

# Climate Change Response by Financial Institutions: A "Japanese Perspective" Required of the Authorities<sup>1</sup>

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At the end of April, the Financial Services Agency (FSA) released a draft of its "Basic Approach to Climate Change Response by Financial Institutions"<sup>2</sup>. The content of the draft is largely in line with the guidance already issued by the Basel Committee on Banking Supervision. It aligns with the international trend to proactively encourage financial institutions to address climate change. However, there is room for debate as to whether it is desirable to bring the "grand" policy experiment of climate change adaptation to Japan as it is being discussed in other countries. In this article, I would like to present several issues that need to be discussed to enhance the "sustainability" of the climate change response.

## As major countries' banking supervisors take action on climate change, the Japan Financial Services Agency finally released its "principles"

As climate change becomes a top concern for the global community, banking regulators continue to attempt to make financial institutions more aware of climate change risks and to translate these risks into changes in their lending and investment behavior as a tool to encourage action on climate change issues. This trend, which began in Europe in the late 2010s, has gradually been gaining momentum with international organizations such as the Financial Stability Board (FSB), as

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<sup>1</sup> This article appeared in the June 7, 2022 issue of the journal "Kinyu Zaisei Jijo" in Japanese. <https://kinzai-online.jp/node/9022>

<sup>2</sup> <https://www.fsa.go.jp/news/r3/ginkou/20220425/20220425.html>

well as U.S. regulators, which once stalled under the Trump administration. It is now becoming a new "mainstay" of the international financial regulation and banking supervisory agenda.

Last November, the Basel Committee on Banking Supervision (BCBS) released "Principles for the Effective Management and Supervision of Climate-Related Financial Risks" for consultation, reducing the climate change response's philosophy to a practical perspective on banking supervision<sup>3</sup>. The "Approach" released by the FSA this time also follows this trend, emphasizing "governance," "risk (and opportunity) recognition/assessment/response," "communication with stakeholders," and "support for clients' response" to climate change risks, etc. Its content exactly mirrors the arguments made by the papers published by the BCBS and FSB.

## **Is "climate change" the only issue that will emerge when the time horizon of risk is lengthened?**

While the idea of using a banking supervisory framework to address climate change is indeed a grand and innovative regulatory scheme, my observation is that there are some aspects that do not necessarily comfortably fit into the Japanese-facing environments. Overlooking these issues may in fact make the "sustainability" of Japan's climate change response rather vulnerable. In this article, I will discuss several issues related to the banking regulatory design regarding the climate change risk.

(Discussion Point 1) Is "climate change risk" the only risk to be addressed over a long- time horizon?

The innovative aspect of the climate change response concept is to extend the time horizon for risk management of financial institutions, usually about one to five years, to as long as 30 to 50 years. This will encourage the current generation to respond to risks that would typically only concern future generations as they are likely to materialize in the distant future. It has long been pointed out that the aging of the population has led to the adverse effects of "silver democracy," and this approach will help alleviate these adverse effects.

On the other hand, one question is whether "climate change" is the only significant economic and social issue that can be seen if the time horizon is extended to 30 to 50 years. Focusing only on climate change while ignoring other important issues may lead to biases in policy responses (misallocation of policy resources) and unexpected policy outcomes. Taking Japan as an example, "declining birthrate and aging society," "major earthquakes," and "fiscal sustainability" seem to be

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<sup>3</sup> <https://www.bis.org/bcbs/publ/d530.htm>

far more critical than "climate change" in terms of probability, nearness of its materialization, and macroeconomic impact (see Figure 1)<sup>4</sup>.

**(Figure1) Comparison of mega-risks with a reasonably high probability that Japan will face in the future**

	<b>Climate change</b>	<b>Aging population</b>	<b>Big earthquakes</b>
<b>Impacts on the Japanese Economy</b>	According to Brookings (2021), the cumulative impact (deviation from the baseline) of the most negative of the four climate change scenarios used on the Japanese GDP growth rate are; <b>2021-30: Cumulative total –1.98%</b> <b>2031-40: Cumulative total—2.68%</b>	According to the Japan Center for Economic Research (2021), the extent to which Japan's population factors will put downward pressure on annual growth rates is: early 20s: about 0.3% late 20s: about 0.4% early 30s: about 0.6% The cumulative downward pressures expected from these estimates for the 20s and 30s are; <b>2021-30: Cumulative total—mid-3%</b> <b>2031-40: Cumulative total—slightly higher than 6%</b>	According to the Cabinet Office (2013), the economic damage (direct and indirect) caused by an earthquake that directly hits the Tokyo metropolitan area is 95 trillion yen, equivalent to a little less than 20% of current GDP. <b>At the time of the earthquake—a little less than 20%</b>
<b>Uncertainty over the materialization of damages</b>	<b>Very large</b> In addition to the very large uncertainties related to climate change, the concept of the transmission channels of climate change to the macroeconomy is still in the early development stage.	<b>Relatively small</b> The accuracy of demographic projections tends to be relatively high, and the method of estimating the impact of population factors on the macroeconomy (supply-side) is also well-established.	<b>Relatively small within the next 30 years</b> Probability of a magnitude 7 earthquake that hits Tokyo area directly within the next 30 years is about 70% (as of January 24, 2020, government projection)

(Sources)

Brookings (2021): Brookings “Global Economic Impacts on Climate Shocks, Climate Policy and Changes in Climate Risk Assessment” March 27, 2021

<https://www.brookings.edu/research/global-economic-impacts-of-climate-shocks-climate-policy-and-changes-in-climate-risk-assessment/>

<sup>4</sup> Outside of Japan, for example, retail lenders in the U.K. have pointed out that if climate change risk is to be taken into account when considering long time horizon risks, other important risks (e.g., customer behavior during this period, loan repayment, inflation and housing price changes, etc.) must also be taken into account.

<https://www.fca.org.uk/publication/corporate/climate-financial-risk-forum-guide-2021-appetite-statements.pdf>

Japan Center for Economic Research (2021): Japan Center for Economic Research, "Medium-term Economic Outlook: Negative Growth in the 30s without building a DX Society," December 7, 2021 <https://www.jcer.or.jp/economic-forecast/2021127.html>

Cabinet Office (2013): Cabinet Office, "Damage Assumption and Countermeasures for a Metropolitan Earthquake (Final Report)," 2013

[http://www.bousai.go.jp/jishin/syuto/taisaku\\_wg/pdf/syuto\\_wg\\_report.pdf](http://www.bousai.go.jp/jishin/syuto/taisaku_wg/pdf/syuto_wg_report.pdf)

Of course, some may argue that the risks related to earthquakes have already been addressed in the BCP. Similarly, the negative impact of "declining birthrate and aging population" on regional economies, in particular, may be seen as an "already discussed" agenda during the time of Superintendent Mori. However, in the case of climate change, the risks are precisely captured by dividing them into the physical and the transition risks, and they are quantitatively assessed every year by stress testing through scenarios. This strict recognition of the risk puts pressure on financial institutions to address these risks. If this is necessary for climate change, then there is no reason why Japan should not conduct similar risk assessments for "declining birthrate and aging population" and "major earthquakes. Before passively accepting the tweet made by Elon Musk lamenting Japan for eventually ceasing to exist<sup>5</sup>, we must first confront these important issues facing Japan by using the institutional schemes that have already been developed for the climate change response.

Equally important is the risk that the climate change response could invite unintended consequences through its correlation with other issues. A typical example would be increased reliance on nuclear power generation as a result of aiming to reduce CO2 emissions as part of the climate change response. Under current technological constraints, there appears to be a trade-off between the risk of climate change and the risk of nuclear power plant dependence. Suppose the society's appetite for the risk associated with nuclear power plant dependence is not thoroughly assessed before proceeding with climate change responses. In that case, the result may be a biased policy outcome that ignores the possible low appetite for the nuke risks.

## **Physical risk responses may "rub salt" into the wounds of entities suffering from climate change**

(Discussion Point 2) Should the entities to which the physical risks are attributable be penalized?

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<sup>5</sup> "Mask, 'Japan Will Eventually Cease to Exist,' Alarmed by Declining Birth Rate," Nihon Keizai Shimbun, May 8, 2022

The actions that supervisors require financial institutions to take in response to climate change should be based on an assessment of physical and transition risks. Then financial institutions are expected to implement these actions through:

1. Pricing (incorporating a risk premium into lending rates).
2. Rationing (reducing the volume of loans).
3. Moral suasion (persuasion through engagement, etc.) against entities at high risk.

Of these, (1) is the most effective, and my observation is that the authorities are gradually shifting their orientation from (3) to (1). For example, the premium for transition risk will encourage financial institutions directly to be attuned to the government policy on climate change. Meanwhile, the premium for physical risk help visualize the physical costs of climate change in the future and thus encourage the entities that suffer from this premium to put more pressure on governments to address the causes of climate change. As a secondary effect, it is also expected to make economies and societies more resilient to climate change through people/enterprises' geological shift from high to low physical risk areas.

It appears that a socially acceptable atmosphere is gradually developing in which industries with high transition risk (e.g., those with high CO2 emissions in themselves or in their supply chains) are being penalized more heavily. On the other hand, there still appears to be very limited room for society to accept the mechanism of penalizing the entities with high physical risks (basically, companies and individuals located in specific regions).

In Europe, for example, the results of stress tests related to climate change risk have already been published<sup>6</sup>, and the results show that while there is not much difference in the degree of transition risk among countries, the difference in physical risk is huge. In other words, the physical risk in southern European countries (Greece, Spain, Italy, etc.), where "wildfire" damage associated with climate change is large, is much greater than in other countries. In this case, would the magnitude of the physical risk (and, moreover, the magnitude of the sovereign risk arising from the fiscal burden that this poses) justify imposing a higher penalty on loans to these countries? Although the authorities have not stated that they "should" do so at this stage, the design of the climate change response makes such an interpretation quite possible.

Similarly, if we translate this to Japan, would it be acceptable to increase interest rates on loans to companies and residences (or force them to purchase natural disaster insurance) in areas where wind and flood damage is prominent (e.g., Kumamoto, Fukuoka, and Hiroshima prefectures) because of the physical risks involved? Although it seems economically reasonable to induce

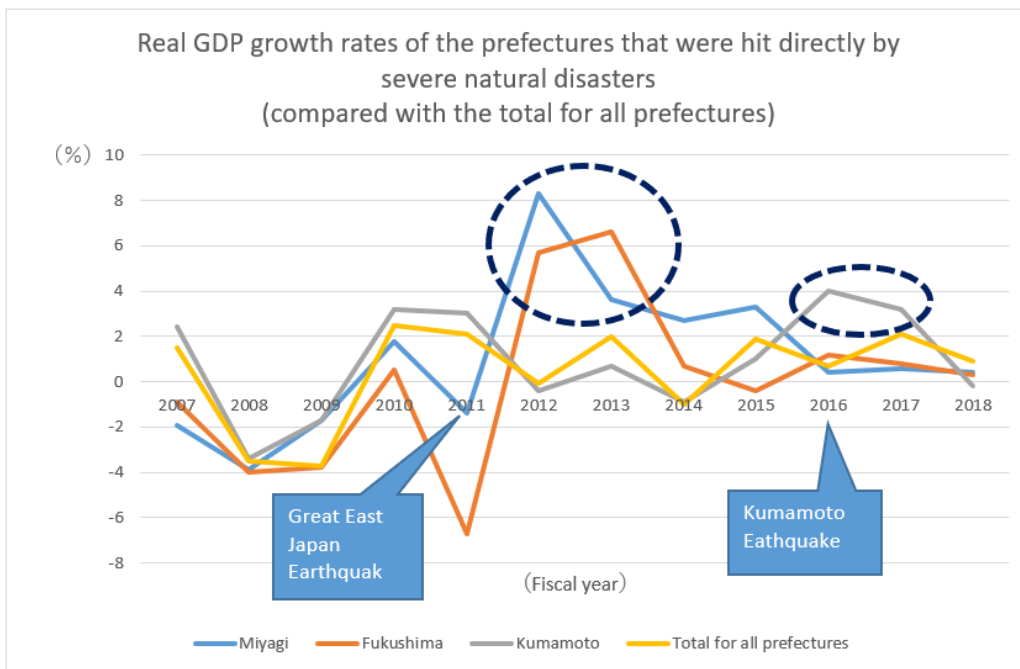
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<sup>6</sup> <https://www.ecb.europa.eu/pub/pdf/scpops/ecb.op281~05a7735b1c.en.pdf>

companies and residents who are strongly exposed to physical risk to move to safer areas through a penalty effect, it may be challenging to see that the society would actually accept it.

Regarding the physical risk, it is also important to note that its impact on the macroeconomy in Japan is likely to have a "positive" effect (sometimes with a time lag) rather than a "negative" effect, as is generally expected (see Figure 2). This is mainly owing to the "reconstruction demand" effect. In other words, the manifestation of physical risk (the occurrence of natural disasters) has created a "new effective demand" that easily offsets the negative economic impacts of disasters. If we conduct a data-oriented stress test, we must consider how to deal with such "inconvenient truths ." At the same time, if stronger levees, seawalls, and other flood control facilities are built to prevent wind and flood damage, there remains the concern that the residents' awareness of the need to prevent climate change in the future itself will fade as the immediate physical risk decreases.

(Figure2)



(Source) Cabinet Office

[https://www.esri.cao.go.jp/jp/sna/data/data\\_list/kenmin/files/contents/main\\_2018.html](https://www.esri.cao.go.jp/jp/sna/data/data_list/kenmin/files/contents/main_2018.html)

# Japan's awareness as the "most vulnerable country to climate change" will lead to a robust climate change response

(Discussion Point 3) Given the current low level of awareness of climate change risk among the Japanese, can we say that the government's policy to confront financial institutions with the disgruntled crowd facing possible penalties against CO2 emission is fair?

As is often pointed out in the media<sup>7</sup>, the sensitivity of the Japanese people to climate change issues is significantly lower than that of Europe and other foreign countries. In such a situation, demanding that financial institutions should take action to change the CO2 emission-causing behavior of companies and people based solely on overseas trends may ultimately lead to a backlash against financial institutions.

On the other hand, many foreign research institutes consider Japan to be one of the countries most vulnerable to climate change<sup>8</sup>. In other words, the Japanese people's lack of sensitivity to climate change issues may simply be the result of insufficient information about climate change risks from the government and media. Before the government/authorities put the financial institutions in the crossfire of public outcry, they must first show the public the damage that climate change will do to Japan in a more "realistic" manner and raise public awareness of the crisis.

To this end, as pointed out in Discussion Point 2, we should understand that lowering the physical risk temporarily by enhancing the physical resilience with infrastructure investment against typhoons and floods will only weaken society's sensitivity to the root causes of climate change. There is no need to dismiss Japan's wisdom of public investment that swiftly helps the suffered regions to alleviate the economic as well as physical damages. However, as fiscal sustainability becomes doubtful in the long run and the adverse effects of climate change could easily go beyond the human capacity to cope with it, the authorities should be more vocal about the limitations of these policies and the ultimate need to cut off the root causes.

Finally, I would like to emphasize that the government's subsidies to gasoline retailers in response to the recent hike in oil prices are in direct conflict with measures to reduce CO2 emissions. Suppose the government/supervisory authorities demand that financial institutions play the role of

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<sup>7</sup> See, for example, "Trust in Science: 25% in Japan," Mainichi Shimbun, January 24, 2020, for a discussion of the low level of awareness of climate change among the Japanese. For background, see, for example, "Global Warming: Why Public Opinion in Japan Is Not Growing," Mainichi Shimbun, January 9, 2021.

<sup>8</sup> See, for example, the followings.

<https://www.iberdrola.com/sustainability/top-countries-most-affected-by-climate-change>  
<https://reliefweb.int/report/world/global-climate-risk-index-2021>

a hater in forcing companies and individuals to change their attitude toward climate change by passing on the cost of risk premiums. In contrast, the authorities play the role of "Buddha" by subsidizing companies and individuals who suffer from increased costs. In that case, no financial institutions will seriously follow the government's leading climate change responses.