Swimming against the tide: Japanese banks and climate change

1.0 Introduction

Managing the risks related to climate change is the biggest challenge for financial institutions in the 21st century, as it is now widely accepted that global warming will create physical, social and economic disruption on an unprecedented scale.

Managing the risks related to climate change is the biggest challenge for financial institutions in the 21st century, as it is now widely accepted that global warming will create physical, social and economic disruption on an unprecedented scale. The Paris Agreement, which has the support of many global banking institutions, sets the goal of keeping the average global temperature rise to "well below 2°C above pre-industrial levels … [while] pursuing efforts to limit the temperature increase even further to 1.5°C." A transition to a low carbon economy offers an estimated $89 trillion investment opportunity,[1] but the impact of unchecked climate change could lead to the destruction of assets worth as much as $24 trillion.[2]

Japan's largest financial institutions have a critical role to play in decarbonising the global economy and managing the financial risks that result from climate change. To avoid catastrophic climate change, leading scientists have said there should be no expansion of coal power,[3] and all existing coal-fired power plants must be phased out as soon as possible.[4]

Despite commitments from leading global banks to reduce coal financing,[5] Japanese 'mega-banks' - Mitsubishi UFJ Financial, Mizuho Bank and Sumitomo Mitsui Financial Group - are some of the biggest financiers of coal power plants worldwide, particularly in Southeast Asia. They have yet to release any plans to decarbonise their portfolios.

GREENPEACE

This report

This report analyses the three indicators of exposure to coal related climate risk of Mitsubishi UFJ Financial, Mizuho Bank and Sumitomo Mitsui Financial Group:

- Financing of Top 30 Coal power companies
- Financing of Top 120 coal power developers
- Financing of Japanese 'high risk' coal power plants

Through these three prisms, we see that Japanese banks have become some of the biggest funders of coal globally, often ranking only behind Chinese banks. We then examine some of the financial, regulatory, environmental and reputational risks of coal investment, which all investors should be aware of.

Questions for investors to ask the Japanese financial institutions:

- What steps have your institution taken to assess climate risk generally and fossil fuel exposure specifically?
- When will your institution disclose their climate risk in line with TCFD recommendations?
- When will your institution release a coal phase out policy that matches international best practice by competitors?[6]
- When will your institution publish a company-wide, forward-looking strategy in alignment with the Paris Agreement?
- What risks (including reputational and legal risks) does your institution believe arise from their coal investments globally? How do the companies propose to address such risks?
- Will your institution disclose policy positions related to climate change so as to influence their trade associations to take progressive positions on climate legislation?
- Given Japanese utilities' opacity for financing direct assets, how does your institution calculate their exposure to stranded assets in the new Japanese coal power?

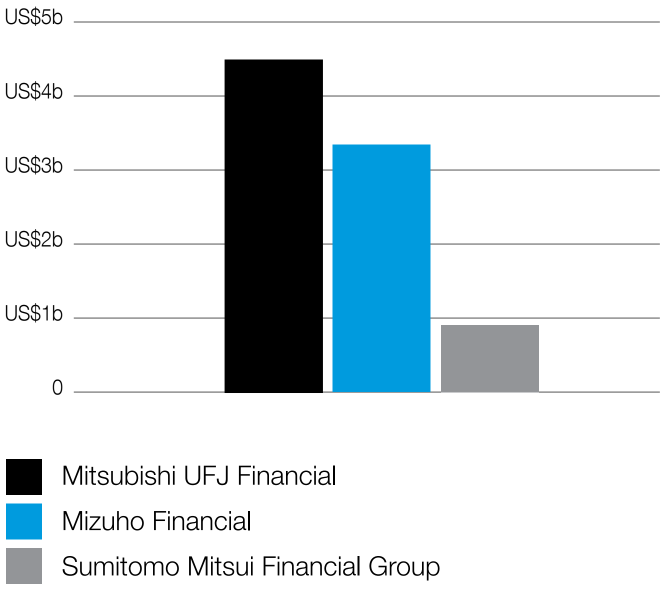
2.0 Japanese banks' poor record on climate

2.1 Japanese investment in global coal companies

Japanese financial institutions are some of the biggest in the world, and have been historically among the biggest financiers of coal power companies. From 2015-2017, Mitsubishi UFJ Financial, Mizuho Financial and Sumitomo Mitsui Financial Group contributed over US $8 billion to financing to coal power companies globally.[7]

Japanese banks financing top 30 coal power companies

Mitsubishi UFJ Financial - US $4.47 billion
Mizuho Financial -US $3.31 billion
Sumitomo Mitsui Financial Group -US $906 million



Japanese financial groups are falling behind their European and US peers who are moving away from coal. In 2018, Mitsubishi UFJ Financial was ranked 5th biggest for their financing of coal power plants. The top four were all Chinese banks. A civil society report found that 'seven Chinese and Japanese banks provided over half of the financing for coal power in the last three years'.[8]

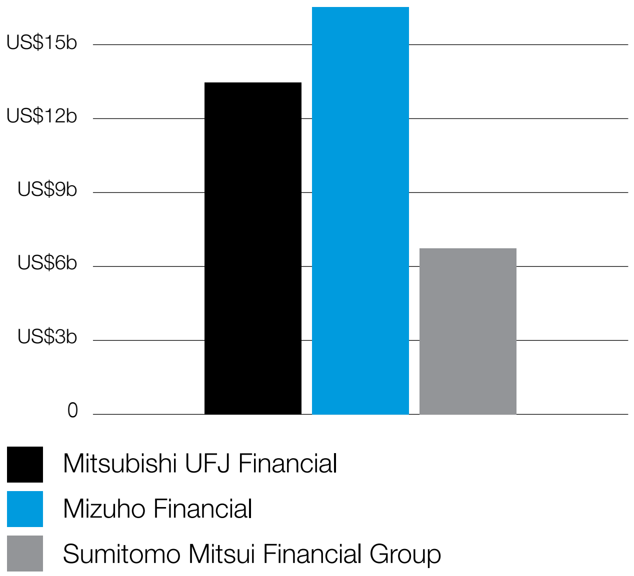
2.2 Japanese banks and new coal developers

According to the latest study on the top 120 coal plant developers (a group of companies which together plan to build more than 550,000 MW of new coal-fired power capacity, the equivalent of the combined coal fleets of India, the United States and Germany),[9] Japanese banks have emerged as the biggest lenders of new coal projects that, if constructed, will push the world towards dangerous climate change.

From 2014 to 2017, the three mega-banks of Japan facilitated over US $35 billion of financing (underwriting and lending) to new coal plant developers globally[10]. Mizuho and Mitsubishi UFJ Financial were ranked number 1 and 2 among the biggest lenders to future coal power developers globally.[11]

Japanese banks financing of 120 top coal plant developers

Mitsubishi UFJ Financial: US $13.7 billion
Mizuho Financial: US $16.8 billion
Sumitomo Mitsui Financial Group: US $6.6 billion



2.3 New coal power in Japan

Japan's energy system has been in a state of flux since the Fukushima disaster in 2011 and the subsequent closure of nuclear power stations which had once provided nearly a third of the country's electricity. There was the opportunity to turn to renewables to replace the lost energy source. But Japanese utilities have underestimated global trends towards renewable energy, and instead plan to build more than 40 new coal-fired power stations.[12]

Building new coal power plants is financially risky and environmentally disastrous. Not only is coal burning the biggest single contributor to carbon dioxide emissions, in many countries, it also poses stranded asset risk in the medium-long term. According to Oxford University's Smith School,[13] Japan's coal-fired power generation pipeline is at risk of stranding because of competition from

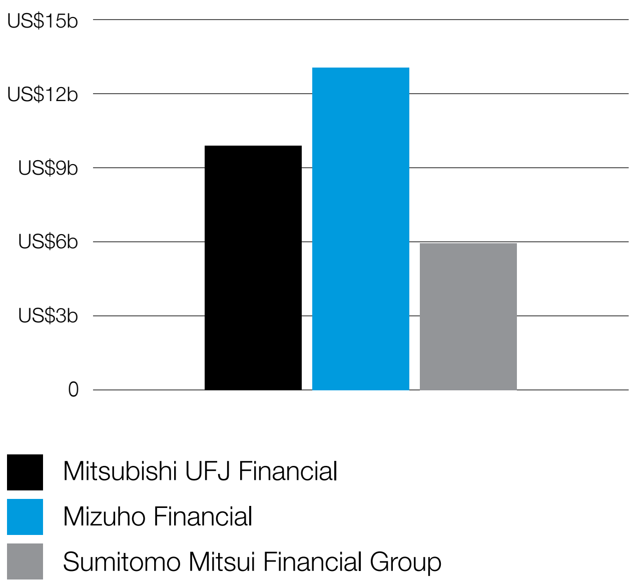
- renewable energy and nuclear power;
- regulatory risks that arise from the fact that coal power is the biggest source of water and air pollution.

Unlike most other utility companies around the world, Japanese utilities have provided little transparency over the flow of money to their coal assets. In 2020, Japanese electricity deregulation will legally require utility companies to unbundle their assets. But so far, utility companies have shown no signs of becoming more transparent.

Japanese financial groups have long been financiers of the energy industry, underwriting and issuing hundreds of corporate bonds for utility companies. According to Greenpeace's latest research, Japanese mega-banks dominate the underwriting of utilities behind 13 'high risk' domestic coal plants.[14]

'High risk coal plant' bond underwriters

Mitsubishi UFJ Financial - US $9.9 billion
Mizuho Financial - US $13 billion
Sumitomo Mitsui Financial Group - US $5.9 billion



3.0 Risky business

3.1 Financial Risk

a) Stranded asset risk

Stranded asset risk is playing out most notably in electricity generation where utilities with outdated coal-fired power plants are under pressure from tougher regulation and competition from renewables.[15] The International Energy Agency's World Energy Investment Outlook 2014 estimated that, after a full accounting of external costs, coal power plants worth US $120 billion could be stranded.[16]

Given Japanese financial groups' exposure to coal-fired power plant assets around the world and particularly in Japan, investors have a right to know how the banks assess whether their assets could be stranded in the long term.

b) Physical risk

Beyond direct exposure to stranded assets, Japanese financial groups are also exposed to the physical impacts of climate change in their energy assets. Climate variability leading to extreme weather events, and rises in sea level and temperature over time, will fundamentally change economic landscapes around the world. The risks have moved beyond a 'corporate social responsibility' issue: they are 'distinctly financial in nature'.[17] Coal power is especially susceptible to heat and water risk, which reduces plants' operating hours.[18] Yet none of the three Japanese mega-banks have recognised the economic losses due to these physical risks in their business strategies, nor have they committed to stress testing their business models with a scenario that is consistent with the Paris Agreement targets.

3.2 Regulatory risk

Governments aiming to limit carbon emissions in line with the Paris Agreement are introducing new regulations which impact investors and banks. Compliance failures can trigger fines, litigation, divestment and sudden changes in asset prices. Put simply, coal investments are incompatible with action on climate change, and banks and their investors run the risk that their short term lending decisions will undermine longer term political action on climate.[19]

Japan as a member of the G20 is falling behind its partners in requiring corporate and financial disclosure over climate-related risk. But there are signs of change. Policies such as the Financial Stability Board's Task Force on Climate Change related Financial Disclosures (TCFD) will accelerate the transition towards a low-carbon economy. When policymakers begin pressing for better climate measurement and stress testing, Japanese banks may find themselves in the frontline because of their importance to the Japanese economy.

Market	Regulation expressly requires climate risk to be disclosed	Regulation implies that climate risk should be disclosed	Regulation treats climate risk as financial risk (where material)	Regulation treats climate risk as non-financial risk	Policy/guidance expressly encourages or guides climate risk disclosure
Japan	✖	✖	✖	✖	✖
EU	✖	✔	✖	✔	✖
USA	✖	✔	✔	✖	✔
UK	✖	✔	✔	✔	✖
Canada	✖	✔	✔	✔	✔

Global Climate Risk Regulation in Comparison [20]

Japanese mega-banks have signed up[21] to the TCFD recommendations, which indicates to investors that they will act on them. Key TCFD recommendations require banks to disclose:[22]

- How the Board is viewing climate-related issues;
- What the management's role is related to the assessment and management of climate-related issues;
- What climate-related issues could have material financial impact on the organisation; and
- What climate-related transaction and physical risks exist in banks lending and other financial intermediary business activities.

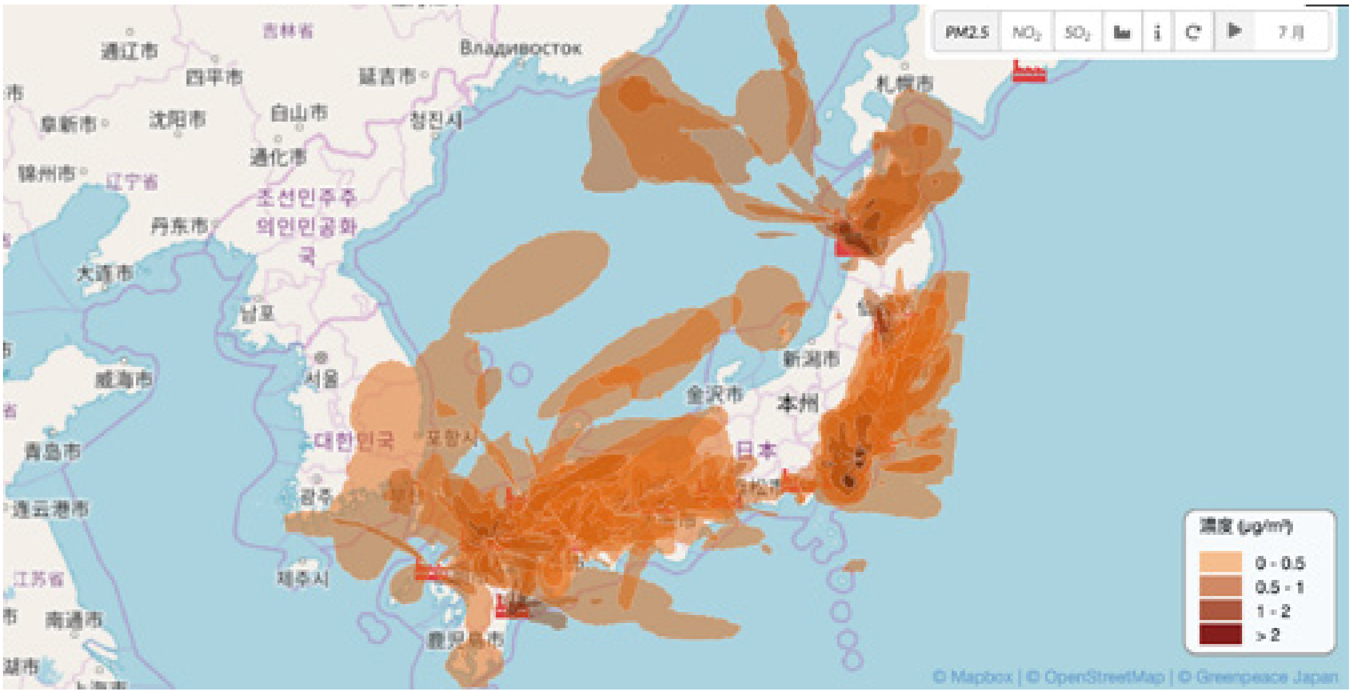
3.3 Environmental and health risk

Anthropogenic climate change is the overwhelming environmental challenge of our time and coal is the biggest single contributor.[23] Coal accounts for two-fifths of all global energy-related carbon emissions.[24]

Additionally, coal power is a major source of air pollution, producing sulphur dioxide (SO2), nitrogen oxides (NOx) and particulate matter (PM). When inhaled, these pollutants can have wide-ranging and harmful health impacts, including asthma attacks, lung tissue damage, stroke, heart attack and premature death. Recent Greenpeace research, building on a study undertaken with Harvard University, looked into the likely health impacts of the more than 40 planned coal power plants in Japan. Some of the findings are:

- Within 40 years of operation, the emissions from the planned power plants would cause over 60,000 premature deaths in Japan[25]
- The biggest impact would be felt in Tokyo, as several big plants are planned nearby where the population density is very high[26]
- Approximately 1170 schools and 530 hospitals are located within 10km of the planned power plants.

Concern about air pollution has led to regulatory control and environmental litigation in other countries. For example, since 2013, China has implemented command-and-control regulations to curb coal power plant growth,[27] and it closed down at least 50,000 megawatts of coal-fired power plant projects in 2017.[28] In this way, environmental risk has translated directly into financial risk for investors.



Simulation of expected air pollution impacts of planned coal plants in Japan [29]

3.4 Reputational risk

"Investors can no longer ignore climate change. Some may question the science behind it, but all are faced with a swelling tide of climate-related regulations and technological disruption." Blackrock, Adapting portfolios to climate change. [30]

"Blackrock expects the whole board to have demonstrable fluency in how climate risks affect the business and management's approach to adapting and mitigating the risk." [31]

Banking corporations have drawn the attention of campaigners and regulators because of their role in funding projects which contribute to climate change. The leader of the Dutch Central Bank and the governor of the Bank of England have stated that banks must do more to take into account risks posed by climate change.[32] A coalition of 100 investors with almost US $2 trillion in assets under management have called on the banking sector to act on climate,[33] and the Investor Agenda Initiative has called for commitment to phase out investments in thermal coal (specifically thermal coal mining and coal-fired power generation).[34] The world's second biggest institutional investor, the Norwegian Pension Fund, has divested from coal assets in its portfolio, including several Japanese energy companies.[35] Consumers, investors and civil society around the world have demanded that banks reduce and stop investing in coal or they will divest their assets from coal financing banks.[36]

The latest 'Banking on Climate Change' report card[37] showed Japanese banks falling behind their European and US counterparts in taking action on climate, especially on the issue of coal power plant investments. Any financial institution associated with coal projects can expect to meet opposition and protests from civil society, and investors must ask Japanese banks how they intend to mitigate the reputational risk and consumer backlash resulting from coal finance. In Japan, examples of coal plant cancellations in part due to local resistance already exist.[38]

Appendices

Methodology

1. Japanese investment in global coal companies

We relied on research conducted by Rainforest Action Network, BankTrack, the Indigenous Environmental Network, Oil Change International and the Sierra Club, analysing banks' financing for coal power from 2015-2017. Their report 'Banking on Climate change' examined participation in transactions involving the top 30 companies worldwide by coal generation capacity, from the Global Coal Exit List:

1. China Huaneng Group
2. China Guodian
3. China Datang
4. China Huadian
5. State Power Investment Corporation
6. Shenhua Group
7. NTPC
8. Eskom
9. China Resources Power
10. Korea Electric Power Corporation
11. Guangdong Yudean Group Co Ltd
12. Shaanxi Coal and Chemical Industry
13. Zhejiang Provincial Energy Group
14. RWE
15. Southern Company
16. Duke Energy
17. DTEK
18. Enel
19. Datong Coal Mine Group
20. Perusahaan Listrik Negara (PLN)
21. Shandong Weiqiao Pioneering Group
22. American Electric Power
23. NRG Energy
24. Hebei Construction & Investment Group
25. PPL Corporation
26. CLP Holdings
27. Dynegy
28. Huainan Mining Industry Group
29. Formosa Plastics Group
30. EDF

The criteria for the Global Coal Exit List can be found at their website,[39] and is summarised here:

1. Percentage criteria: 30% or more of the company's power production or revenues are coal-based.
   b. Companies which have a coal share of revenue above 30%.
   c. Utilities which have a coal share of power generation above 30%.
2. Absolute criteria: Companies whose annual coal production equals 20 million tons or more, and companies whose installed coal-fired capacity equals 10,000 MW or more.
3. Expansion criteria: Companies with coal mining or coal power expansion plans.
   a. Mining: new coal mines, meaningful expansion of coal production or exploration activities.
   b. Power: companies planning to develop, own or operate new coal-fired power plants of at least 300 MW.
   c. Services: Where information was available, infrastructure expansion was included.

2. Japanese banks and new coal developers

We relied on research conducted by BankTrack, Urgewald, Friends of the Earth France, Re:Common and Rainforest Action Network into the top 120 coal plant developers,[40] as identified by Urgewald.[41] The aim of Urgewald's database is to expose the companies responsible for the largest and the most aggressive expansion in the coal power sector. The database shows coal data on 120 coal companies. These 120 companies, are behind 2/3 of global coal power expansion worldwide.

The database shows three categories of companies:

1. The first category includes all companies that are planning to build more than 3,000 MW of new coal power capacity. Overall, there are 56 companies in the world that plan to build more than 3,000 MW of new coal capacity.
2. The second category includes companies planning to build coal plants in countries that have a lot of coal plants already. These countries emit a lot of CO_2 and should put all their efforts into transitioning to renewable energies immediately.
3. The third category includes companies planning to build coal plants in countries that do not have any coal power. Countries that do not have any coal plants yet should not start to build any coal plants now. New coal plants have to run for 40 years or longer to be profitable. This pressure to be profitable creates destructive coal dependencies.

Full explanation of their methodology can be found here:

https://coalexit.org/sites/default/files/inline-files/23062017%20Methodology.pdf

https://www.banktrack.org/coaldevelopers/data/coal_plant_developers_report_methodology.pdf.

3. Japanese banks and new coal power in Japan

Japan has more than 40 planned coal power plants. We selected developers of a group of coal plants that we believe are of high risk because of:

- Progress status of Environmental Impact Assessment
- Generated capacity
- Number of affected population

We excluded construction under 500 MW.

The developers were:

- Chugoku Electric Power
- Ube Industry
- Osaka Gas
- Tokyo Gas
- Idemitsu Kosan
- Kyushu Electric Power
- Tokyo Electric Power Co.
- Kobe Steel
- J Power
- Chubu Electric Power Co.
- Shikoku Electric Power Co.
- Kansai Electric Power Co.
- Itochu Enex
- Nippon Paper Industries Co.

Our research focused on the underwriting of corporate bonds. Because of the lack of transparency of Japanese utilities, it is not possible for banks to isolate their investment per asset class. This means any bond underwriting could be under pressure from climate risk in these companies' coal development.

Scope

Timeframe

We examined all bond issuances currently active for each of the companies listed above, as of March 2018.

Companies

In addition to direct financing to these companies, the research was broadened to research the entire corporate groups, including holding companies and financing subsidiaries. Where there has been ambiguity in source information of financial services, the authors of this report have acted cautiously, resulting in a likely underestimation of the true amounts of finance involved.

For each financial institution, we considered the following subsidiaries in analysis:

- Mizuho Financial
  - Mizuho Securities Co Ltd
  - Mizuho Bank Ltd
  - Mizuho International PLC
  - Mizuho Securities Asia
- Mitsubishi UFJ Financial:
  - Mitsubishi TB Securities Co Ltd
  - Tokyo-Mitsubishi Securities Co Ltd
  - Mitsubishi UFJ Morgan Stanley Securities
- Sumitomo Mitsui Financial:
  - Sumitomo Trust Securities Co Ltd
  - Sumitomo Capital Securities
  - SMBC Nikko Securities Inc

Bond issuance

Issuing bonds can best be described as cutting a large loan into small pieces, and selling each piece separately. Bonds are issued on a large scale by governments but also by corporations. Like shares, bonds are traded on the stock market. To issue bonds, a company needs the assistance of one or more (investment) banks which underwrite a certain amount of the bonds. Underwriting is in effect buying with the intention of selling to investors. If the investment bank fails to sell all bonds it has underwritten, it will end up owning the bonds.

Data Collection

For the collection of financial data, this research relied on Bloomberg's financial database. The data and assessment presented in this report have not been provided or authorised by the financial institutions themselves. While every attempt has been made to research and present data accurately and objectively, we cannot guarantee complete accuracy due to the lack of disclosure regarding coal sector investments.

Endnotes

1 See http://static.newclimateeconomy.report/wp-content/uploads/2014/08/NCE_Chapter6_Finance.pdf

2 See https://www.nature.com/articles/nclimate2972

3 See https://wedocs.unep.org/bitstream/handle/20.500.11822/22106/EGR_2017_ch_5.pdf?sequence=1&isAllowed=y

4 See http://climateanalytics.org/briefings/coal-phase-out.html

5 See http://coalbanks.org/#txt_Bank_moves_out_of_coal

6 See for example, three leading criterias of a meaningful phase out of coal at https://coalexit.org/methodology

7 This figure is taken from the "Banking on Climate Change Report" 2018, which analyzed banks financing for coal power including participation in transactions with top 30 companies worldwide by coal generation capacity, from the Global Coal Exit List, which can be found here: https://d3n8a8pro7vhmx.cloudfront.net/rainforestactionnetwork/pages/19540/attachments/original/1522211861/Banking_on_Climate_Change_2018_vWEB.pdf?1522211861

8 https://d3n8a8pro7vhmx.cloudfront.net/rainforestactionnetwork/pages/19540/attachments/original/1522211861/Banking_on_Climate_Change_2018_vWEB.pdf?1522211861

9 See explanation of the coal developers list at https://www.banktrack.org/coaldevelopers/

10 Accounting for both underwriting and lending.

11 https://www.banktrack.org/coaldevelopers/

12 https://asia.nikkei.com/Politics-Economy/Policy-Politics/Japan-falling-behind-peers-on-shift-away-from-coal

13 http://www.smithschool.ox.ac.uk/research/sustainable-finance/publications/satc-japan.pdf

14 We determined whether a coal plant is 'high risk' based on a variety of factors, please see further in methodology section.

15 "Adapting Portfolios to climate change" Blackrock Investment Institute, Global Insight 2016.

16 Simon Evans, "The IEA Weighs In on Stranded Assets–Not Just a Green Conspiracy?" The Carbon Brief, June 4, 2014, www.carbonbrief.org/the-iea-weighs-in-on-strandedassets-not-just-a-green-conspiracy

17 Geoff Summerhayes, Australia's new horizon: climate change challenges and prudential risk, February 2017.

18 See for example, http://www.tai.org.au/content/coal-and-gas-reliability-liability-heat-report; https://secured-static.greenpeace.org/india/Global/india/2017/docs/India-water-and-Coal-%20Briefing-2nd-Edition.pdf.

19 https://www.nature.com/articles/s41558-017-0053-1

20 https://f.datasrvr.com/fr1/717/47909/TCFD_Baker_McKenzie_PRI_full_report_2017.pdf

21 https://www.fsb-tcfd.org/tcfd-supporters-march-2018/

22 https://www.fsb-tcfd.org/wp-content/uploads/2017/12/FINAL-TCFD-Annex-Amended-121517.pdf

23 https://www.iea.org/publications/freepublications/publication/CO2EmissionsfromFuelCombustionHighlights2017.pdf

24 US Energy Information Administration, "FAQs," May 6, 2016, www.eia.gov/tools/faqs/faq.cfm?id=79&t=11.

25 http://www.greenpeace.org/japan/ja/news/press/2018/pr20180319/

26 http://www.greenpeace.org/japan/ja/news/blog/staff/blog/61323/

27 https://www.economist.com/blogs/economist-explains/2018/01/economist-explains-19

28 https://unearthed.greenpeace.org/2017/10/11/china-halts-150-coal-fired-power-plants/

29 https://act.greenpeace.org/page/21550/petition/1#

30 https://www.blackrock.com/investing/literature/whitepaper/bii-climate-change-2016-us.pdf

31 https://www.blackrock.com/corporate/en-au/about-us/investment-stewardship/engagement-priorities

32 https://www.bloomberg.com/news/articles/2017-10-05/dutch-regulator-tasks-banks-and-insurers-on-climate-change-risk

33 Please see the investor groups' press release at http://news.bostoncommonasset.com/a-hundred-investors-with-assets-totalling-nearly-2-trillion-call-on-worlds-largest-banks-to-disclose-climate-related-financial-information/; the report 'Banking on a low carbon future can be found at http://news.bostoncommonasset.com/wp-content/uploads/2018/02/Banking-on-a-Low-Carbon-Future-2018-02.pdf

34 https://theinvestoragenda.or

35 https://www.nbim.no/en/responsibility/exclusion-of-companies/

36 https://thecorrespondent.com/5470/even-the-oval-office-cant-stop-the-most-successful-climate-campaign-ever/602843230-9624c159

37 https://d3n8a8pro7vhmx.cloudfront.net/rainforestactionnetwork/pages/19540/attachments/original/1522211861/Banking_on_Climate_Change_2018_vWEB.pdf?1522211861

38 http://www.kikonet.org/eng/press-release-en/2017-03-23/Ichihara-cancel

39 https://coalexit.org/methodology

40 https://www.banktrack.org/coaldevelopers/

41 https://coalexit.org/database

Greenpeace is an independent campaigning organisation. Founded in 1971, it acts to change attitudes and behavior, to protect and conserve the environment, and promote peace and sustainability.

Greenpeace Japan

8-13-11 NF Bldg, 2 F, Nishi-Shinjuku
Shinjuku, Tokyo 160-0023

Tel: 81-3-5338-9800
http://www.greenpeace.org/japan

April 2018