 8-K" www.sec.gov/Archives/edgar/data/75488/000095015719000032/form8k.html

⁴ PG&E Corporation, "PG&E Files for Reorganization Under Chapter 11" www.pge.com/pge_global/common/pdfs/about-pge/company-information/reorganization/reorganization-press-release-01.29.19.pdf

⁵ National Centers for Environmental Information, "County Average Temperature Ranks" (June –August 2018) www.ncdc.noaa.gov/monitoring-content/sotc/national/2018/aug/countyavgrank-201806-201808.gif

⁶ National Centers for Environmental Information, "County Precipitation Ranks" (June-August 2018) www.ncdc.noaa.gov/monitoring-content/sotc/national/2018/aug/countyprcrank-201806-201808.gif

⁷ The New York Times, "How PG&E Ignored Fire Risks in Favor of Profits" www.nytimes.com/interactive/2019/03/18/business/pge-california-wildfires.html

⁸ Enterprise – Record, "Camp Fire: PG&E notifies state regulators that key electrical tower had damage before the deadly blaze" www.chicoer.com/2018/12/13/camp-fire-pge-notifies-state-regulators-that-key-electrical-tower-had-damage-before-the-deadly-blaze/

⁹ Cable News Network, "PG&E seeks bankruptcy" www.money.cnn.com/2001/04/06/news/pacificgas/

¹⁰ NBC Bay Area, "California Regulators Fine PG&E \$8.3 Million for Deadly Butte Wildfire" www.nbcbayarea.com/news/local/California-Regulators-Fine-PGE-83-Million-For-Deadly-Butte-Wildfire-420486773.html

¹¹ California Department of Forestry and Fire Protection (CAL FIRE), "CAL FIRE Investigators Determine Cause of Four Wildfires in Butte and Nevada Counties" www.calfire.ca.gov/communications/communications_newsreleases_2018

¹² CDP, www.cdp.net

This document is provided by RBC Global Asset Management (RBC GAM) for informational purposes only and may not be reproduced, distributed or published without the written consent of RBC GAM. This document does not constitute an offer or a solicitation to buy or to sell any security, product or service in any jurisdiction. This document is not available for distribution to people in jurisdictions where such distribution would be prohibited.

RBC GAM is the asset management division of Royal Bank of Canada (RBC) which includes RBC Global Asset Management Inc. (RBC GAM Inc.), RBC Global Asset Management (U.S.) Inc., RBC Global Asset Management (UK) Limited, RBC Investment Management (Asia) Limited, and BlueBay Asset Management LLP, which are separate, but affiliated subsidiaries of RBC.

In Canada, this document is provided by RBC GAM Inc. (including Phillips, Hager & North Investment Management) which is regulated by each provincial and territorial securities commission with which it is registered. In the United States, this document is provided by RBC Global Asset Management (U.S.) Inc., a federally registered investment adviser. In Europe, this document is provided by RBC Global Asset Management (UK) Limited, which is authorised and regulated by the UK Financial Conduct Authority. In Asia, this document is provided by RBC Investment Management (Asia) Limited to professional, institutional investors and wholesale clients only and not to the retail public. RBC Investment Management (Asia) Limited is registered with the Securities and Futures Commission (SFC) in Hong Kong.

This document has not been reviewed by, and is not registered with any securities or other regulatory authority, and may, where appropriate, be distributed by the above-listed entities in their respective jurisdictions. Additional information about RBC GAM may be found at www.rbcgam.com.

This document is not intended to provide legal, accounting, tax, investment, financial or other advice and such information should not be relied upon for providing such advice. RBC GAM takes reasonable steps to provide up-to-date, accurate and reliable information, and believes the information to be so when printed. RBC GAM reserves the right at any time and without notice to change, amend or cease publication of the information.

Information obtained from third parties is believed to be reliable, but no representation or warranty, express or implied, is made by RBC GAM, its affiliates or any other person as to its accuracy, completeness or correctness. RBC GAM and its affiliates assume no responsibility for any errors or omissions.

Some of the statements contained in this document may be considered forward-looking statements which provide current expectations or forecasts of future results or events. Forward-looking statements are not guarantees of future performance or events and involve risks and uncertainties. Do not place undue reliance on these statements because actual results or events may differ materially from those described in such forward-looking statements as a result of various factors. Before making any investment decisions, we encourage you to consider all relevant factors carefully.

Publication date: April 15, 2019