



BANCO DE PORTUGAL
EUROSISTEMA

Universidade Lusíada

Sustainable Finance International Conference

3 May; 17:15-18:00 Lisbon

“Central banking and sustainability”

Keynote speech by Vice-Governor Clara Raposo

Thank you, Professor Álvaro Matias, Professor Isabel Cantista and Professor Theodor Cojoianu, for inviting me and for the kind introductory words. It is always a pleasure to be back in Academia. If you allow me the environmental jargon, it is my natural habitat, very much to my liking.

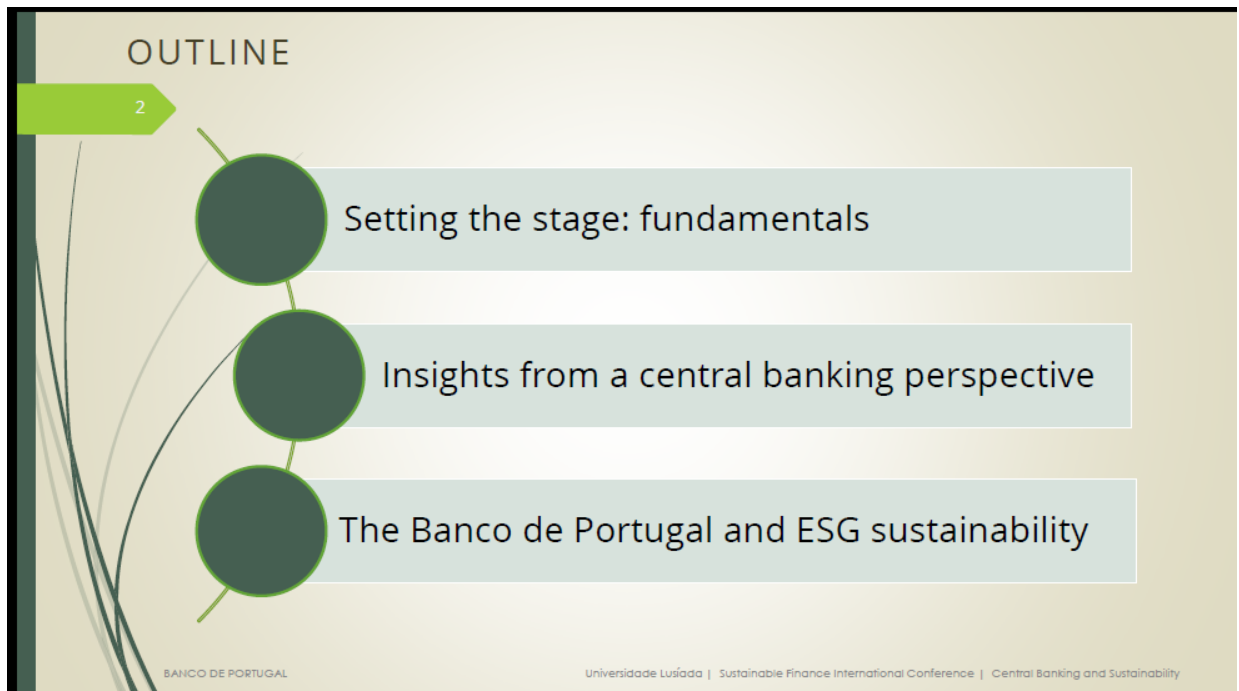
I start by congratulating Universidade Lusíada, and the organisers of the event, as well as all the participants, for this welcome initiative, which brings us all together to debate one of the most critical issues of our time. Not only for the world of finance, but for the world itself – period. Or, , as UN Secretary General António Guterres strongly stated on many occasions, a critical issue for the livelihood of billions.

The overwhelming challenges posed by climate change require a plurality of efforts to be properly tackled. As Governor Mário Centeno of Banco de Portugal put it some time ago, this is a subject that concerns politicians and policymakers, financial and non-financial firms, universities, NGOs – and, last but not least, what we all are: citizens.

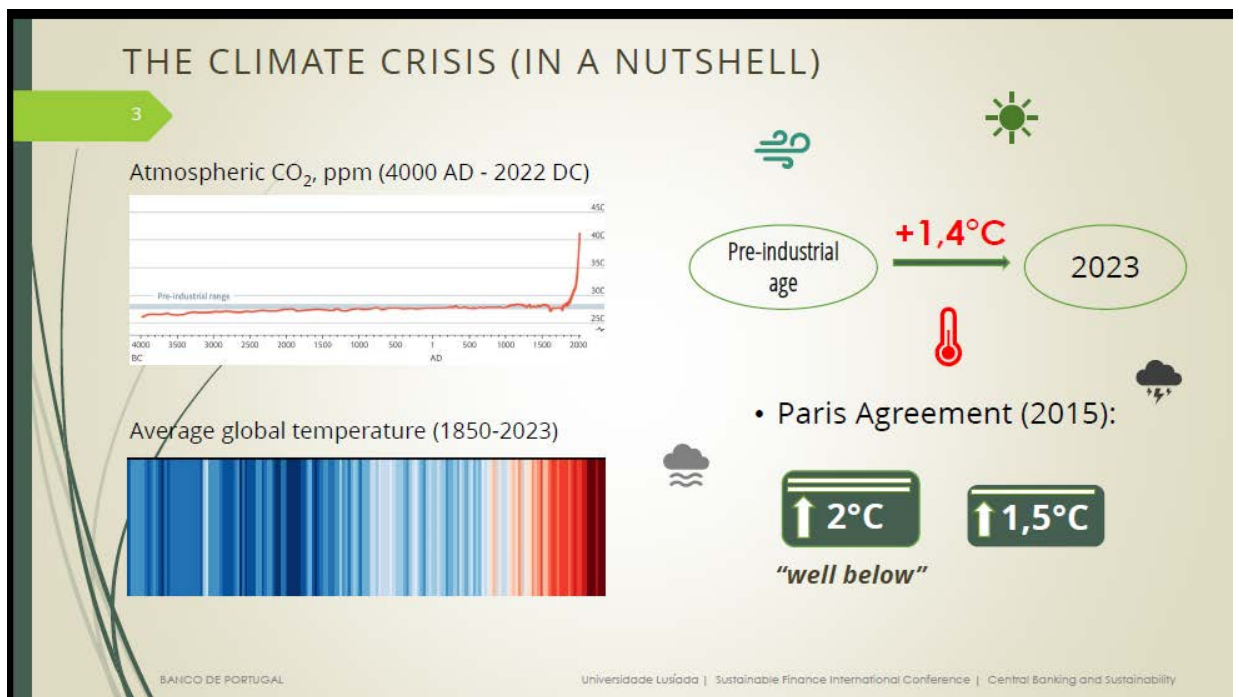
Until a few years ago, whenever central banks talked of “sustainability”, it was mostly public finances or credit developments that were at stake: as in “fiscal sustainability” or “debt sustainability”. Nowadays, while those notions remain as up to date as ever, it is another concept that claims the spotlight. I mean, of course, “ESG sustainability” – i.e., sustainability in terms of environmental, social and governance factors.

According to a McKinsey study, the number of internet browser searches for these three letters – “ESG” – increased five-fold just between 2019 and 2022. One of many signs that the concept is here to stay.

Within the framework of ESG sustainability, a wide range of issues call out for our attention and our action, but none more so than climate change. Today, that will be the focus of what I have to say.



My outline is quite straightforward. I will start by briefly recalling a few fundamental points about climate change and sustainable finance. I will then move on to the reasons why these issues are particularly relevant for us, at central banks. And I will wrap up with a reference to what we have been doing in this regard at the Banco de Portugal.



I can be brief on the basics of climate change; they are well known – especially among such an audience and after a full day of shared insights.

The science is plain to see: a clear trend of rising average global temperatures since the beginning of the industrial age, driven by a piling up of greenhouse gases in the atmosphere.

I can also be brief on the implications. It is true that the sheer complexity of climate change does not allow us to fully grasp the true pace and extent of its impact.

But this impact is indeed becoming increasingly apparent in the higher frequency and magnitude of extreme climate events, and the growing severity of chronic climate events.

Wake-up calls about what the climate crisis means for our societies and economies have been coming for many years. The UN's Intergovernmental Panel on Climate Change (IPCC) is certainly the main reference, but several other reputable entities have also been providing important insights.

Earlier this year, the UN's World Meteorological Organisation estimated that 2023 had been the hottest year on record, with the average global temperature reaching 1.4°C above pre-industrial levels.

Which is to say we are on the brink of breaching the 1.5°C overall limit that was set in the Paris Agreement.

And only a few weeks ago, the European Environmental Agency updated and detailed what the impact for the European Union might be if we failed to fix current climate trends.

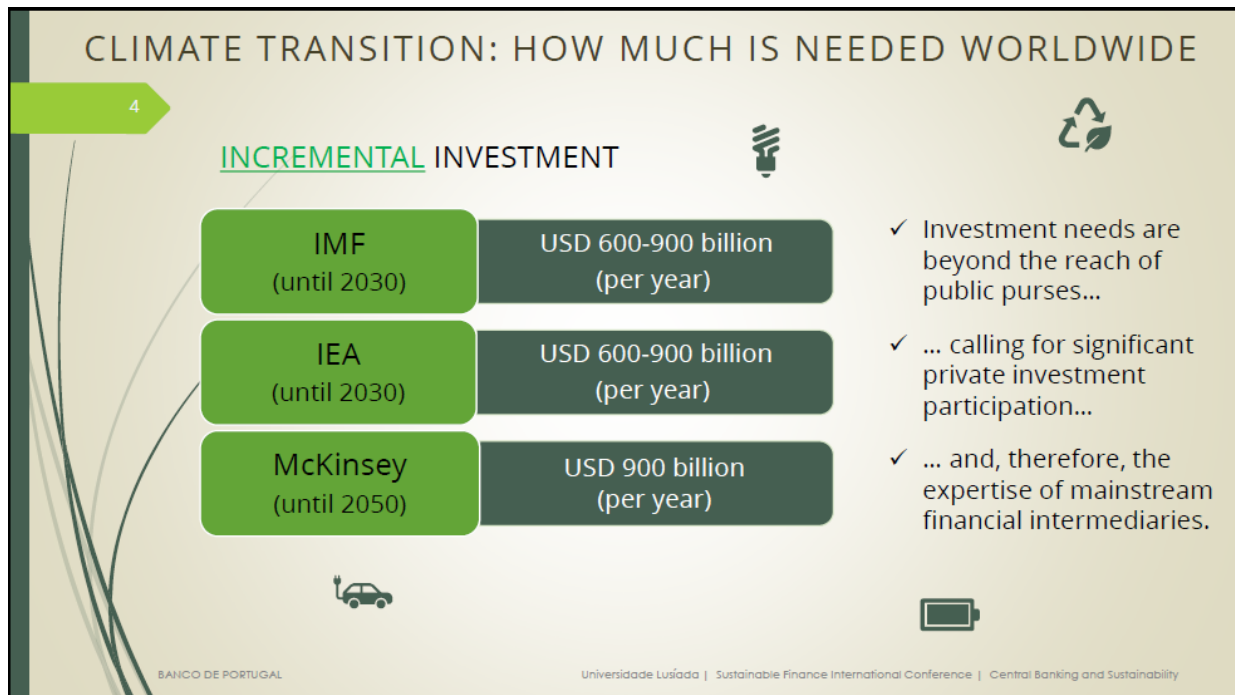
The root of the problem is well known: “the greatest market failure the world has ever seen”, in the words of Nicholas Stern. Or what economists like to call a colossal negative externality, a huge difference between the social cost of greenhouse gas emissions and their private cost, as supported by emitters.

Tackling the climate crisis must necessarily combine an element of adaptation and one of mitigation.

In the latter case, mitigation, three action points stand out, all of which essentially fall within the scope of Government intervention:

- First, adjusting carbon prices, either through taxation, emission trading schemes, or regulation. This does not necessarily have to mean a significant increase of the tax burden on societies; it could conceptually be largely accomplished through a rebalancing of tax systems. The IMF estimates that the average cost of carbon emissions currently stands at about 5 US dollars per ton. It would need to reach 85 US dollars per ton by 2030 to “keep 1.5°C alive”, as the IMF Managing Director put it last year, at COP-28.

- Second, enhancing green R&D, which will require the involvement of academia and private firms, but also public incentives in those fields where the private sector would not be sufficiently forthcoming.
- And third, mobilising the huge amounts of capital that are needed to finance the energy transition worldwide. Which is not unrelated to my previous point on green R&D progress.



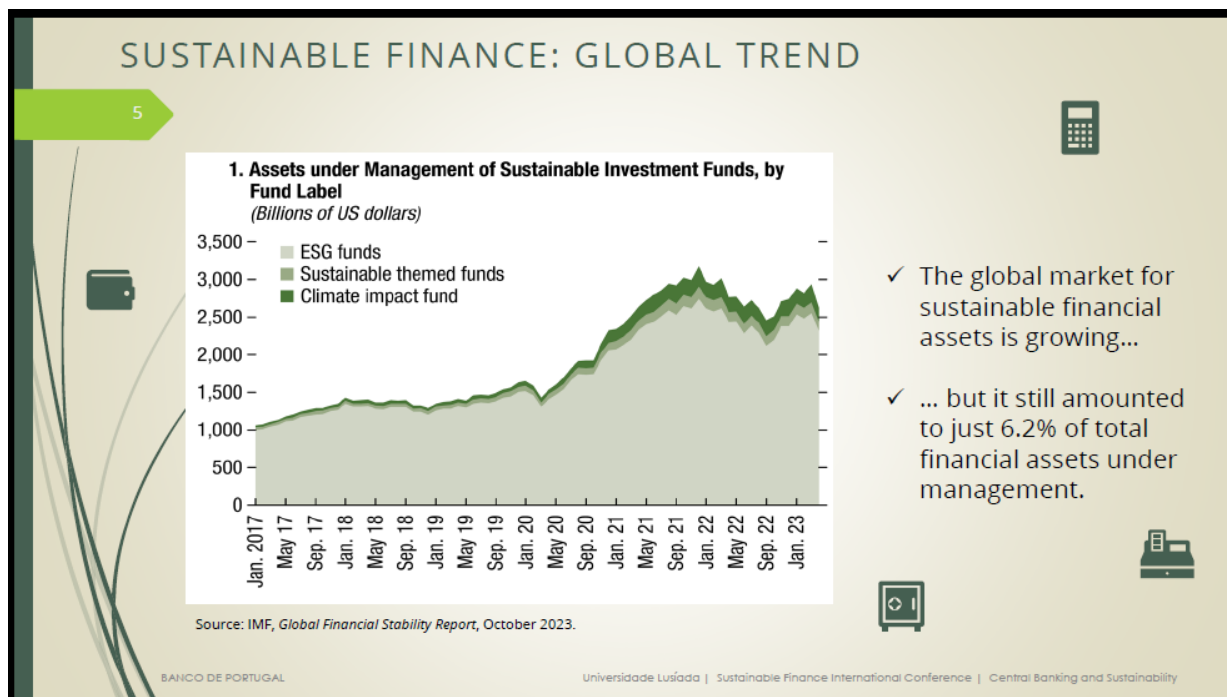
How much will be needed?

Well, several of the most credible international financial institutions (such as the International Monetary Fund and the International Energy Association) have looked into the matter and came out with a range of estimates that are not far from one trillion US dollars per year until 2050 if climate goals are to be achieved.

And I am merely talking of incremental investment, the one that goes beyond what will always be necessary to ensure that the existing stock of capital is regularly replaced, in line with its life cycle. If we take into account this replacement requirement, total investment may reach around ten times that figure over the next decades. And this total investment will tend to follow the same rationale of alignment with the energy transition as incremental investment, thus compounding the effect of climate change.

We cannot credibly expect that investment needs of this magnitude will be fulfilled within already tight public budgets. Which is to say that the only way forward to dealing effectively with climate change is to succeed in mobilising the vast pools of private capital that are required. Naturally, this also requires

success in mobilising the unique expertise available in the mainstream financial system to intermediate and allocate capital.



There are some signs that the financial system is rising to the task, as regards both climate finance, in a narrow sense, and sustainable finance, more broadly speaking.

IMF figures, for instance, point to an upward trend over the past few years in the value of assets under management of sustainable investment funds – notwithstanding market fluctuations and the impact of the Covid pandemic.

Nevertheless, there is still a long way to go, as can be seen by the fact that such assets amounted to just 6.2% of total financial assets under management in late 2023.

One of the main obstacles curtailing the expansion of sustainable investment is a lack of sufficiently reliable, comparable, and granular data. Market participants naturally need high quality data to properly assess and manage risks embedded in such investments, whether they refer to climate projects, environmental projects or more general ESG projects. That is critical to enhance credibility and avoid the well-known curse of greenwashing.

Significant efforts have been put forward by several international institutions to improve the outlook for ESG data and, more broadly, the regulatory framework conducive to more and better sustainable finance. Among such stakeholders, one should acknowledge the important contributions made by the International Monetary Fund, the G20 (in which Portugal participates this year as a Guest country), and the


Network for Greening the Financial System (NGFS), a global club of central banks and other financial supervisors which the Banco de Portugal joined in 2018, almost from its start.

And, of course, due credit must also be given to European institutions like the European Central Bank, the European Banking Authority, and the European Union itself.

The EU agenda for sustainable finance, in particular, has been at the forefront of regulatory efforts worldwide since the EU's action plan for sustainable finance was launched, in May 2018. This agenda has already resulted in significant steps regarding such cornerstones as sustainable taxonomies, disclosures, benchmarks, ratings, and labels. It's an ongoing process that will entail a sizeable effort of adaptation, but from which we can expect a more transparent, credible, and robust framework to mainstream sustainability in the financial system.

CENTRAL BANKS AND THEIR CLIMATE ROLE

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FIRST AND FOREMOST – TWO CONVENIENT TRUTHS:

- **GOVERNMENTS**, not **CENTRAL BANKS**, are climate **policymakers**; they have the legitimacy and the most effective instruments.
- **CENTRAL BANKS** are climate **policy takers**; their main role is to fulfill their core mandates of price and financial stability.

FURTHERMORE – A CRITICAL SUPPORTING ROLE:

- **CLIMATE CHANGE** affects monetary policy, in both conceptual and operational terms.
- **CLIMATE CHANGE** is a source of financial risk for banks and the entire financial system.

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As I said before, the most effective instruments to tackle climate change can be found in the toolboxes of Governments, which are also the ones with proper legitimacy to define and implement climate policies.

Governments may therefore be regarded as the key climate policymakers, and other institutions – such as central banks – will essentially be climate policy takers, to quote Frank Elderson, Member of the ECB's Executive Board and Vice-Chair of the Supervisory Board.

And yet, like all members of society, central banks do indeed have a role to play in addressing the climate crisis. A role that must certainly comply with their mandates, but may also be seen as deriving from those mandates, and even as being instrumental in carrying them out.

So, what should central banks do, and what can they do?

First and foremost, central banks will be providing their best contribution to address climate change “simply” by being successful in performing their core missions. Which are, of course, preserving price stability and upholding the stability of the financial system.

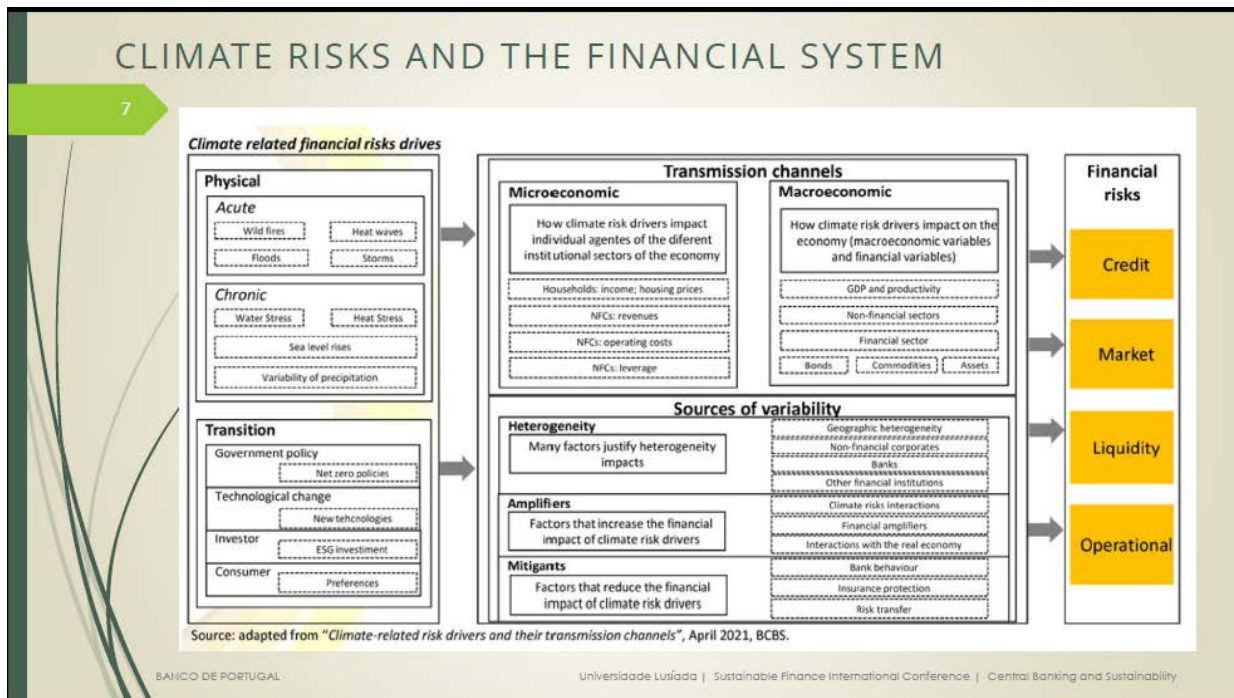
The basic rationale for this statement is also quite easy to grasp: without price stability or financial stability, it will be much more difficult to finance, and thus to successfully promote, an orderly transition from a high- to a low-carbon economy.

Excessive inflation distorts relative prices, increases uncertainty, and curtails an efficient allocation of resources. This would quite possibly compromise a suitable redirection of investment flows to sustainable projects.

And, naturally, only a sound financial system, with institutions duly resilient to financial risks, well-capitalised and well-managed, will be fully able to assist in providing the huge amounts of sustainable investment that are sorely needed to finance the energy transition.

But the fact is that central banks need to go beyond simply accomplishing their core goals. And that is because of what we might call a special case of double materiality: like any other entities, central banks have a material impact on climate change, but climate change also has a specific material impact on central banks’ core missions.

- First, monetary policy, which is how central banks promote price stability. Climate change impacts monetary policy in two main ways. It affects the macroeconomic variables that shape the conceptual framework of monetary policy, such as inflation, output, credit demand, or the equilibrium real interest rate. And it affects the risk and valuation of financial assets used for monetary policy operations.
- Second, climate risks affect the stability of banks and of the entire financial system, which central banks are tasked with preserving.



Such risks are nowadays classified in two main categories: physical risks and transition risks.

- Physical risks are directly associated with natural phenomena. They can be deemed acute, in the case of more frequent and intense natural disasters, such as heatwaves, storms, wildfires, floods, and so on. Or they can be termed chronic, if referring to long-term effects progressively induced by climate change, such as rising sea levels, changes in rainfall patterns, or ocean acidification. On top of direct human distress, these risks lead to losses in property, putting a toll on the financial system through several different channels.
- Transition risks stem from the process of adjustment to a low-carbon society, unleashing effects that will impact the value of assets in various ways. It may be the result of public policy changes, such as the implementation of carbon taxes or regulatory curbs on greenhouse gas emissions. Or it may derive from technological progress, shifts in consumer preferences, and potential litigation, among others. Assets affected by transition risks are usually considered to be stranded assets, to reflect the fact that they would no longer be available, or at least not fully available, for their traditional uses, with their traditional benefits.

Climate risks of both kinds (physical and transition) are not considered financial risks on their own. They are rather seen as drivers of the traditional financial risks categories – namely credit, market, liquidity, and operational risk.

The Single Supervisory Mechanism is responsible for banking supervision in the euro area, bringing together the ECB and national central banks. It identified climate and environmental risks as one of its main priorities for the period 2022-2024. Even before that, climate and environmental risks were already on its map of main risks to be watched with particular care.

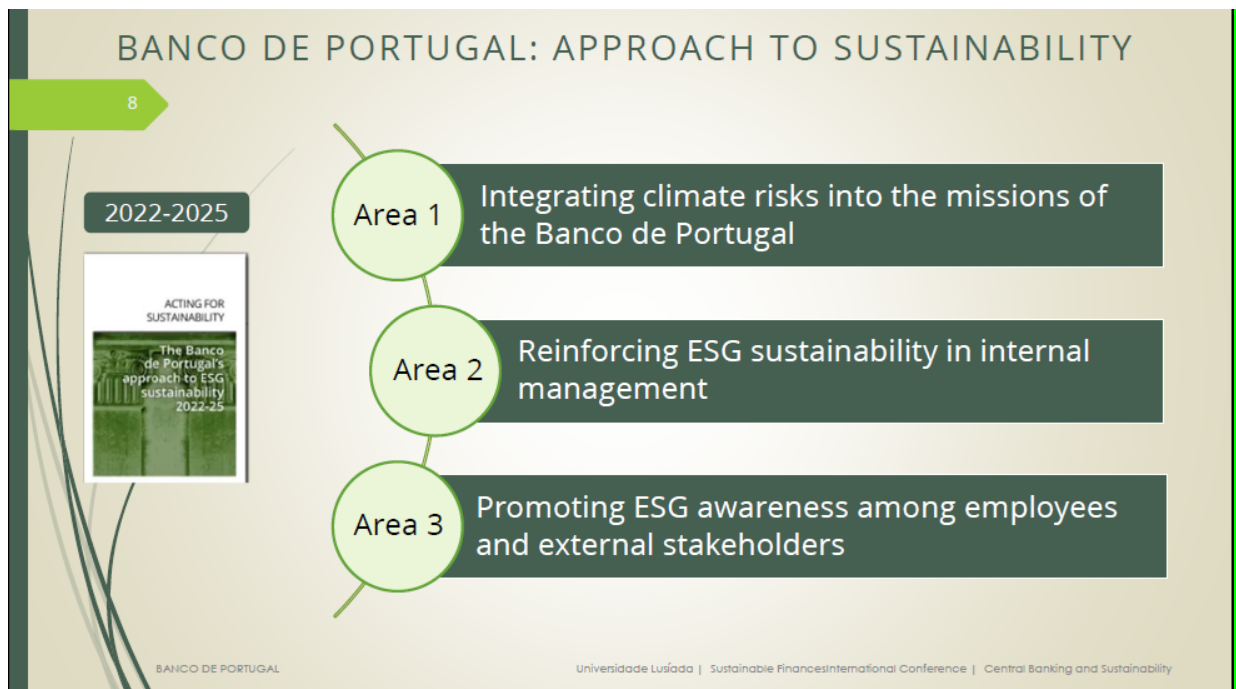
Beyond those core missions of price stability and financial system stability, central banks provide contributions to tackle climate change in several other fields of their activities.

Depending on each institution's specific mandate, these may range from promoting research on economic and financial impacts to compiling relevant statistics or counselling governments on climate policies, among others.

And further including the decarbonisation of central banks' own activities, from currency issuance to the oversight of payments systems, the management of their non-monetary policy portfolios or several others.

This is the broad background against which the Banco de Portugal has defined its own approach to sustainability. Although the bank had long been applying policies in areas related to social responsibility or good governance measures such as diversity promotion, ESG issues really started gaining a much larger significance in our activities about five to six years ago.

That's when we joined the Network for Greening the Financial System, subscribed the Letter of Commitment to Sustainable Finance in Portugal and began taking several other steps that resulted in the adoption of an integrated approach to sustainability, with a special focus on environmental issues – and, above all, on climate change.



The current version of this approach is a strategic roadmap that goes by the name of “Acting for Sustainability” and is closely intertwined with the overall strategic plan of the Banco de Portugal for 2021-2025. It states our commitment to sustainability and where we stood in early 2022, when the roadmap was published on our official website. Most importantly, it contains a wide set of initiatives, involving most of the bank’s areas of activity.

Currently a little more than midway through its time horizon, the roadmap unfolds into three main areas. The first has a double focus: both on the bank’s missions - our core responsibilities - and on climate change, the most challenging of ESG issues.

The second area for action broadens the scope to the entire ESG landscape, while turning to the internal dimension of our activities.

The third and final area covers different sorts of outreach initiatives, connecting us with both internal and external stakeholders.

BANCO DE PORTUGAL: APPROACH TO SUSTAINABILITY

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ACTING FOR SUSTAINABILITY 2022-2025
AREA 1: Integrating climate risks into the missions of the Banco de Portugal
HIGHLIGHTS

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| Taking active part in the monetary policy work set out in the ECB's Action Plan for climate change (since Jul 2022) | Issuing the first Annual Report of the Banco de Portugal on the Banking Sector's Exposure to Climate Risk (Jul 2023) | Issuing supervisory expectations on climate and environmental risks, addressed to banks under direct BdP supervision, and following up on their incorporation (since Apr 2021) | Doing Research on climate change and providing technical assistance to the Government on the EU's agenda for sustainable finance (since 2019) |
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Going a bit further, into the details of initiatives implemented under each of those dimensions, I start with area 1, which deals with the Banco de Portugal's missions.

As concerns the goal of preserving price stability, our activities take place essentially within the Eurosystem, where we share responsibilities with the ECB and other national central banks. We have been taking part in the decisions that are leading to an incorporation of climate considerations into the euro area monetary policy. Under the new monetary policy strategy, published almost three years ago, and the more recent action plan for climate change, such considerations started to be embedded into the conceptual framework of monetary policy, and also into the way monetary policy is implemented, as regards the design of asset purchase programs, collateral eligibility or reporting requirements.

As for the preservation of stability in the financial system, our key priorities are twofold:

- On the one hand, we seek to assess the exposure of banks to climate risks and the financial system's resilience to such risks.
- On the other hand, we are adapting our supervisory approach so that banks are encouraged to incorporate climate and environmental risks into relevant areas of their activities.

One of the main milestones in this process was the publication, in July 2023, of our first Annual Report on the Banking Sector's Exposure to Climate Risk, an obligation set on the Banco de Portugal by the Climate Framework Law of December 2021. This report brings together the macroprudential and microprudential

viewpoints, and will be updated every year; both of these viewpoints are analytical pathways rarely seen and potentially quite enriching.

Another milestone, still regarding financial stability, was the issuance of supervisory expectations addressed to the so-called less significant institutions, which fall under the direct supervision of Banco de Portugal. These expectations focus on business strategies, internal government models, risk management procedures, and disclosure mechanisms. Their incorporation by the industry is being regularly assessed.

And to wrap up area 1, I must still mention that climate change has been part of our research agenda, yielding about a dozen papers, articles and other technical notes in the past few years. Likewise, we provided many technical inputs to inform the Government's positions on the main files of the EU's agenda for sustainable finance.

BANCO DE PORTUGAL: APPROACH TO SUSTAINABILITY

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ACTING FOR SUSTAINABILITY 2022-2025
AREA 2: Reinforcing ESG sustainability in internal management
HIGHLIGHTS

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| Issuing the Decarbonisation Programme of the Banco de Portugal's operations – targets and measures (Jan 2024) | Issuing the first Report on the Climate-related Financial Disclosures of the Banco de Portugal's Own Financial Assets (Mar 2023) | Developing initiatives to curtail the ecological footprint of printing and issuing euro banknotes (since 2014) | A “not E” ESG example: Improving access to the Money Museum for people with specific needs (2023) |
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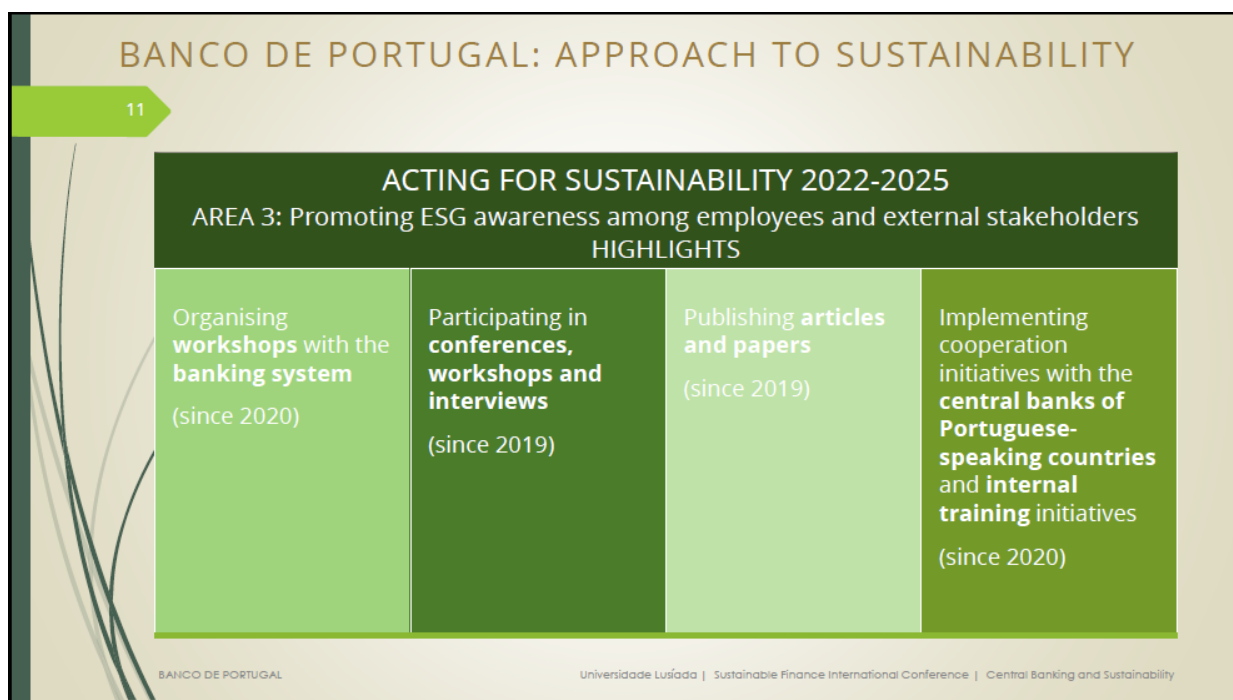
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Moving on to area 2, which deals with internal management, the main highlight is the recent publication of the **Banco de Portugal's Decarbonisation Programme**. This is a commitment to carbon neutrality by 2050, with intermediate targets, that are more demanding than those set by the Portuguese Government to the country as a whole.

Starting with an assessment of the bank's carbon footprint, the document sets targets for emissions from its buildings, vehicle fleet and electricity purchased. It further comprises a detailed action plan with several quantified and time-bound measures to be implemented.

The Decarbonisation Programme is also built upon previous cornerstones. Among them are two contributions that enlarged the scope of the bank's carbon footprint assessment: one is the first Report on the Climate-related Financial Disclosures of the Banco de Portugal's Own Financial Assets, published in March 2023; the other is a set of initiatives aimed at estimating, and curtailing, the ecological footprint associated with printing and issuing euro banknotes.

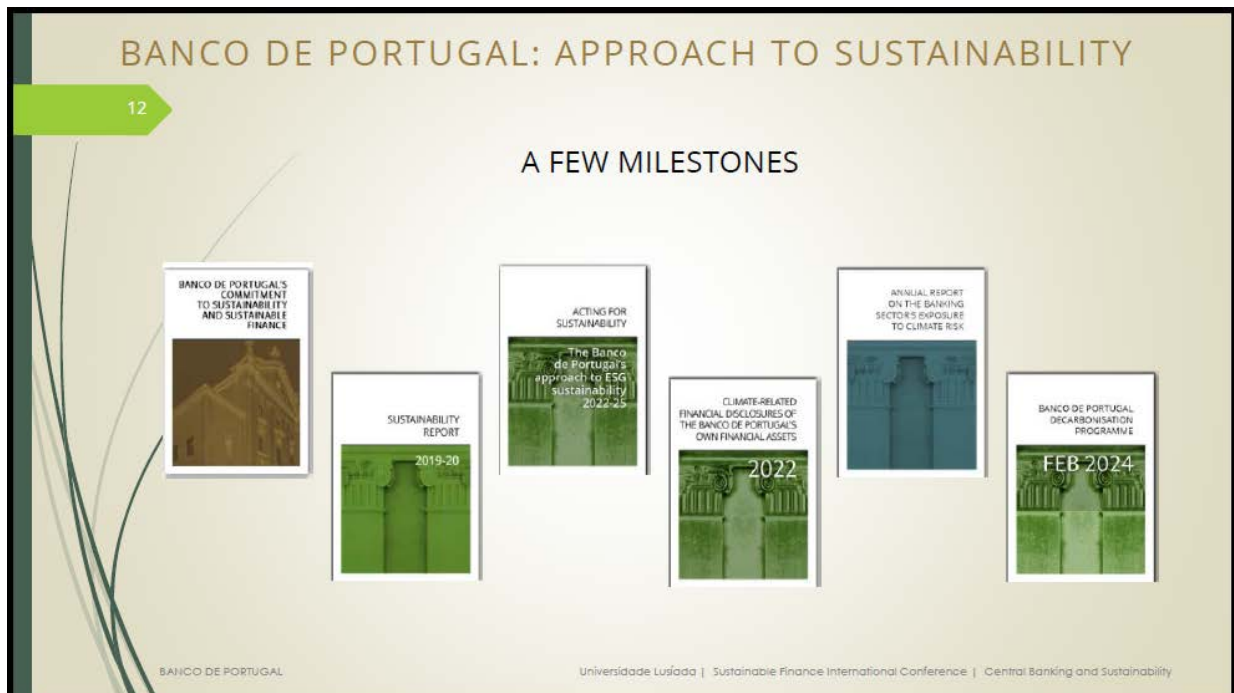
Among several other measures taken still in this context of internal management, and to give you an example that does not fall under the "E" dimension of ESG, I am happy to say that people with specific needs are now better able to enjoy the Money Museum that we operate at our headquarters – a truly interesting experience that I can vividly recommend, with free access to our citizens.



Many more initiatives could be mentioned within area 3, which aims to promote ESG awareness among our stakeholders.

This keynote address is one of them.

Regularly exchanging views on climate and environmental issues with the banking system, as we last did in March, is a main concern of ours. Another is to keep in touch, also on these issues, with our counterparts from Portuguese-speaking countries. And, of course, to raise the ESG awareness of our own staff.



But I will now turn to my final takeaway. Last week, in Portugal, in the words of great poet Sophia, we celebrated that “initial whole and clean day” of April, on which our democracy stands. The time is therefore prone to celebrations and the assessment of legacies.

That comes to my mind as I consider the patchwork of milestones summarising what we have been doing to tackle climate change over the past few years. In a very modest way, I am hopeful that, as future generations look back at that patchwork, their assessment may not be too harsh.

These are the first steps of a long way in which we learn by doing. For our sakes and for a future with future.

Thank you.