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Marketing Communication

Sleeping Giant: Bond markets are critical in the fight against biodiversity loss

Fidelity International

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Sleeping Giant: Biodiversity

Kris Atkinson, Portfolio Manager, Ana Victoria Quaas, Investment Director and Charlotte Apps, Sustainable Investing Analyst discuss the importance of biodiversity for bond investors and how debt markets can aim to effect real-world change on biodiversity.

Summary

While climate change is undoubtedly one of the most significant risks to the long-term profitability and sustainability of companies, biodiversity loss is an equally pressing issue that investors cannot ignore. Biodiversity loss refers to the gradual reduction in the variety and abundance of life on earth. Biodiversity loss is driven by 5 key factors: land and sea use change, pollution, overexploitation, climate change, and invasive species. Biodiversity refers to the living component of natural capital, which more broadly encompasses the world's stock of natural resources, including geology (rocks and minerals), soil, air, and water. Together all components of natural capital interact to provide ecosystem services, such as pollination and food production, air circulation, climate regulation, flood protection and carbon sequestration, from which we derive social, economic and cultural benefits.

Investors must understand natural capital as a vital asset for the functioning of the global economy, and the material financial risks associated with its decline.

It is estimated that more than 50% of global GDP is moderately or highly dependent on nature[1]. The 'Global Risks Report 2023' by the World Economic Forum has ranked 'biodiversity loss' among the top five 'risks that may have the most severe impact over the next 10 years'[2].

Yet, biodiversity loss is accelerating. Since 1970, there has been around a 69% decline in global wildlife populations and this is occurring across all geographic regions, but most strikingly in Latin America and the Caribbean where wildlife populations have fallen 94% in the last 50 years.[3] Extinction rates are estimated to be 100-1000 times the natural background rate[4] with up to 1 million animal and plant species, out of a total of 8.1 million, facing extinction[5].

Unabated loss of biodiversity leads to the degradation of the ecosystem services upon which we depend, posing a serious threat to global economic and social prosperity.

Moreover, biodiversity loss and climate change are closely linked. Limiting climate change to below 1.5ºC is achievable only if action is immediate. The preservation of biodiversity and natural capital plays a critical role in achieving net zero. The Intergovernmental Panel on Climate Change (IPCC) 1.5°C 'safe landing' pathway assumes nature will continue to be a provider of carbon sinks and ecosystem services implying the critical importance of halting nature loss with immediate effect. On the other hand, climate change is one of the major threats to biodiversity and is expected to become the dominant driver in coming decades, acutely so in tropical regions.

Failure to address biodiversity loss in tandem with climate change is a failure to address either issue.

The risks associated with biodiversity loss are numerous

Biodiversity is crucial to maintain the equilibrium of our planet, yet it is under severe threat due to human activities. As highlighted in our Biodiversity

[1] World Economic Forum (2020) Nature Risk Rising: Why the Crisis Engulfing Nature Matters for Business and the Economy

2 World Economic Forum (2023) The Global Risks Report 2023 18th Edition

3 WWF (2022) Living Planet Report 2022 – Building a nature positive society. Almond, R.E.A., Grooten, M., Juffe Bignoli, D. & Petersen, T. (Eds). WWF, Gland, Switzerland

4 Extinctions - Our World in Data - https://ourworldindata.org/biodiversity#%3A~%3Atext%3DModern%20extinction%20rates%20average%20around%2Csome%20modern%20species%20are%20understudied

5 IPBES Global Assessment Report on Biodiversity and Ecosystem Services

Primer, the risks associated with biodiversity loss are numerous.

Biodiversity risks are both physical and economic in nature. These risks range from physical threats like ecosystem degradation and natural resource scarcity to transition risks triggered by forthcoming regulatory initiatives aimed at preserving natural capital. Disintermediation risks are also posed as certain value chains face disruption while others benefit from resolving biodiversity issues. Legal risks, spurred by a surge in climate change litigation cases, are set to expand into biodiversity-related issues. Additionally, reputational risks look for firms negligent in their management of biodiversity risks, potentially leading to brand devaluation and customer loss.

Physical risks arising from loss can have far-reaching implications for businesses, potentially disrupting supply chains, reducing productivity, and even impacting the viability of business operations. For instance, issuers relying on natural resources or ecosystem services may see a decline in their productivity and profitability if their operations lead to habitat destruction, species loss or ecosystem degradation. Therefore, businesses that proactively manage their impacts and dependencies on biodiversity can better mitigate these physical risks, ensuring the stability and longevity of their operations.

Transition risks stem from policy changes, regulatory developments and shifts in market preferences towards biodiversity-friendly practices and products. As global awareness of biodiversity loss grows, governments are enacting stricter regulations and standards to preserve natural ecosystems. Simultaneously, consumers are increasingly favouring products and services from issuers that prioritize biodiversity conservation. Issuers failing to adapt to these changes risk losing market share, facing legal penalties, or incurring reputational damage. Therefore, by investing in issuers that anticipate and manage these transition risks, investors can manage the risks associated with their investments and contribute to global biodiversity transition.

The task of mitigating biodiversity loss is a complex issue that demands a comprehensive transformation of the global economy. The transition toward a more biodiversity-conscious paradigm is universal in nature, affecting sectors and geographies worldwide, and spanning the breadth of the global economy. This universality brings in a vast array of stakeholders, among them the investment community, who through their capital allocation decisions can help to shape the course of this transition.

Investors can redirect financial flows towards issuers that demonstrate better biodiversity practices. By investing in these businesses, they not only contribute to biodiversity conservation but also safeguard their investments by reducing exposure to the risks associated with biodiversity loss.

Beyond risk management, investors should also turn their attention to solution providers - issuers that are pioneering innovative ways to benefit from their biodiversity transition. These issuers could be developing new technologies for sustainable agriculture, creating alternative materials to reduce dependence on natural resources, or providing services that restore and protect natural ecosystems. By identifying and investing in these issuers, investors can drive the transition towards a more-biodiversity friendly global economy while also tapping into the growth potential these innovative issuers offer.

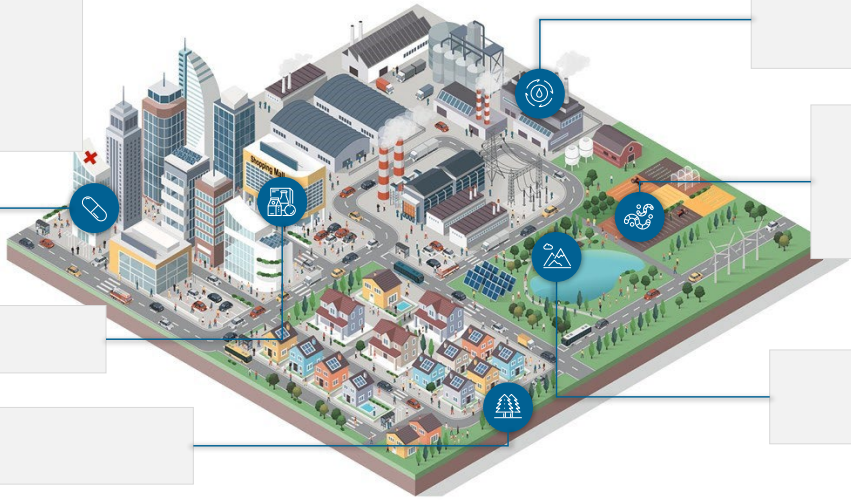
Why biodiversity matters to bondholders

Shareholders are not the only ones that lose out when companies misbehave - bondholders are also affected. In fact, while equity investing is about picking winners, credit investing emphasises avoiding the losers, so risk exposure takes precedence. We believe that an issuer's creditworthiness is directly linked to the way it behaves. An organisation's governance structure, corporate behaviour and its impact on the environment and society, all affect how it will perform.

Credit quality is a complex subject, but broadly speaking it is a function of a company's profitability, productivity, industry positioning, cost of capital and future value. These characteristics can be intrinsically connected to sustainability credentials. Consider the example of a large agribusiness firm. Its profitability and productivity are intrinsically linked to healthy ecosystems, as they rely on fertile soil, natural pollinators, and stable climate conditions to maintain and increase crop yields. If biodiversity is lost due to unsustainable farming practices, it can lead to soil degradation, loss of pollinators and increased vulnerability to climate change impacts, such as droughts or floods. This in turn could decrease the company's productivity and profitability, which could negatively affect its industry positioning and future value.

For many issuers double materiality exists when it comes to biodiversity. Double materiality refers to the recognition that companies can both impact and be impacted by biodiversity. For example, in terms of a company's impacts, industrial activities can result in habitat destruction, species extinction, and other negative environmental consequences, thereby contributing to biodiversity loss. On the other hand, companies themselves can be affected by biodiversity loss through the disruption of supply chains, increased operational risks, reputation damage, and regulatory changes.

Global industries are nature-dependent



Source: Fidelity International. [1]United Nations Forum on Forests, 2019. 2Financing Nature: Closing the global biodiversity financing gap, 2020. 3Journal of Natural Products, Newman, D.J and Cragg, G.M, 2012. 4World Economic Forum, January 2020.

While biodiversity poses risks that could lead to financial losses, there are also opportunities for creating value. Bond investors who understand both the risks and opportunities of biodiversity are better placed to identify the winners and losers of the transition to a more sustainable and biodiverse economy.

Untapped potential

Only a small percentage of bonds traded on debt capital markets provide information about their impact on biodiversity, with most issuances failing to specify their ESG benefits.

As it stands, the bond market trades around US $1 trillion each day and has tremendous potential to support the transition towards a more biodiverse world. The scale of investment needed represents a huge opportunity. The UN Environment Programme estimates that meeting international commitments will require US$8.8 trillion of cumulative investment in nature-based solutions between now and 2050. Currently, the annual investment is US$146 billion. Moreover, private

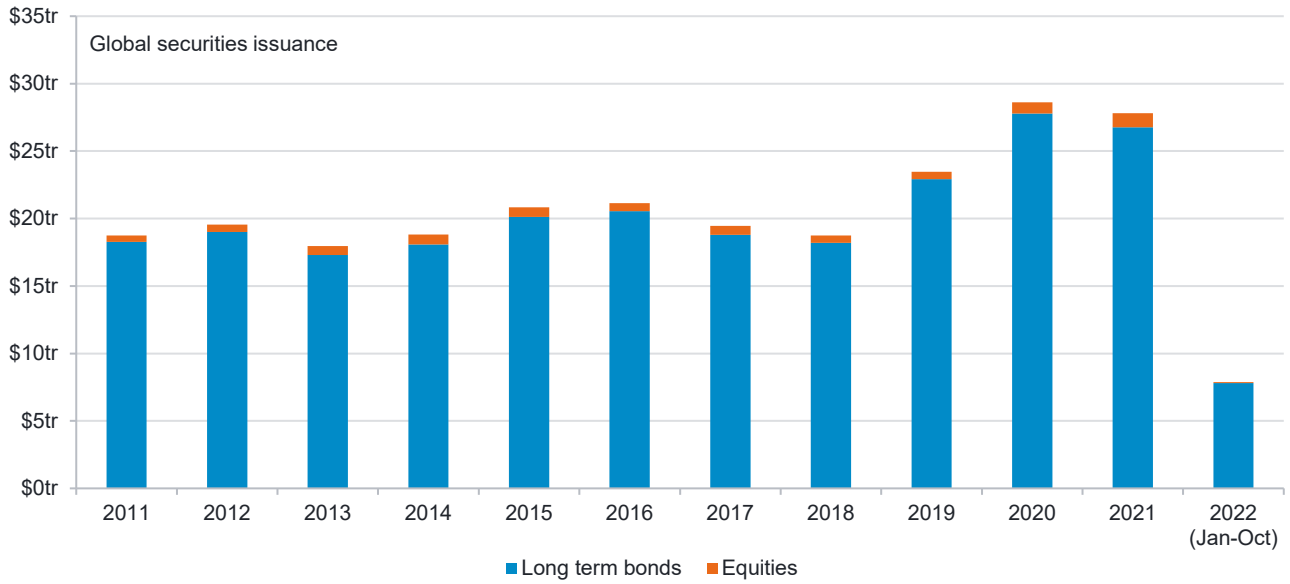
capital accounts for just 17% of the total.[6] Comparing that to climate finance, where private sources now account for more than half of all investment, means there is a significant gap to be closed.

It is often thought that equity markets play the foremost role in urging issuers to become more sustainable, and bond markets are more marginal actors. However, we believe fixed income investors have a vital role to play and in some ways are better positioned than equity markets to exert pressure and promote positive change. The size of the bond market, frequency of bond issuance, breadth of issuer type, and the possibility of targeted capital deployment via sustainable debt instruments are all unique advantages bond investors have in addressing biodiversity.

Size of the bond market: The bond market dwarfs the size of the equity market, according to SIFMA (Securities Industry and Financial Markets Association). As of the end of October 2022, total outstanding global fixed income securities stood at US$128 trillion compared to global equity market cap of US$96 trillion. Total long-term fixed income issuance in 2022 through October was US$7.8 trillion compared to just US$81.2 billion for equities.

Frequency of issuance: Companies tap bond markets for new issues far more regularly and in greater size than equity markets. This facilitates a close relationship between fixed income investors and corporate executives, giving bondholders frequent touch points with which to influence management teams.

Bond issuance surpasses equity issuance



Source: SIFMA, December 2022.

Breadth of issuer type: Bond markets comprise public and private businesses, in contrast to equity markets, which are only involved with listed companies. In addition, governments, local authorities, and supernational institutions issue debt, not shares. For investors this means a greater set of issuers to engage with as well as wider access to potential sustainable solutions which can help address biodiversity loss.

Targeted capital deployment: Fixed income markets provide capital at the issuer and asset level, allowing investors to deploy capital in more targeted ways and monitor how the capital is being used through covenants and other metrics.

[6] United Nations Environment Programme (2022). State of Finance for Nature 2022 - Time to Act: Doubling Investment by 2025 and Eliminating Nature-negative Finance Flows (unep.org)

Sustainable debt instruments: Bond markets provide investors with the ability to invest in securities designed to finance specific projects (such as green bonds, social bonds, and sustainability bonds) or align with client interests via sustainability linked bonds.

How to incorporate biodiversity risks

As the world faces unprecedented biodiversity loss, investors are increasingly recognizing the need to incorporate biodiversity considerations into their investment decisions. While some investors may choose an exclusionary approach, avoiding investments in high-risk sectors and issuers, we believe this is not enough. Instead, a more comprehensive approach is needed that encompasses all sectors, asset classes and geographies.

Investors may not be as aware of the impact they can have on biodiversity compared to climate change. However, there is a growing understanding that biodiversity loss poses significant risks to businesses and the global economy. As such, investors are beginning to turn their attention towards this critical issue, and the need to engage with issuers on how they can help mitigate biodiversity risks.

Building relationships through ongoing dialogue is the most effective way to improve a company's attitude towards its biodiversity responsibility. Through engagement, investors can encourage issuers to focus on biodiversity protection, mitigation, and restoration, and attract the type of capital that supports these initiatives. This can ensure that biodiversity considerations are integrated into a company's overall strategy, rather than as a one-off project. In our Biodiversity Primer, we highlight some of our major engagements to date on biodiversity topics, such as deforestation, plastic pollution and biodiversity target setting.

Why tackling biodiversity loss requires active management

Biodiversity is a critical aspect of sustainability that must be considered in investing strategies as it plays a vital role in the health of ecosystems and the planet. However, measuring and understanding biodiversity risks is more complex and even more nuanced than climate change for several reasons. Firstly, biodiversity encompasses a broad range of species, ecosystems, and genetic diversity, each with its own unique characteristics, distribution, and functions. Secondly, biodiversity risks are more difficult to quantify and predict than climate change risks. Thirdly, biodiversity is location-specific, including the type and condition of the ecosystem, species, and local human activities. Finally, the impacts of biodiversity loss can be irreversible, with potentially cascading effects onto the functioning of ecosystems and the services they provide.

An active discretionary approach to biodiversity is an important strategy in the fight for biodiversity conversation. Debt markets play a crucial role in allocating capital towards biodiversity conservation and restoration efforts, giving bondholders the ability to influence organisations, support them in developing their biodiversity conservation strategies, and fund companies committed to transitioning towards biodiversity-friendly practices.

In contrast to passive approaches, a discretionary approach involves conducting in-depth research to identify issuers that prioritize biodiversity conservation and restoration efforts. By incorporating additional information beyond traditional financial metrics, such as the credibility of conservation strategies and management's commitment to net-positive impact on biodiversity, active investors can select issuers that align with their values and sustainability goals. Active discretionary investors can also engage with issuers to encourage biodiversity conversation and restoration efforts, such as improving supply chain management, reducing habitat destruction, or implementing sustainable agricultural practices.

An active discretionary approach to biodiversity should be based on two key building blocks - the biodiversity profile of a business and engagement. Issuers that are driving the biodiversity conservation agenda or are leaders in their field should be rewarded with more capital resources. Issuers that are in high biodiversity impact sectors or are laggards within sectors should be engaged with to support them in their transitions - after all, stewards of capital have a duty to push issuers to

be ambitious and set targets to combat biodiversity loss.

While a discretionary approach to biodiversity may require more time and resources, the potential to make a significant impact on biodiversity conservation and generate long-term returns make it a worthwhile approach. By investing in issuers that prioritize biodiversity, active investors can contribute to the conservation of the planet's natural resources and wildlife, while also generating attractive returns.

In the following section we have included some examples of the different ways issuers and we as investors are considering biodiversity risks

Issuers addressing biodiversity risks

Renewable power company, **Brookfield Renewable Energy**, installs and operates renewable energy infrastructure but recognises that their work can affect local habitats, which could contribute to decreasing global biodiversity. In response, the company engages with local stakeholders and experts to monitor biodiversity and conduct studies, adjusting operating procedures accordingly. For example, where possible, the company makes operational adjustments at wind farms to minimise impacts on bird and bat populations. The company also strives to protect fish habitats by adjusting flows and water levels and implementing fish ladders at its hydropower generation sites.

Electricity and gas distributor **Enel** is aware of the significant risks that its operations can pose for biodiversity. To mitigate these risks, Enel has a specific biodiversity policy that is supported by widespread data collection to enable best practice. For any damage that has been identified, the company will try to minimise the consequences; it has been involved in the restoration of 9,452 ha of habitat to protect biodiversity[7]. In addition, Enel has several biodiversity-related targets and pledges, which have already seen strong success. They have reduced waste by 49% since 2017[8] and have outlined a zero-plastic pledge, singling out habitats on the red list of the International Union for Conservation of Nature (IUCN) as areas where they will try to avoid projects.

Energy management firm, **Schneider Electric**, has pledged to fight natural capital loss by targeting net-zero biodiversity loss in its direct operations by 2030[9] and aligning biodiversity objectives with science. It is developing solutions and technologies that contribute to the preservation of biodiversity by optimizing the use of resources over their entire lifecycle. The company is also partnering with suppliers to eliminate the use of single-use plastics from packaging, use recycled cardboard, and help them to sharply reduce their CO2 emissions. Finally, Schneider Electric plans to partner with NGOs and investment funds on local initiatives, ensuring that all its sites deploy biodiversity conservation and restoration programs, and that sites located in water-stressed areas implement water conservation plans.

Green Bond Case Study: Bazalgette

Bazalgette Tunnel Limited (trading under the name Tideway) is an infrastructure provider that owns, constructs and maintains the Thames Tideway Tunnel. This Tunnel, which will span a length of 25km, will aim to upgrade London's Victorian Era Sewer System and improve its capacity and efficiency to cope with a population that has more than doubled in size.

Currently, excess sewage discharged into the river Thames due to sewer overflows has increased to an average of once a week from one to two times a year in Victorian times, severely polluting the river with sewage. The new Thames Tideway Tunnel, once constructed, can help to capture 96% of the overflow and thus reduce untreated sewage by sixteen million cubic metres in a typical year. Sewage discharges will also be reduced to fewer than four times per year.

This project will have long and sustained future positive impacts on the environment as well.

For one, the improvement in water quality will prevent fish kills and allow the river to sustain a rich, diverse array of wildlife. The river Thames is a

[7] Enel Sustainability Report, 2022 pg. 307
[8] Enel Sustainability Report, 2022 pg. 304
[9] Schneider Electric Biodiversity Pledge

key nursery area for millions of bass and flounder, and species higher up the food chain (birds, dolphins, and seals) will also benefit from the abundance of fish.

In addition, Tideway has committed to beneficially using 85% of its excavated spoil, and nearly 1.5 million tonnes of underground material are currently being used to create a 110-hectare wildlife habitat for bird species[10]. This 'green transformation' is said to be the largest habitat creation scheme inside the M25.

The completion of the Tunnel will also reduce the risk of flooding in London by increasing the capacity of the sewage system to manage heavy rainfall. This will help protect homes, businesses, and other infrastructure from flood damage.

Furthermore, Tideway is focused on its carbon management throughout the project. The company is in the process of stepping up its already strong emissions monitoring process, and the anticipated total carbon footprint of the Tunnel project is to be reduced by another 8% to 768,756tCO2e[11]. There are also requirements to achieve 53% reduction in the number of vehicle movements to reduce congestion and improve air quality. Instead, 90% of material excavated will be transported by river, further supporting the development of the river economy.

The project is expected to be completed by 2025. To finance construction, Tideway successfully raised £300m green bonds in 2022. The net proceeds from the issuance of green bonds by Tideway will be used to finance the design and construction of the Thames Tideway Tunnel. This asset falls into the Green Bond Principles use of proceeds for 'Pollution Prevention and Control' and 'Sustainable Water and Wastewater Management' as published by the ICMA. Several KPIs have also been set up to measure the Tunnel's environmental performance and ensure tracking of legal commitments.

Upon analysis, we believe there is meaningful impact from reducing sewage spills into the river Thames with material benefits to the environment and community. Tideway has also embedded credible, measurable, and worthwhile ESG targets into the project.

Bondholders are waking up to biodiversity

We believe that investors focus on a biodiversity strategy, which is backed by a forward-looking framework and positive engagement, will not only create value for a broad range of stakeholders but also enhance the sustainable returns in their portfolios. The potential of active fixed income biodiversity investing is still relatively untapped, but it is growing fast.

Global capital markets won't thrive when biodiversity-derived losses force defaults. The bond market has a privileged position with which to drive change, and investors are quickly waking up to the potential of this sleeping giant.

[10] Tideway | Super sewer spoil reused to develop 110-hectare habitat inside the M25

[11] https://www.tideway.london/media/5689/tideway-sustainability-report-2022.pdf

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