



# The green transition, finance and biodiversity: aim high, shoot higher

René Karsenti and Apostolos Thomadakis argue  
that financing the energy transition requires a  
comprehensive shift in how the financial system works

**T**he urgency to succeed in financing the energy transition and reorienting private capital to sustainable investments requires a comprehensive shift in how the financial system works. The role of major market participants, investors, and policymakers in facilitating this shift is essential. To develop more green and sustainable economic growth, there is a need to:

1. broaden access to the market through innovation and diversification;
2. further develop global standards and taxonomies;
3. enhance disclosure and reporting;
4. fully incorporate fintech and digitisation;
5. fully address biodiversity and nature-related risks

Beyond its quasi-moral obligation, mobilising finance for the energy transition is a historic opportunity, especially for the EU to act and lead as a true pioneer, that should not be missed.

Fifteen years ago, green, social and sustainability bonds (or sustainable bonds, collectively) were non-existent, while the green issuance volume was still a miniscule share of the bond market. Institutions such as the European Investment Bank (EIB), the World Bank Group (WBG), the International Capital Market Association (ICMA), and the International Finance Facility for Immunisation (IFFIm), have been trailblazers and put forward several significant initiatives.

As a result, building on such and other subsequent initiatives, the market has grown exponentially and moved from an aggregate issuance of €35 billion in 2014 to €568 billion in 2020 (see Figure 1). Today, the total value of outstanding sustainable bonds is at €1.6 trillion<sup>1</sup>.

**Figure 1. Global issuance of green, social and sustainability bonds (€ billion, 2014-2020)**



*Note: The process followed by the CBI to classify a green bond as eligible covers the following steps: i) identification of climate- themes and self-labelled debt; ii) screening sectors and green credentials to determine if the proceeds will finance eligible green expenses/assets/projects/activities; iii) evaluating the use of proceeds threshold. For more information on the Green Bond Database Screening Process, see [here](#).  
Source: Climate Bonds Initiative.*

## **In the shadow of the pandemic**

The COVID-19 pandemic has caused colossal damage since the beginning of 2020. It has been estimated that the cumulative cost to the global economy in 2020-21 would be over €10 trillion<sup>2</sup>. More importantly, it has pushed hundreds of millions of additional people into poverty across the world, while it has disrupted progress towards achieving the United Nations (UN) Sustainable Development Goals (SDGs)<sup>3</sup>.

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But, at the same time, it made clear the important role that capital markets play in intermediating capital to rebuild shattered economies. Indeed, the pandemic has served as an accelerant for growth in the sustainable bond markets. Sustainable bond issuance totalled around €411 billion in the first half of 2021, nearly a 60% year-on-year growth from H1 2020<sup>4</sup>.

In particular, social issues have gained momentum and emerged as a key instrument in financing a post-COVID 'sustainable recovery'. This segment represented 36% of the total sustainable bond issuance in 2020, up from 6% in 2019.

This is a remarkable development since the creation of the first IFFIm Vaccine Bond in 2006. Although many were concerned that the focus on social bonds would detract from progress in the green bond market, in fact the complete opposite has been the case.

Green and environmental considerations have been hard-wired into the countries' post-COVID programmes, both on the funding and disbursement side. What's also noticeable is that more than 95% of the sustainable bonds issued in 2020 reference ICMA's Green and Social Bond Principles<sup>5</sup>.

Despite these positive developments, more needs to be done. Below we identify five key areas in which renewed focus should be given. For the remainder of this particular piece we will concentrate primarily on the fifth and final area.

- Broaden the market through innovation and the diversification of market participants and products in the green and sustainability space<sup>6</sup>.

- Develop global standards further and ensure taxonomies are as harmonised as possible – in close consultations with market players – to avoid fragmentation.
- Enhance disclosure in reporting by issuers and investors, including on their climate transition strategy to generate even more confidence and robustness<sup>7</sup>.
- Incorporate fintech and digitalisation as the main driving forces for the development of capital markets<sup>8</sup>.
- Fully address biodiversity and nature-related risks, which has been identified as one of the top five risks in terms of likelihood and impact in the coming 10 years<sup>9</sup>.

### **Assessing the risks**

To effectively address biodiversity, it is important to first distinguish nature-related risks from climate change-specific risks, and then to find ways to properly measure them. Nature-related risks (encompassing biodiversity loss and ecosystem degradation) and climate-related risks, are both essential components for the accurate assessment of environmental risks.

Although they are highly interconnected, at the same time they are distinct from each other. Nature-related risks broadly refers to the risks to an organisation posed by the linkages between its activities and the natural world<sup>10</sup>. These can be shorter-term risks, as well as longer-term risks arising from its impact and dependency on nature.

On the other hand, climate change risks can be categorised into two broad categories, those risks related to the physical impacts of climate change (eg. acute risk, chronic risk), and risks related to the transition to a lower-carbon economy (eg. policy and legal risks, technological risks, market risks, reputational risk)<sup>11</sup>.

However, some of these risks have been carried over into nature-related risks – namely physical (eg. the loss of mangrove swamps), transition (eg. the closure of soft drinks plants in India due to their impact on water

shortages), and litigation (eg. bond investors taking legal action against a Californian energy utility company for misrepresenting the risks of wildfires).

Moving into the measurement of such risks, Gross Domestic Product (GDP) has so far failed to clearly capture the depreciation of changes in biodiversity<sup>12</sup>. Nevertheless, according to the World Economic Forum (WEF), half of global GDP in 2019 was moderately or highly dependent on natural capital<sup>13</sup>.

Although the depreciation and loss of natural capital has been a primary source of 'economic growth', it has not been taken into account in the calculations. Thus, there is need to capture the true value (or 'accounting prices')<sup>14</sup> of natural capital. This will allow for accurate measurements of the financial costs and risks and avoid further rapid destruction of our common biodiversity.

Developing comprehensive risk measures beyond the impact on GDP, are critical for market participants in their investment decisions. Banks and investors may be adversely affected by climate change risks, for example by holding the sovereign bonds of countries that are highly dependent on the over-exploitation of natural resources. In a case like this, the risk is under-priced by the market and needs to be clearly assessed and reported.

There is also need for a new set of international impact-weighted accounting standards, similar to the introduction of the international accounting standards after the 1929 Great Depression.

In essence, a standardised tool to measure the net impact that companies have on both the environment and people. More generally, although metrics that incorporate nature loss into risk models already exist<sup>15</sup>, there is no single and widely accepted method for measuring biodiversity foot printing. Risks are far from negligible.

A 2018 assessment exercise found that 13 of the 18 sectors in the FTSE 100 (at that time having a total of approximately €1.4 trillion in net market capitalisation) have a high dependence on natural capital (including assets such as forests, water, fish stocks, minerals, biodiversity and land)<sup>16</sup>.

This poses significant challenges to achieving the sustainable development objectives and poverty reduction.

### **Global commons – a radical proposition?**

The long-term objective is to bring aggregate demand in line with aggregate supply; meaning that global demand must equal the biosphere's ability to meet the supply on a sustainable basis. This so-called 'impact equation' illustrates how the biosphere can heal itself over a set period<sup>17</sup>.

But the current rate of depletion, driven by activity to create physical and human capital, threatens our fundamental life support system – the natural environment.

Perhaps a more visionary – and at the same time controversial – proposal for preserving natural capital, calls for the creation of a global Commons Fund (Dasgupta, 2021)<sup>18</sup>. Such an initiative would require an international organisation to monitor and manage forms of natural capital as global public goods.

This would be similar to the way the World Bank advances the cause of global economic development, and to the International Monetary Fund (IMF) when it comes to the rescue during instances of financial instability.

Global commons are like the Seven Seas – no one pays for their use as long as access to them is free. Such a rather controversial proposal might essentially entail the introduction of a new form of rent, to be collected through a

global organisation. The money raised would pay the compensation required to prevent further deterioration of the natural world.

However, this should not be perceived as an additional taxation to financial preservation, but instead as a way in which the global commons could (themselves) generate the funds needed to restore natural capital (ie. the air, water and land).

## Conclusions

In 2015 Mark Carney – at that time Governor of the Bank of England – warned about “*the tragedy of the horizon*” and highlighted the important role of finance in accelerating short- and long-term climate change<sup>19</sup>.

Progress in green and sustainable finance has been impressive since then, while the COVID-19 pandemic has proven its importance going forward.

The decade ahead promises to be exciting, with new tools, participants, practices, and standards coming to the fore that will help us to navigate the climate transition. The future of finance should be green and sustainable.

But to achieve this, it needs to be mindful of its environmental and social impacts, invest in the future, and also protect the ecosystem, and save lives. Let’s not miss the opportunity to make a real and lasting impact. ■

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### Endnotes

1. Based on data from the *Environmental Finance Bond Database*, accessed on September 9, 2021.
2. See IMF (2020), *“World Economic Outlook Update: A Crisis Like No Other, An Uncertain Recovery”*, June, International Monetary Fund.
3. Latest estimates put the number of newly poor people as a consequence of COVID-19 in 2020 to rise to between 119 and 124 million. See WB (2021), *“Global Economic Prospects”*, June, World Bank.
4. See the *Climate Bonds Initiative’s Sustainable Debt Market Summary for H1 2021*.
5. See *Green Bond Principles (GBP)* and *Social Bond Principles (SBP)*.
6. The last few months have proved to be a period of remarkable innovation, with the launch of the ICMA’s *Sustainability-Linked Bond Principles* last June and the *Climate Transition Finance Handbook* in December.
7. There is a need for a new set of international Impact-weighted accounting standards, similar to the introduction of the international accounting standards after the 1929 Great Depression. This would be a standardised tool to measure the net impact that companies have on the environment and on the people.
8. A striking commonality between FinTech and sustainability is the need for common standards and harmonisation. FinTech could be used to develop common platforms, particularly in the sustainable finance sector for oversight, to facilitate comparability, and provide dynamic insights into environmental, social and governance (ESG) performance and reporting. For data providers, regular and more frequent ESG reporting is paramount to harness analytics and create greater transparency.
9. See WEF (2020), *“The Global Risks Report”*, 15 January, World Economic Forum. Moreover, it has also been advocated by market participants and investors through the United Nations’ *Principles for Responsible Investment (PRI)*, as well

as the international alliance Act4Nature, while it is one of the six environmental objectives under the EU Taxonomy which is central to the EU's Biodiversity Strategy 2030. Other important initiatives towards this direction include: the Natural Capital Financial Facility (NCFF), a partnership between the EIB and the European Commission which has already resulted in the EIB issuing a Sustainability Awareness Bond with a biodiversity theme in early January, the Taskforce on Nature-related Financial Disclosures (TNFD), the Finance for Biodiversity (F4B) which proposes a dedicated international Nature and Climate Sovereign Bond Facility, the Biodiversity Finance Initiative (BIOFIN), and the Sustainable Blue Economy Initiative. More recently, it was released in the UK as part of the Dasgupta Review on the Economics of Biodiversity, commissioned in 2019 by HM Treasury.

10. See the TNFD (2021), *"Nature in Scope: A Summary of the Proposed Scope, Governance, Work Plan, Communication and Resourcing Plan of the TNFD"*, June, Taskforce on Nature-related Financial Disclosures.

11. See TCFD (2017), *"Recommendation of the Task Force on Climate-related Financial Disclosures"*, June, Task Force on Climate-related Financial Disclosures.

12. See Dasgupta (2021), *"Economics of Biodiversity: The Dasgupta Review"*, February, HM Treasury.

13. See WFE (2020), *"Nature Risk Rising: Why the Crisis Engulfing Nature Matters for Business and the Economy"*, January, World Economic Forum.

14. A capital good's accounting price refers to the contribution an additional unit of it would make to the flow of social benefits.

15. Such as the Exploring Natural Capital Opportunities, Risks and Exposures (ENCORE) tool, developed by the Natural Capital Finance Alliance (NCFA), or the Integrated Biodiversity Assessment Tool (IBAT).

16. This is based on NCFA's ENCORE database.

17. See footnote 11.

18. Such a proposal might be carried by the UK to the 26th United Nations Climate Change Conference of the Parties (COP26) taking place later in November, and promoted more widely.

19. See *"Breaking the Tragedy of the Horizon – Climate Change and Financial Stability"*, speech on 29 September 2015.

*This article was first [published](#) by the European Capital Markets Institute. ECMI is managed and staffed by the Centre for European Policy Studies (CEPS) in Brussels.*