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**Testimony before the Senate Special Committee on the Climate Crisis**

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Chairman Schatz and members of the committee, it is an honor to be here today.

My name is Frédéric Samama.

I am the Head of Responsible Investment at Amundi, the largest European asset manager with $1.8 trillion in assets.

I am specialized in developing financial innovations that combine additional returns for investors and positive impacts on society[[1]](#footnote-2).

Today, my testimony will focus on The Green Swan,[[2]](#footnote-3) a book I recently published with authors from the Banque de France, the Bank for International Settlements (BIS), and Columbia University.

The views expressed here today are my own.

First, I will explain why Central Banks are putting climate change on their agenda.

Second, I will describe the mobilization of asset owners on climate change.

Third, I will revisit the traditional green vs fiduciary responsibility debate.

Our book, the Green Swan, is about Central Banks and Climate Change.

In the last two years, 59 Central Banks and financial supervisors have joined the Network for Greening the Financial System[[3]](#footnote-4).

This is because Central Banks now recognize that climate change threatens financial stability.

Either we do nothing, and then we put humanity at risk,

or we adjust how we manage our systems.

But the magnitude of the adjustments is so massive that it could threaten financial stability.

This is why the book’s authors developed the concept of Green Swans, inspired by the famous Black Swans of Nassim Nicholas Taleb.

A Green Swan is a highly certain event with multiple non-linear and interacting causes that threatens life on Earth.

Climate change is an example of a Green Swan.

First, climate change is certain.

Second, climate change carries a variety of non-linear and interacting risks: physical, regulatory, and societal. It is very challenging to make such a complex model.

Third, climate change could lead to extreme losses in the short term. And even to the possible extinction of part of humanity in the long term.

In summary, climate change could create some potentially extremely disruptive events that underlie systemic crises.

Regarding physical risks, extreme weather events have multiplied by four over the past 40 years.

And more heat waves, droughts, typhoons, disease pandemics, rising sea levels are to come.

This could destroy many physical assets like crops or coastal properties.

And as insurance companies cover only 44% of the damages in the US (and 8% in Asia), households and banks are increasingly exposed.[[4]](#footnote-5)

Similarly, by 2050, the World Bank estimates that 143 million people could have to migrate due to climate change.[[5]](#footnote-6)

This could lead to an increase in conflicts and wars.

Regarding transition risks, at the COP21, 195 countries agreed on targets to curb greenhouse gas emissions with already major impacts on many industries.

Volkswagen lost 40% of its value for developing software to dodge new emissions regulations.

In this context, how can we preserve financial stability?

Two steps are needed for this.

First, traditional backward-looking risk models do not capture future risks.

We need to work with new models, including scenario analysis or climate stress tests.

But the deep uncertainties are such that no single model or scenario can provide a full picture of the macroeconomic and firm-level impacts caused by climate change.

Central Banks must recognize the limits of their existing analytical and policy toolbox.

Second, Central Banks must play an additional role by helping coordinate the measures to fight climate change.

We must obviously move forward with carbon pricing.

We must explore new policy mixes (fiscal-monetary-prudential) to better address the climate imperatives ahead.

We must reform international monetary and financial systems to recognize climate stability as a global public good.

We must systematically integrate sustainability criteria in the financial sector.

And here the good news is that investors are getting mobilized.

For example, 450 investors managing $41 trillion are now challenging the 100 most polluting companies.[[6]](#footnote-7)

Not to save the planet. But to save the assets of their beneficiaries.

In parallel, investors now benefit from plug-and-play financial tools.

With low carbon equity indexes[[7]](#footnote-8), investors can now reduce their exposure to the most polluting companies while maintaining broad market exposure.

These indexes have outperformed traditional indexes since their creation[[8]](#footnote-9).

In other words, to be green has led to better performance.

In conclusion, the world has changed over the past five years.

In Paris, 195 countries agreed to address climate change

Renewable energy is becoming competitive compared to coal.

Populations and asset owners are getting mobilized.

On their own, none of these forces will be enough to catalyze change.

But when they all change at the same time and get aligned, then we have a tipping point.

And this is the moment we are living.

Mr. Chairman and members of the Committee, you have an incredible window of opportunity to regulate polluting companies to ensure the stability of our financial markets.

Thank you.

1. ###  “Amundi’s early mover”. Environmental Finance, 2018. Available at https://www.environmental-finance.com/content/analysis/amundis-early-mover.html

 [↑](#footnote-ref-2)
2. ###  Available at https://www.bis.org/publ/othp31.pdf

 [↑](#footnote-ref-3)
3. <https://www.ngfs.net/en/about-us/membership>. [↑](#footnote-ref-4)
4. MunichRe. 2018. “The Natural Disasters of 2018 in Figures.” https://www.munichre.com/topics- online/en/climate-change-and-natural-disasters/natural-disasters/the-natural-disasters-of-2018-in- figures.html. [↑](#footnote-ref-5)
5. ###  “Groundswell: Preparing for Internal Climate Migration” World Bank 2019

 [↑](#footnote-ref-6)
6. http://www.climateaction100.org [↑](#footnote-ref-7)
7. Andersson, M., Bolton, P., & Samama, F., 2016 (a), “Hedging Climate Risk”, Financial Analysts Journal, 72(3), 13-32

Andersson, M., Bolton, P., & Samama, F., 2016 (b), “Governance and Climate Change: A Success Story in Mobilizing Investor Support for Corporate Responses to Climate Change”, Journal of Applied Corporate Finance, 28(2), 29-33 [↑](#footnote-ref-8)
8. Eccles, B., [Klimenko](https://hbr.org/search?term=svetlana%252520klimenko), S., “The Investors Revolution” Harvard Business Review May-June 2019 [↑](#footnote-ref-9)