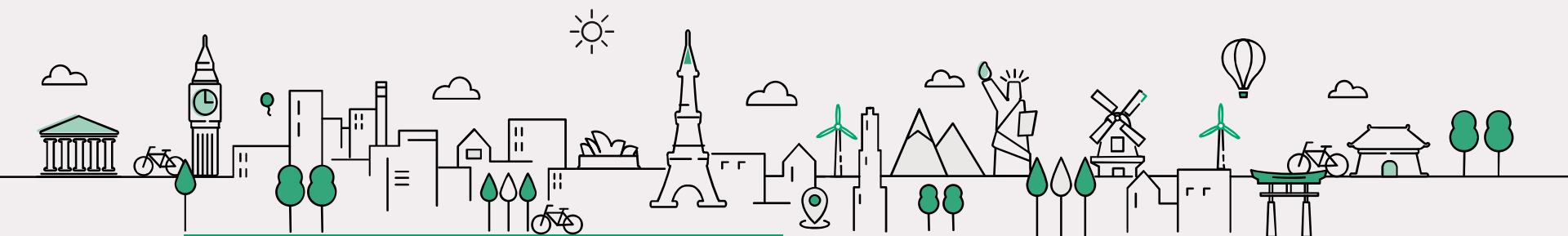


# CLIMATE RISK SUMMIT

## Making the most of the green and sustainable assets market



FELIPE GORDILLO  
FRANKFURT, DECEMBER 2019

For Professional Investors



**BNP PARIBAS**  
**ASSET MANAGEMENT**

The asset manager for a changing world

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All data in this presentation are as of 01/10/2019, unless specified.

# Climate emergency: Why do we need to act now?

2030



At the current rate, the IPCC report states that **we will exceed 1.5°C of warming by 2030**

99%



**99% of coral reefs disappear under a 2°C scenario.**  
**1 billion people have some dependence on coral reefs**

200  
million



Forecasts of **climate change-induced migration** vary from **25 million to 1 billion environmental migrants** by 2050

Source: OECD Development Co-operation report 2018, BNP Paribas Asset Management, November 2019.

# Climate emergency: Why do Central Banks have a role to play?

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- ❑ **Financial system stability:** Central banks are crucial to determine climate-related financial risks in the financial system and to integrate them into prudential supervision.
  - ❑ **Asset owners with reserves totaling \$13trn:** Central bank integration of sustainability factors can contribute to market standardization, improvement of ESG data and more sophisticated solutions such as climate scenarios.
  - ❑ **Preservation of monetary policy instruments:** The climate emergency is a threat that can erode conventional monetary policy effectiveness.
  - ❑ **Central banks are independent** and less subject to political changes.
-

# Are Central Banks in a position to lead by example?

DeNederlandscheBank

EUROSYSTEEM



Central Banks potentially manage 3 types of portfolios: FX reserves, pension funds and a portfolio of own funds.

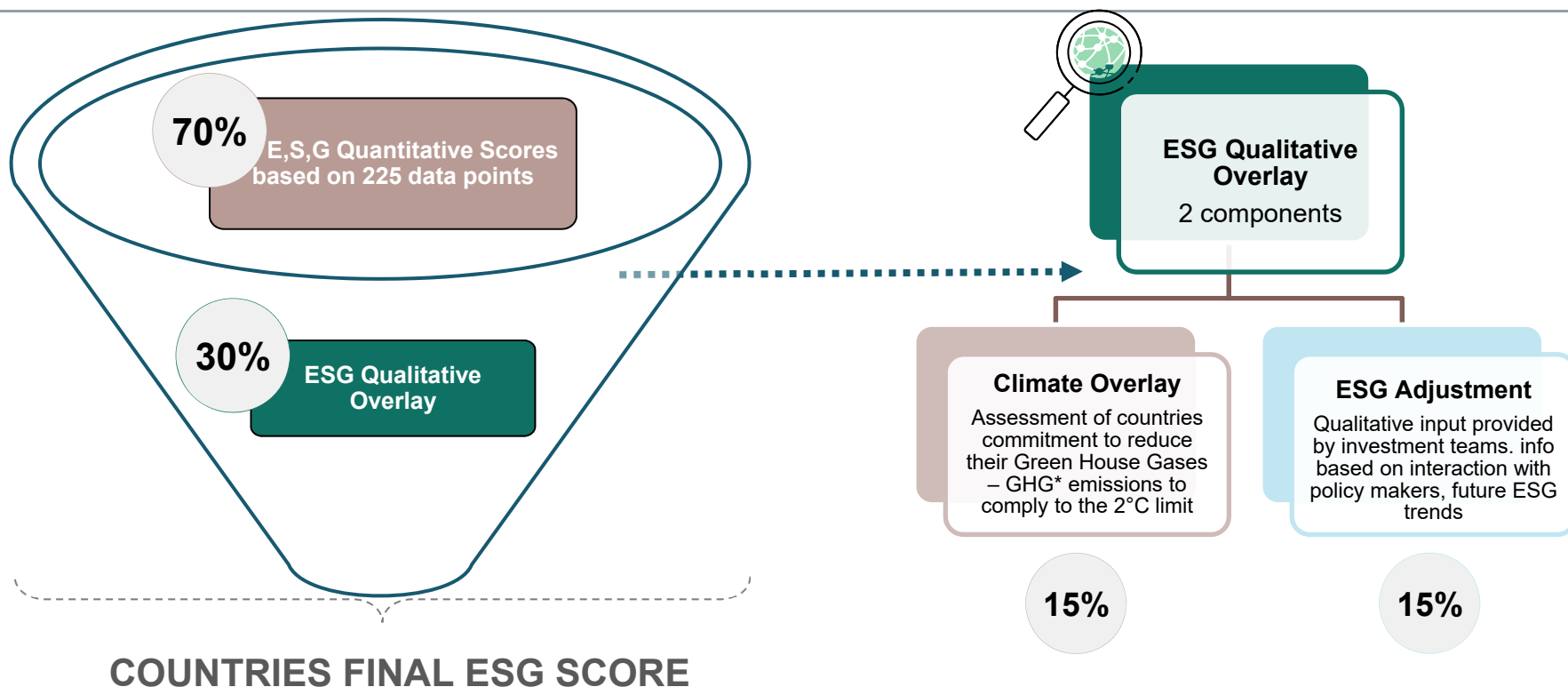
DNB is the first central bank to **integrate ESG** criteria across its own funds and FX reserves and to become a **PRI signatory**.

Riksbank recently **divested** from highly carbon intensive bonds from Queensland and Alberta.

## Challenges:

1. Reserve management traditionally aims to optimize 3 targets, liquidity, safety and return. Including sustainable goals could involve **additional tradeoffs**.
2. In the **absence of comprehensive** ESG disclosures it is difficult to ensure well informed investment decisions,
3. A vast majority of reserves are invested in sovereign bonds. There is a **mismatch** between the **time horizon** of the ESG factors for a country, and the speed at which bond markets price ESG data.

# ESG approach to sovereign debt



**ESG in sovereign debt benefits from the investment team's in-depth knowledge and from the dialogue with regulators and policymakers**, hence helping to integrate a view on each country's perceived evolution to the static ESG performance quantitative assessment and taking into account very unique characteristics.

\*Green House Gases

# Climate scenarios for sovereign issuers

BNPP AM Climate model aims to assess the commitment of each country to the goals of the Paris Agreement, comparing **2°C compatible emissions budget** for each country by 2030 and their expected emissions given their **Nationally Determined Contributions**.

## ILLUSTRATION – The Case of India



India emissions in 2030\* (MtCO<sub>2</sub>eq) for the below +2°C scenario given its population forecast\*\*

6996.13

India's expected emissions in 2030 given its NDCs & population forecast (MtCO<sub>2</sub>eq)

6950.80

NDC Country ambition

-0.6%

### CLAIM TRANSLATION



**India's NDC\* Temperature: +1.9°C.**

i.e. if all countries were to emit in 2030 0.6% less than their carbon emissions budget estimated with the CLAIM model, we would be on the path to have a global warming of +1.9°C by 2100, which is compliant with the below 2°C target.

\*CLAIM output ; \*\*Population forecast for India in 2030: 1.51bn inhabitants vs 1.37bn in 2019 - Source: United Nations Medium Variant scenario population forecast.  
Source: Beyond Ratings, BNP Paribas Asset Management, November 2018

Illustration – applying countries temperatures to a sovereign benchmark

Country	weight	t°C	t°C / portfolio
Italy	22.6	2.5	0.557
Germany	16.8	3.0	0.497
France	24.7	1.9	0.480
Spain	14.2	2.5	0.359
Austria	3.6	6.2	0.223
Belgium	6	3.1	0.189
Netherlands	5	3.3	0.167
Ireland	1.9	4.0	0.077
Portugal	2.2	2.6	0.057
Finland	1.6	1.3	0.022
Slovakia	0.5	3.1	0.015
Slovenia	0.4	2.4	0.010
Luxembourg	0.1	4.5	0.005
Latvia	0.1	2.9	0.003
Lithuania	0.1	2.3	0.002
Cyprus	0.1	2.2	0.002
Sum	100%		
av. t°C / bench			2.7

Source: BNP Paribas Asset Management - As of November 2019

\*Nationally Determined Contributions



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# Prudential regulation at the heart of financial stability



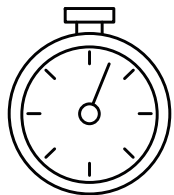
Micro-  
prudential  
regulation

- ❑ **FSB's Task Force on Climate Related Financial Disclosures - TCFD** aims to promote market discipline by identifying climate change risks and opportunities. Over 800 organizations support TCFD, including the world's financial institutions, managing more than of \$118 trillion.

- Disclosures are underdeveloped.

- ❑ **Brown penalizing factor** across capital adequacy rules is the preferred tool to reflect climate change risks not sufficiently priced by the market.

- Incorporating climate into international capital requirement rules requires political consensus at G20 level.



Macro-  
prudential  
regulation

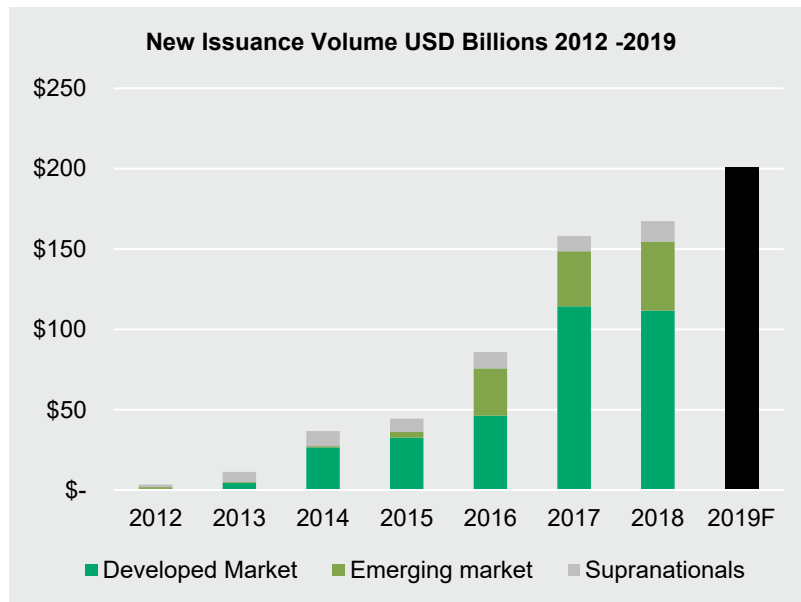
- ❑ **Stress testing** is the adequate process to understand how climate risk affects financial institutions. Bank of England Insurance Stress Test (June 2019) and Climate Biennial Exploratory Scenario – BES ( 2021)

- The challenge is to conceive long term climate driven macro economic models based on current data and trends.



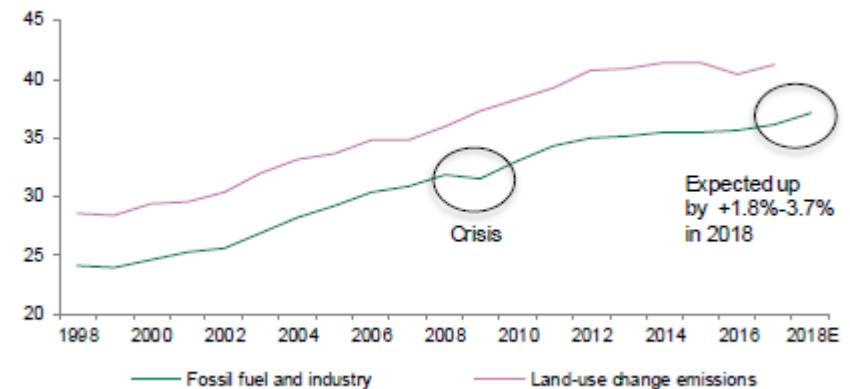
# A Green Bond Revolution

Between now and 2030, **USD 6.9 trillion a year** will be required to support the energy transition towards a low-carbon economy\*. The global fixed-income market exceeds **USD 100 trillion of outstanding** securities\*. Green bonds are the **missing link** between the need for energy transition financing and supply from debt capital markets.



Source: Climate Bonds Initiative & BNPP AM Sustainability Centre, March 2019

**Global fossil CO2 emissions up in 2018 (GtCO2)**

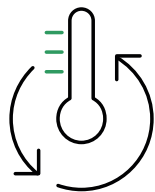


Source: Global Carbon Project

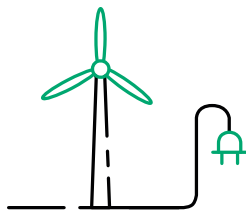
\*Source: IEA, March 2019 (via Reuters)

# Debate: What should central banks do to scale up green finance?

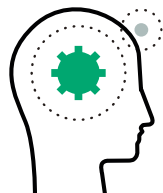
Central bank and supervisors group - **Network for Greening the Financial System (NGFS)** - recent publications outline how to translate commitments into action to monitor climate financial risks. Central Banks action on climate change is **becoming the new normal on climate policy**.



Changing prudential rules will deliver a timely response to the climate emergency?



Would a preference for green assets come at the cost of price stability?



How to interpret the principle of market neutrality?

“Should policy be neutral relative to the current market, which is subject to pervasive market failures, or relative to a sustainable market in which externalities are priced?” (Robins and Dikau, 2019)\*

\*Source: Robins, N., Dikau, S., Tager, M., 2019. Building a Sustainable Financial System: The State of Practice and Future Priorities. Financial Stability Review Magazine, Autumn 2019, Banco de España



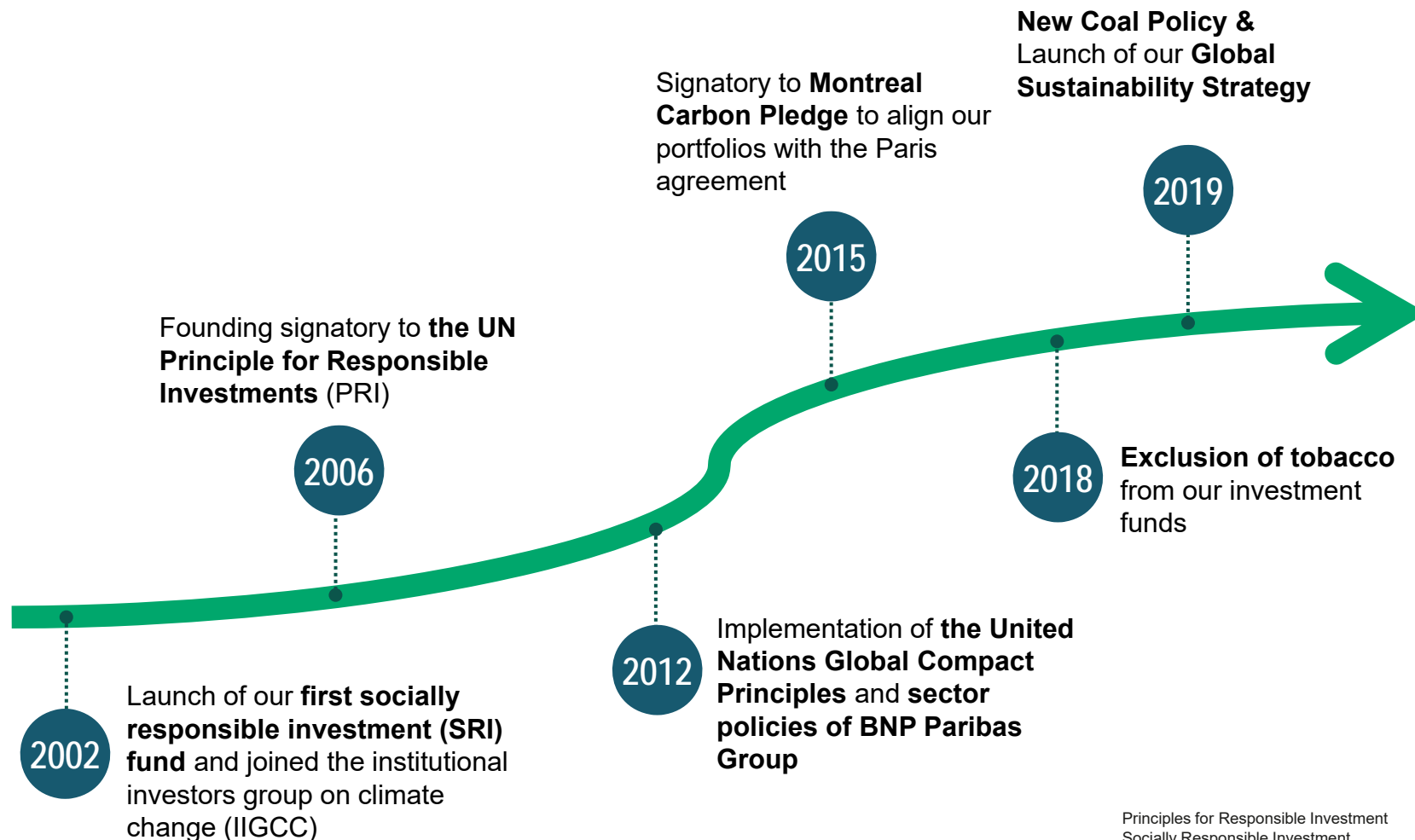
# APPENDIX



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# A long term commitment toward sustainability since 2002



Source: BNP Paribas Asset Management - As of April 2019

Principles for Responsible Investment  
Socially Responsible Investment  
Institutional Investors Group on Climate Change



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# Felipe Gordillo, Senior ESG Analyst



Felipe Gordillo is a Senior ESG Analyst at BNP Paribas Asset Management. He joined the firm in 2009. As senior analyst, Felipe is responsible for the implementation of BNPP AM green bonds strategies and lead ESG engagement for sovereigns. Further, Felipe is responsible for research and engagement in the Real Estate sector.

Felipe is member of The Climate Bonds Standard Board providing oversight over the implementation and operation of the Climate Bonds Standard & Certification Scheme.

Felipe is co head of the Property Working Group at the Institutional Investor Group on Climate Change – IIGCC. This group aims to ensure that considerations of climate change are integrated into decision-making processes for property investment portfolios.

Felipe is also member of the Principles for Responsible Investment -PRI Sovereign Engagement Working Group aiming to develop a framework for sovereign bondholder engagement

Felipe teaches Microfinance and Responsible Investment at Panthéon-Sorbonne University and Gustave Eiffel Business School at Paris-Est Créteil Val-de-Marne University.

Prior to joining BNP Paribas, Felipe gained 3 years of professional experience working at Positive (Planet) Finance, an International NGO fighting poverty through the development of the microfinance sector. Felipe holds two master degrees, in Development studies from Sorbonne University and Financial Engineering from ESSEC Business School.

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