



# CAN DEBT CAPITAL MARKETS SAVE THE PLANET?

The rapid changes our planet needs are possible,  
but only if we pull the right levers

September 2021

## WWF

WWF is one of the world's largest and most experienced independent conservation organizations, with over 5 million supporters and a global network active in more than 100 countries. WWF's mission is to stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature, by conserving the world's biological diversity, ensuring that the use of renewable natural resources is sustainable, and promoting the reduction of pollution and wasteful consumption.

## ABOUT WWF'S WORK ON DEBT CAPITAL MARKETS

WWF has been working on debt capital markets since 2016, calling for effective and credible international standards to be developed for global green bond markets.

WWF has joined the ICMA-led Green Bond Principles (GBP) as an observer in 2015 and has contributed actively to standard-setting efforts convened by the Climate Bonds Initiative, the GBP, the European Commission and the International Standards Organisation.

While WWF is committed to supporting the development of policies, standards and certification schemes for green bonds and other debt instruments, WWF's participation in these efforts may not be construed as an endorsement of policies, principles, standards or the certification schemes. WWF has no plans to develop a proprietary green bond label, to become a verifier or certifier of green bonds or to develop its own green bond standards. WWF will rather seek to work with partners and existing platforms to support and promote the development of enabling conditions for such standards through multi-stakeholder dialogue.

## AUTHORS

Jochen Krimphoff, Initiative Lead, Sustainable Bond Markets, WWF France  
Ellen Lam  
Rob Fowler, Consultant, Essential Change, Australia

## REVIEWERS / OTHER CONTRIBUTORS

The authors would like to thank all of the interviewees, internal and external reviewers and contributors for their time and immensely valuable contributions to the subsequent draft versions of this report. Internal reviewers and contributors from WWF include (by alphabetical order):

Andrea Victoria Prada Hernandez, WWF Colombia  
Cécile Rechatin, WWF France  
David McCauley, WWF International  
Elizabeth Aceituno, WWF International  
Ella Weikang Wang, WWF China  
Hongxia Du, WWF China  
Jackson Kiplagat, WWF Kenya  
Jean-Marc Champagne, WWF Hong Kong  
Joanne Lee, WWF International  
Karen Ellis, WWF United Kingdom  
Marcene Mitchell, WWF US  
Margaret Kuhlow, WWF International  
Mats Boesen, WWF Norway  
Matthias Kopp, WWF Germany  
Maud Abdeli, WWF Switzerland  
Philippe Diaz, WWF Germany  
Sandy Okoth, WWF Kenya  
Sebastien Godinot, WWF European Policy Office  
Stephan Kellenberger, WWF Switzerland  
Susanne Schmitt, WWF United Kingdom

External peer reviewers who have provided valuable comments include: Andrew Whiley, Antoni Ballabriga, Audrey Trouillet, Ashley Gorst, Boris Kopp, Charlotte Gardes, Claire Coustar, Emmanuelle Bru, Esohe Denise Odaro, Jonathan Gardiner, Jörg Eigendorf, Louis de Montpellier, Miki Tamai, Nathalie Jaubert, Olivier Picard, Paula Meissirel, Simon Zadek, Tanguy Claquin, Taryk Bennani, Trisha Taneja, Yao Wang, and several other reviewers who preferred to remain unnamed.

## DISCLAIMER

It should be noted that the views expressed in this report are the sole responsibility of the authors and do not necessarily represent the views of the external reviewers.

## EDITOR

Sophia Grene

## CITATION

WWF (2021) Can debt capital markets save the Planet? Krimphoff, J., Lam, E., Fowler, R. (Eds). World Wide Fund for Nature, Gland, Switzerland.

# CONTENTS

<b>EXECUTIVE SUMMARY</b>	<b>2</b>
<b>WHY DEBT CAPITAL MARKETS MATTER</b>	<b>9</b>
<b>WWF'S CALL TO ACTION FOR ZERO CARBON &amp; NATURE-POSITIVE DEBT CAPITAL MARKETS</b>	<b>20</b>
<b>CAPITAL MARKETS</b>	
1. Ambition must increase, with impact as primary focus	
2. Investors must rapidly shift their capital out of unsustainable entities and into green opportunities	
3. Governments, financial regulators, supervisors and central banks must step up	
4. Definitions and metrics must continue their journey to define a common language of sustainable finance	
5. Transparency, confidence and integrity are critical for systemic change in the finance and investment ecosystem	
<b>FUTURE SCENARIOS FOR RAPID CHANGE</b>	<b>60</b>
1. Business as Usual - using past experience to guide future action	
2. Encyclopaedia - a global common language	
3. Science-Based Central Banking - central bankers as Nature's next stewards	
4. Investor Pull - coordinated efforts driven by global investor coalitions	
5. Unveiling - radical transparency drives fast-paced, disruptive change, enabled by innovation, technology and big-data	
<b>NEXT STEPS AND DEEPER DISCUSSIONS</b>	<b>78</b>

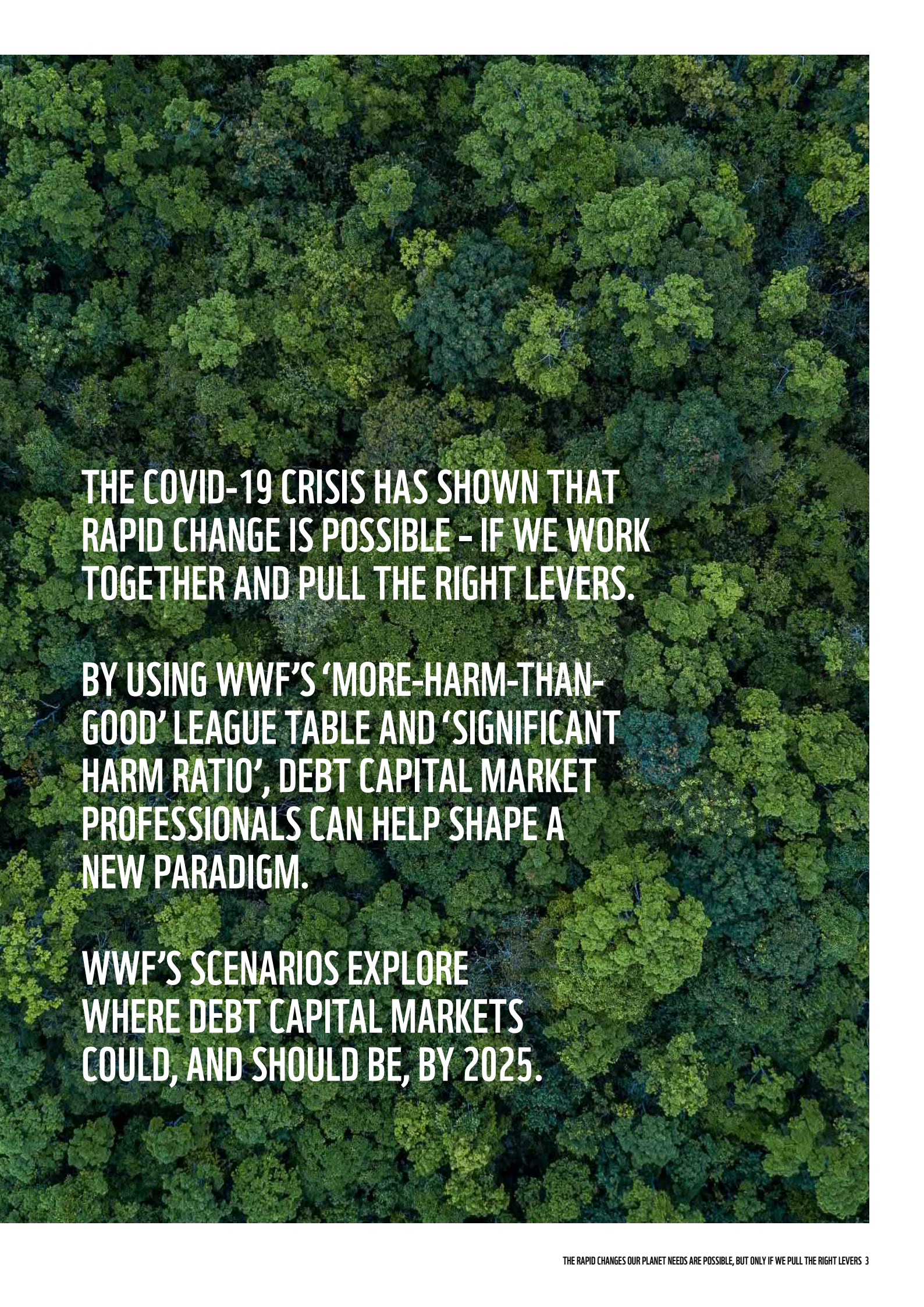
# EXECUTIVE SUMMARY

**DEBT CAPITAL MARKETS MATTER  
FOR THE FUTURE OF THE PLANET.**

**MARKET PRACTITIONERS MUST  
RETREAT FROM 'BUSINESS-AS USUAL'  
AND THEIR HISTORY OF CREATING  
MORE HARM THAN GOOD.**

**IN THE 'RACE-TO-ZERO' TO REDUCE  
CARBON EMISSIONS AND REVERSE  
NATURE LOSS DEBT CAPITAL  
MARKETS MUST RAPIDLY SHIFT TO  
BECOMING 'ZERO CARBON & NATURE-  
POSITIVE DEBT CAPITAL MARKETS'.**



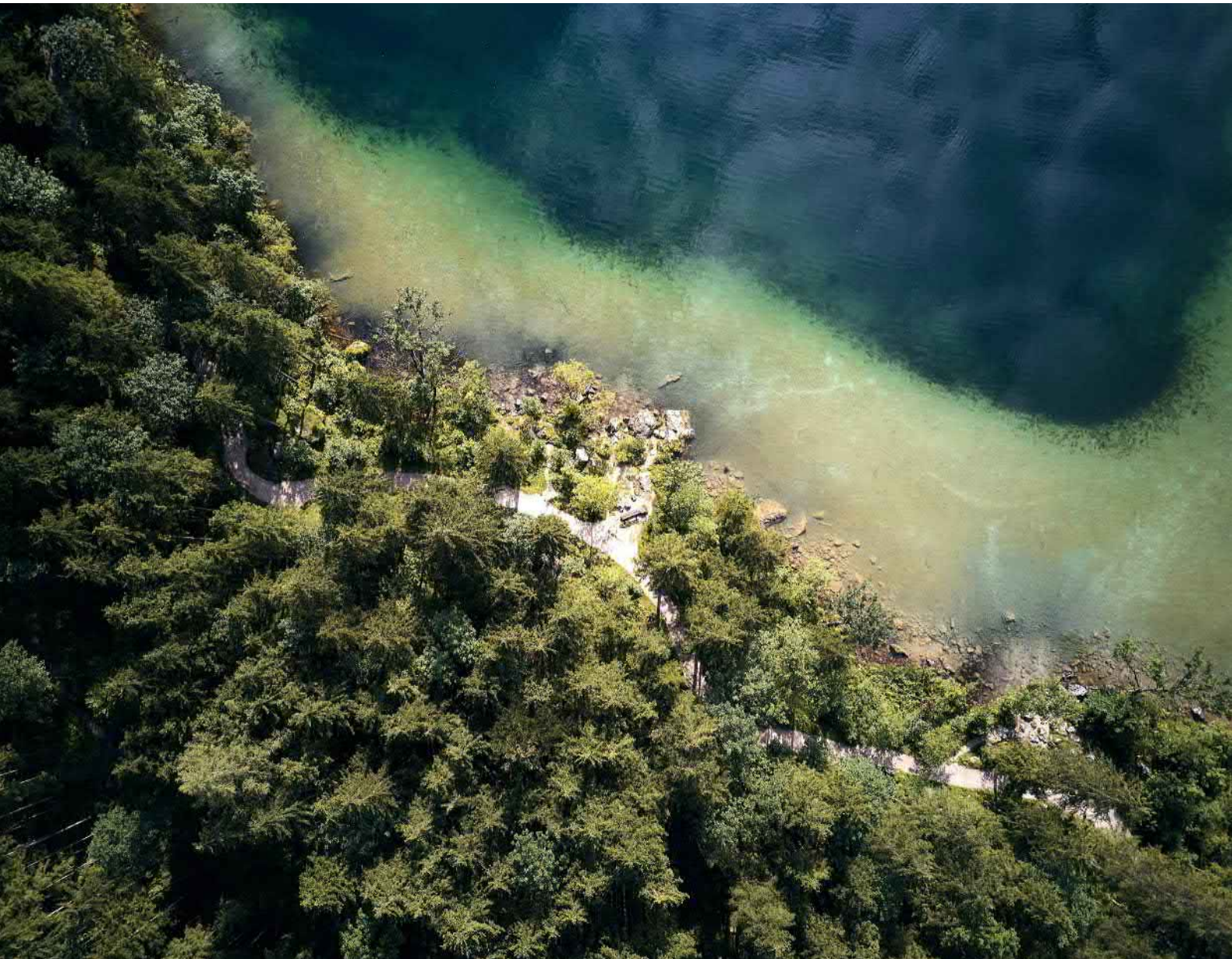
An aerial photograph of a dense, lush green forest, showing a variety of tree species and a thick canopy. The text is overlaid on the lower half of the image.

**THE COVID-19 CRISIS HAS SHOWN THAT  
RAPID CHANGE IS POSSIBLE – IF WE WORK  
TOGETHER AND PULL THE RIGHT LEVERS.**

**BY USING WWF'S 'MORE-HARM-THAN-  
GOOD' LEAGUE TABLE AND 'SIGNIFICANT  
HARM RATIO', DEBT CAPITAL MARKET  
PROFESSIONALS CAN HELP SHAPE A  
NEW PARADIGM.**

**WWF'S SCENARIOS EXPLORE  
WHERE DEBT CAPITAL MARKETS  
COULD, AND SHOULD BE, BY 2025.**





GLOBAL DEBT HAS  
BALLOONED TO  
REACH MORE THAN

USD **124+**  
TRILLION  
IN OUTSTANDING  
FINANCING AND  
INVESTMENT

## DEBT CAPITAL MARKETS MATTER FOR THE FUTURE OF THE PLANET

The Planet's ecosystems, climate and biodiversity, are on the brink of default and world leaders are increasingly looking towards the financial sector for solutions.

In the run up to key international negotiations on climate this year and biodiversity next year<sup>1</sup>, the financial sector can breathe new life into a set of global initiatives in a 'race-to-zero' to reduce carbon emissions and reverse nature loss.

Transforming global debt capital markets should be a priority for the financial sector. They are by far the largest pool of global capital with around USD 1 trillion changing hands every day. The people who control these transactions, including market practitioners, financial regulators, supervisors and central bankers, have a critical role to play.

This report argues that global debt capital markets can and must leverage their power to address the environmental challenges of our generation within this critical 'make-or-break' decade to 2030. Disastrous climate change and the alarming degradation of biodiversity and ecosystems need to be addressed urgently.

# RAPID CHANGE IS ALREADY HAPPENING

## RAPID CHANGE IS ALREADY HAPPENING IN DEBT CAPITAL MARKETS

Since WWF started to work on global debt capital markets in 2016<sup>2</sup>, we have witnessed impressive momentum and our analysis in this new report reveals that rapid change is already happening.

Tremendous progress has been made. Market growth of a new type of 'labelled' debt capital market instruments has reached critical mass. These labelled bonds and loans finance projects with specific environmental, social or sustainability benefits, and are expected to represent more than 10 percent of global bond issuances in 2021<sup>3</sup>. However, that growth needs to broaden and accelerate as the vast majority of the instruments traded on debt capital markets today still provide very little, if any, information on their environmental impacts.

Markets have also grown in quality since 2016. Market guidance and standards have moved from flexible principle-based process guidelines to much more prescriptive, taxonomy-based standards with much tighter definitions of intended environmental benefits. Some of them are becoming regulated in major jurisdictions (e.g., China, EU and ASEAN).

Transparency and independent review of green claims have started to bring clarity on what is green enough. This has created a much clearer view on what is unsustainable and doing significant harm.

## WWF BELIEVES THAT KEY DEBT CAPITAL MARKET ACTORS MUST SHIFT AWAY FROM 'BUSINESS AS USUAL' THAT CAUSES 'MORE HARM THAN GOOD'

Our analysis also shows that prevailing business models and practices 'do more harm than good'. Indeed, in the past five years the top 30 investment banks, which play a pivotal role in the origination and distribution of capital, have underwritten USD 4 trillion in fossil fuel debt, earning a total fee almost twice the amount generated from arranging or underwriting green transactions.

To shift to a greener financial system, leading actors in debt capital markets must be incentivized to rapidly reduce exposure to financing significant harm and increase activities in green capital raising.

To facilitate this shift, WWF has created the 'WWF More-Harm-Than-Good' league table and the 'Significant Harm Ratio'. These figures reveal that the largest players in the underwriting business are not necessarily the fastest and the most advanced in the 'race-to-zero' to reduce carbon emissions.

## WWF'S CALL FOR COLLECTIVE ACTION TO HELP CREATE 'ZERO CARBON & NATURE-POSITIVE DEBT CAPITAL MARKETS'

The good news is that in debt capital markets a small number of people really can help save the planet. And the COVID-19 crisis has shown that rapid change is possible if we pull the right levers. But those key people will only do so if they feel mandated, empowered, and have 'permission' to take the steps required and pull those levers.

Building on the rapid progress we have seen in recent years, WWF has identified Rapid Change Levers for key actors to pull. Across five areas, we show how rapid change is already happening and can be swiftly amplified:

- Ambition must increase, with impact as the primary focus;
- Investors must rapidly shift their capital out of unsustainable entities and into green opportunities;
- Governments, financial regulators, supervisors and central banks must step up;
- Definitions and metrics must continue their journey to define a common language of sustainable finance;
- Transparency, confidence and integrity are critical for systemic change.



## THE GAME-CHANGING ‘WHAT IF?’ QUESTIONS

WWF has created a series of future scenarios of a world in 2025 by asking the question ‘what if...?’ (see boxed text below). By the halfway point in the make-or-break decade the debt capital markets could be shifting to a net positive impact in the real world.

These questions are intended to provoke readers, challenging assumptions about what may happen, and provide a useful shared basis for debate. Some of the questions feel uncomfortable because they seem to point towards an uncertain and disruptive future. Some of the options described in these scenarios might be perceived as unthinkable today and would likely send shockwaves through the traditional debt capital markets.

## FAST FORWARD: FOUR RAPID CHANGE SCENARIOS

If we don’t ask these questions, and decide to stick comfortably to ‘business-as-usual’, we won’t be prepared for the expected disruptions from a changing climate and collapsing ecosystems<sup>4</sup>.

That is why we have explored what could and should happen as soon as possible in debt capital markets, and hence how this small number of people can indeed save the Planet.

We start off with a scenario that describes **Business as Usual – using past experience to drive future action**, where weak mandates and vested interests continue to slow down any attempts for rapid change in the finance and investment ecosystem.

**What if debt capital market practitioners, regulators, supervisors and central bankers** forcefully and decisively acted on the International Energy Agency’s alarming call to ‘stop investing in fossil fuels to meet net-zero targets’?<sup>5</sup> What if, as a result, debt capital markets started to finance only those parts of our economies that preserve, restore and protect the planet, and stopped financing those that harm it?

**What if G20 governments as part of their ‘inevitable policy response’<sup>6</sup>** to address dangerous climate change decided to stop fossil-fuel investments and to develop taxonomies that define which debt capital market investments are green and which investments involve ‘significant harm’?

**What if central bankers announced that as of 2025 at the latest**, bonds that do not have transparency on their alignment with green definitions would no longer be eligible for the central bank’s asset purchasing programs or used as market collateral? Or if regulators required all bond issuers to report on climate- and nature-related risks and opportunities under the TCFD and TNFD frameworks?<sup>7</sup>

**What if investor coalitions decided to announce that by 2025 at the latest**, they will refuse to invest in debt capital market instruments that do not have transparency on their alignment with green definitions or inclusion of ambitious science-based targets for climate and biodiversity indicators?

**What if the debt capital market teams and major investment banks** systematically asked themselves whether or not refinancing fossil fuel assets is actually a good idea? What if they started worrying about the impacts of climate change on both their clients and the planet? What if they ultimately decide to ‘pull the plug’ on these deals?



In stark contrast, we paint four future scenarios for rapid change:

### ENCYCLOPAEDIA

A global common language explores the crucial role that definitions and metrics play to define what is green, and hence what is unsustainable in finance and investment.

### SCIENCE-BASED CENTRAL BANKING

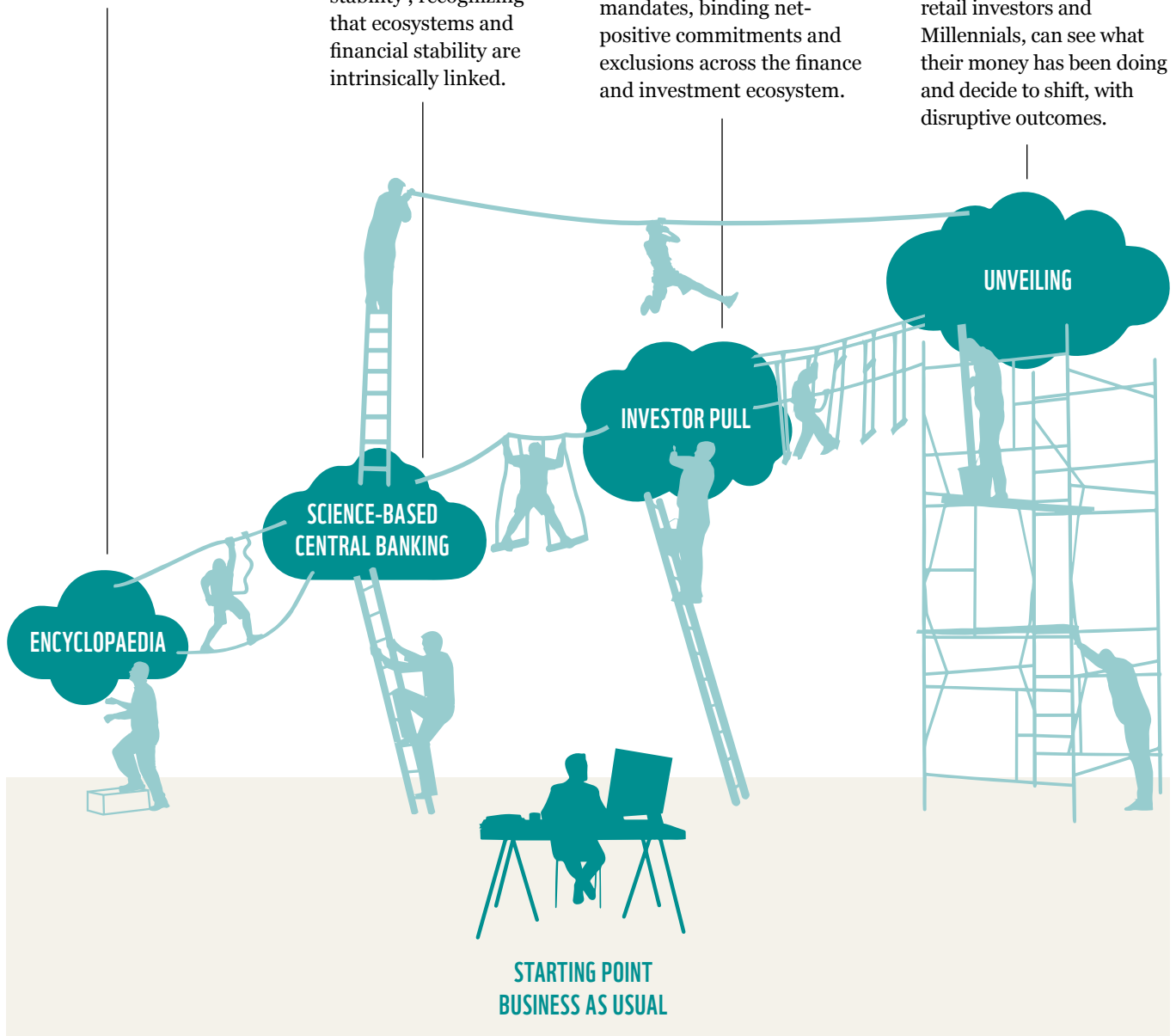
Looks at how central bankers can shift from ‘market-neutrality’ mandates to forcefully promote ‘ecosystem-stability’, recognizing that ecosystems and financial stability are intrinsically linked.

### INVESTOR PULL

Coordinated efforts driven by global investor coalitions explores how investors, asset managers and investment bankers can step up to drive rapid changes in ESG-driven mandates, binding net-positive commitments and exclusions across the finance and investment ecosystem.

### UNVEILING

Radical transparency drives fast-paced disruptive change enabled by innovation, technology, and big data shows how investors, in particular retail investors and Millennials, can see what their money has been doing and decide to shift, with disruptive outcomes.



As we seek to adapt to climate change that is hitting the world economy, we have yet to see the positive impact of ‘green’ debt capital markets. We have yet to figure out how they can help preserve, restore and protect the planet, rather than destroying it.

**Debt capital market professionals collectively control the levers. They can decide to be part of the solution rather than continuing to be part of the problem.**





# WHY DEBT CAPITAL MARKETS MATTER

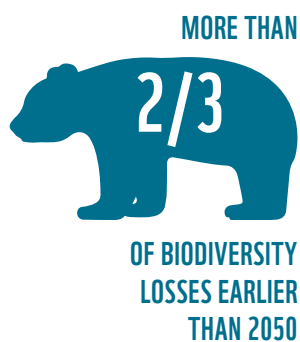
WITH MORE THAN USD 124+ TRILLION IN  
OUTSTANDING FINANCING AND INVESTMENT,  
GLOBAL DEBT CAPITAL MARKETS ARE OUR  
PLANET'S FINANCIAL ARTERIES.

MOST OF THE REAL-WORLD ACTIVITIES  
THESE MARKETS FINANCE DIRECTLY  
DEPEND ON THE UNDERLYING NATURE AND  
ECOSYSTEMS THAT SUPPORT ALL OF US.

ECOSYSTEM DEFAULT IS LOOMING WITH  
SERIOUS IMPLICATIONS FOR FINANCE AND  
THE REAL ECONOMY.

# EVERY DAY AROUND USD 1 TRILLION CHANGES HANDS IN THE GLOBAL DEBT CAPITAL MARKETS.<sup>8</sup>

This incredible volume of cash flowing through the finance and investment ecosystem sustains the real economy. Diverting just a small part of that capital flow from unsustainable sectors to green and sustainable activities would have a massive impact on the Planet.



## CAPITAL MARKETS CAN'T THRIVE WHEN ECOSYSTEMS DEFAULT IS LOOMING

Nature loss poses material risks for the finance sector: according to estimates by the World Economic Forum<sup>9</sup> more than half of the world's economic output – USD 44 trillion of economic value generation – is moderately or highly dependent on nature.

However, perspectives and scenarios remain grim for our future climate and the biodiversity we enjoy and the ecosystems in which we live. Biodiversity - the rich diversity of life on Earth - is being lost at an alarming rate. As the latest edition of WWF's Living Planet Report<sup>10</sup> has shown, species populations continue to rapidly decline.

More than two thirds of the population sizes of mammals, birds, amphibians, reptiles and fish have already been wiped out between 1970 and 2016. Only an integrated portfolio of integrated conservation action, combined with sustainable production measures will allow to reverse the trend and 'bend the curve' of biodiversity losses earlier than 2050 (see depicted by the 'yellow' curve in the chart below).

Our current response to climate change under the Paris agreement is totally inadequate. The sixth assessment report from the Intergovernmental Panel on Climate Change (IPCC) has reinforced that our greenhouse gas emissions must decrease rapidly for the Planet to have any chance of avoiding extremely dangerous climate change.



Without additional actions to reduce greenhouse gas emissions and protect nature we are heading towards a future that will have devastating effects on biodiversity and human well-being.

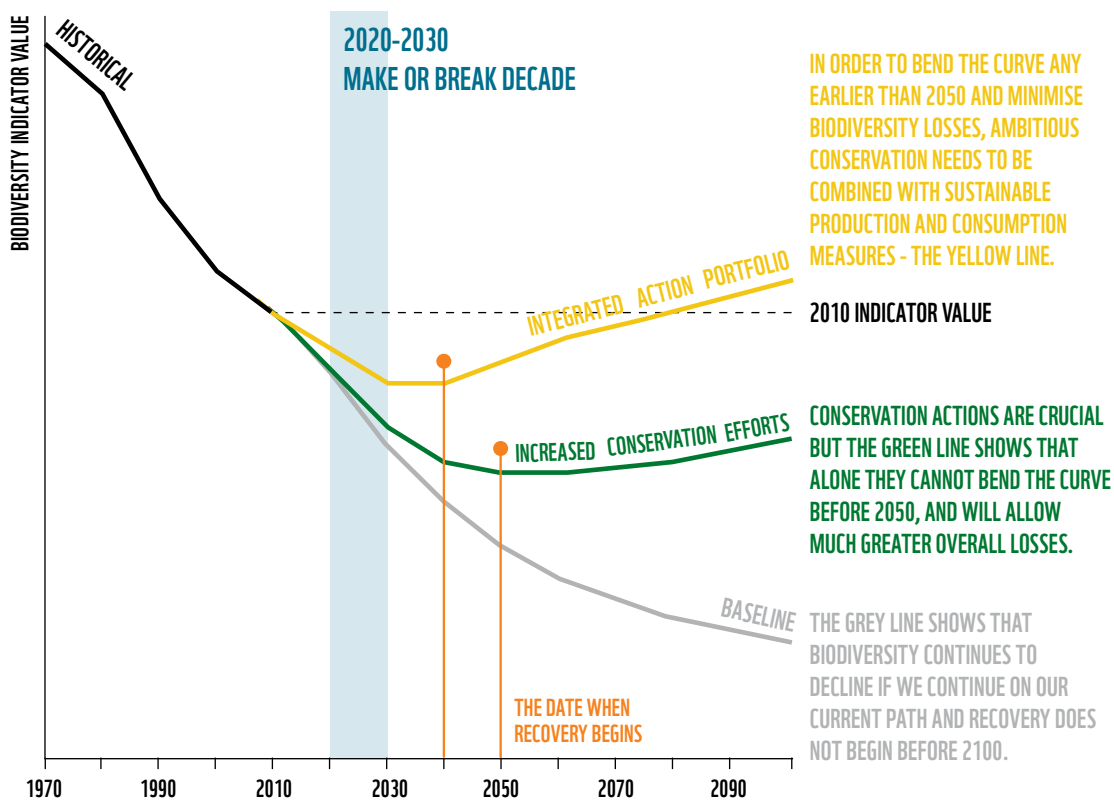
According to the IEA clean energy investment needs to double in the 2020s, reaching USD 1.5 trillion at the end of the decade (from 750 billion in 2021) to maintain temperatures well below a 2°C rise and more than triple in order to keep the door open for a 1.5°C stabilisation<sup>11</sup>. And the annual biodiversity financing gap to reverse the decline in biodiversity by 2030 is

estimated to amount between USD 722 and USD 967 billion a year, according to a recent study<sup>12</sup>.

Our society’s ability to halt this trend, to ‘bend the curve of ecosystems’ decline and biodiversity loss, will depend on when and how decisively action will be taken. And even under the most optimistic scenarios, the recovery of the world’s ecosystems will take decades to materialise.

**Bold action must happen during the “make-or-break” decade between now and 2030.**

## THE BIODIVERSITY CURVE STARTS TO BEND UPWARDS AT A DIFFERENT TIME UNDER EACH SCENARIO - WHEN AND HOW DEPENDS ON WHICH ACTIONS ARE TAKEN



What bending the curve means for biodiversity, and how to get there. This illustration uses one biodiversity indicator (Mean species abundance, MSA) for one biodiversity model (GLOBIO), averaged across the four land use models, to explain what the different scenarios mean for projected biodiversity trends and what this tells us about how to bend the curve. Adapted from Leclère et al. (2020).

Source: WWF Living Planet Report, 2020, page 123

# WHO HAS THE POWER AND THE CAPITAL TO MAKE ALL THIS HAPPEN? THAT IS WHY THE DEBT CAPITAL MARKETS MATTER

IEA SAYS  
CLEAN ENERGY INVESTMENT  
NEEDS TO DOUBLE IN THE  
2020S, REACHING  
**USD 1.5**  
TRILLION  
AT THE END OF THE DECADE  
(USD 750 BILLION PER YEAR  
IN 2021)

=  
TO MAINTAIN



TEMPERATURES  
WELL BELOW A

**2°C**

RISE

AND MORE THAN TRIPLE IN ORDER  
TO KEEP THE DOOR OPEN FOR A  
1.5°C STABILISATION

THE ANNUAL BIODIVERSITY  
FINANCING GAP TO REVERSE  
THE DECLINE IN BIODIVERSITY  
BY 2030 IS BETWEEN

**USD 722-967**  
BILLION A YEAR  
A RECENT STUDY FINDS



IN SOUTHEAST ASIA ALONE, THE COST  
OF INACTION, ASSUMING A GLOBAL  
WARMING PATHWAY OF MORE THAN

**3°C**

BY 2070 WOULD LEAD  
TO ECONOMIC LOSSES  
OF MORE THAN

**USD 7**  
TRILLION  
IN PRESENT VALUE  
TERMS BY 2050<sup>13</sup>





## SIZE OF GLOBAL CAPITAL MARKETS

Global private and public debt climbed to USD 281 trillion as at the end of 2020. Global Bond Markets represented USD 124 trillion outstanding at the end of 2020 and proved to be the largest source of financing globally. This massive value is 25% more than the value of all of the equity listed on all of the stock markets around the world<sup>14</sup>. Debt reflects money owed by the company towards another person or entity. Conversely, equity reflects the capital owned by the company.



Source: Data compiled by WWF from various sources see endnote 14 for details

Countries, communities and corporations are realizing that much of what we do in today's global economy is stripping value from the natural environment we all depend upon for life; a free ride at the expense of the rest of us. We need to rapidly reverse that trend and start to rebuild the natural capital we all draw on for the sake of current and future generations.



ESTIMATES SUGGEST WE  
WOULD REQUIRE

**1.6**  
EARTHS

TO MAINTAIN THE WORLD'S  
CURRENT LIVING STANDARDS

Early in 2021 the UK government released the landmark Dasgupta Review on the Economics of Biodiversity. The central conclusion is that our demands on nature by far exceed its capacity to supply them, putting biodiversity under huge pressure and society at “extreme risk”.

**Estimates suggest we would require 1.6 Earths to maintain the world's current living standards.**

Total global consumption is rising quickly as the major emerging economies move through their development pathways.

Our primary measures of economic success have failed to consider natural capital while they celebrate activity that depletes ecosystems and habitats which are crucial to human survival. Some countries are taking steps to incorporate natural capital and ecosystem services into national economic metrics.

Chinese provinces have introduced a Gross Ecosystem Product metric and New Zealand has a Living Standards Framework to explore these critical changes.

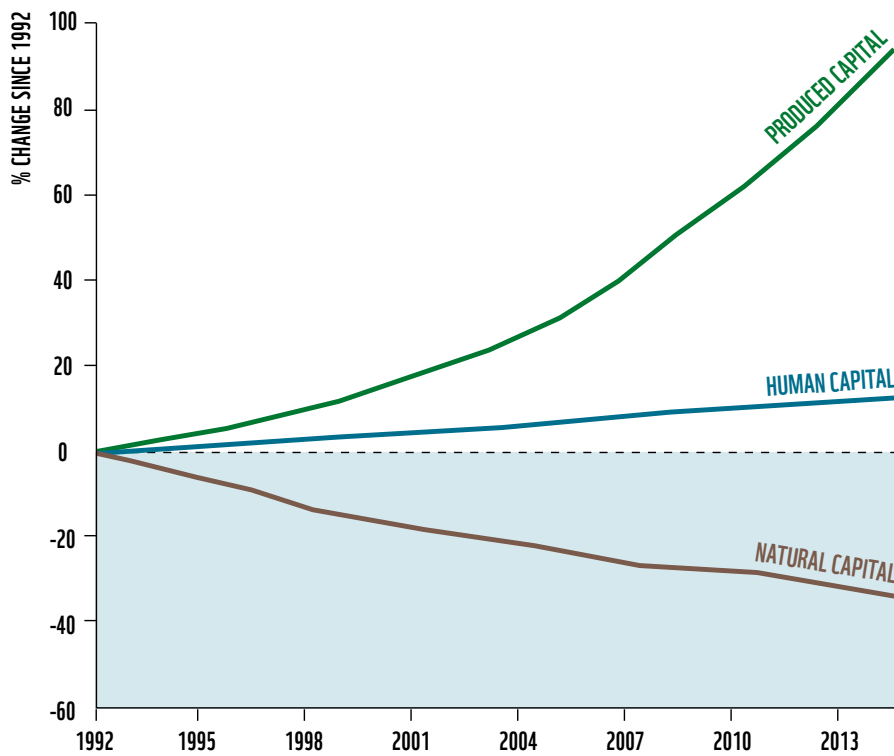
Work by the Taskforce for Nature-Related Financial Disclosure (TNFD) is underway with involvement by more than 25 financial institutions, more than 15 companies and backing from the G7 finance ministers. As we have seen with climate-related financial disclosures that are gaining traction, nature-based financial disclosures also must become mainstream. There is no time to waste.

**The existing financial system is fundamentally tilted against nature with financial flows devoted to enhancing our water, air, soil and other natural assets being dwarfed by the enormous subsidies and other investments that exploit those natural assets.**





## GLOBAL WEALTH PER CAPITA, 1992 TO 2014



Source: Managi and Kumar (2018) quoted in: The Economy of Biodiversity - The Dasgupta Review (2021)<sup>15</sup>





Global debt capital markets are the arteries of the global financial system, and most activities in our economies depend on them. The bond market facilitates issuers to finance or re-finance their operations whilst investors benefit from stable income and safe investments. The cost of debt for the issuer is influenced by its credit worthiness and is evaluated by credit ratings agencies and investors to assess the issuer's creditworthiness, i.e., the issuer's ability to repay its debts.

Investor engagement, in particular by bondholders and/or lenders can also result in higher cost of debt, or even lack of access to debt for issuers that do not embed sustainability in their strategy and are unable to provide meaningful responses to investors' questions.

However, when the cost of debt increases, or if access to debt capital is denied, such as through political instability or stranded assets, then disruptive change can happen very quickly. Private capital also plays an important role in many emerging economies, particularly where capital markets are yet to develop or mature.

Being shut out of the debt capital markets or rejected by private capital providers has major financial consequences for any company or government in that situation (see boxed text).

Conversely, when disruptive change in natural ecosystems occurs this can also undermine the ability of issuers of debt to sustain their operations and hence maintain their credit worthiness with investors.

## NATURAL CAPITAL SUPPORT REAL ECONOMY ACTIVITIES BUT ALSO CREATES VULNERABILITIES.

Debt sustainability has come under mounting pressure in emerging and developing economies, many of which are heavily dependent on nature. Economies that depend on the productivity of natural resources, for instance through agriculture, fisheries and forestry will be most impacted as productive capacity declines.

Similarly, economic sectors depending on intact nature and biodiversity will see their output potential decline, affecting ecotourism, the potential for developing a carbon offset market and through risks of trade restrictions by importing countries as sustainable supply chain legislations become more binding. These factors have a high potential to affect public finances and therefore a government's debt sustainability.

Research<sup>16</sup> published in February 2020 has identified Argentina as one of the G20 countries most dependent on natural capital for their exports. 28% of Argentina's sovereign debt is exposed to an anticipated tightening of climate and anti-deforestation policy in the 2020s. Argentina defaulted on its short-term debt in late 2019. Restructuring finally took place in September 2020 after prolonged negotiations with foreign bondholders.

The country now has a long-term credit rating of CCC+/Ca/CCC, meaning it is considered vulnerable or highly vulnerable.

Debt sustainability assessments (DSAs) are an important tool provided by the International Monetary Fund (IMF) to help assess sovereign vulnerabilities. A country's DSA classification has important repercussions on governments' market access or the need to outright restructure public sector obligation, while also driving the macro-conditionality of IMF-sponsored economic programmes. The IMF is currently working on an enhancement of its DSA framework and plans to include more explicitly the repercussions of climate change on debt sustainability<sup>17</sup>. The IMF has so far stopped short of attempting to introduce biodiversity and natural capital risks into its DSA frameworks. These partial DSAs will, therefore, misdiagnose the true state of debt sustainability in many countries, leading to erroneous policy recommendations and increasing the risk of avoidable debt crises.

This omission needs fixing. This is why WWF, in collaboration with Ninety One (formerly Investec Asset Management) has developed a pilot Climate and Nature Sovereign Index (CNSI)<sup>18</sup>.

Finance for Biodiversity and the Centre for Sustainable Finance at SOAS University of London are also working on identifying how debt sustainability analyses can be augmented to correctly account for nature-related risks<sup>19</sup>.

Sources: WWF-Sight, London School of Economics/ Grantham Institute/Planet tracker and Finance for Biodiversity



# 28%

OF ARGENTINA'S SOVEREIGN DEBT IS EXPOSED TO AN ANTICIPATED TIGHTENING OF CLIMATE AND ANTI-DEFORESTATION POLICY IN THE 2020S

# WHAT IF INVESTORS ACT?

We can see the influence and power of the debt capital markets.



WHAT IF THAT POWER WAS UNLEASHED TO 'HEAL' THE PLANET?

OR, MORE IMPORTANTLY, WHAT IF MARKET PARTICIPANTS TOOK BOLD AND STRONG ACTION TO AVOID HURTING THE PLANET?

BY COLLECTIVELY AND SYSTEMATICALLY ASKING THE QUESTION: 'WHAT IS THE IMPACT OF THIS DEBT ON THE ENVIRONMENT?'

IS THE IMPACT OF THIS DEBT POSITIVE?



POSITIVE OR IS IT



NEGATIVE?

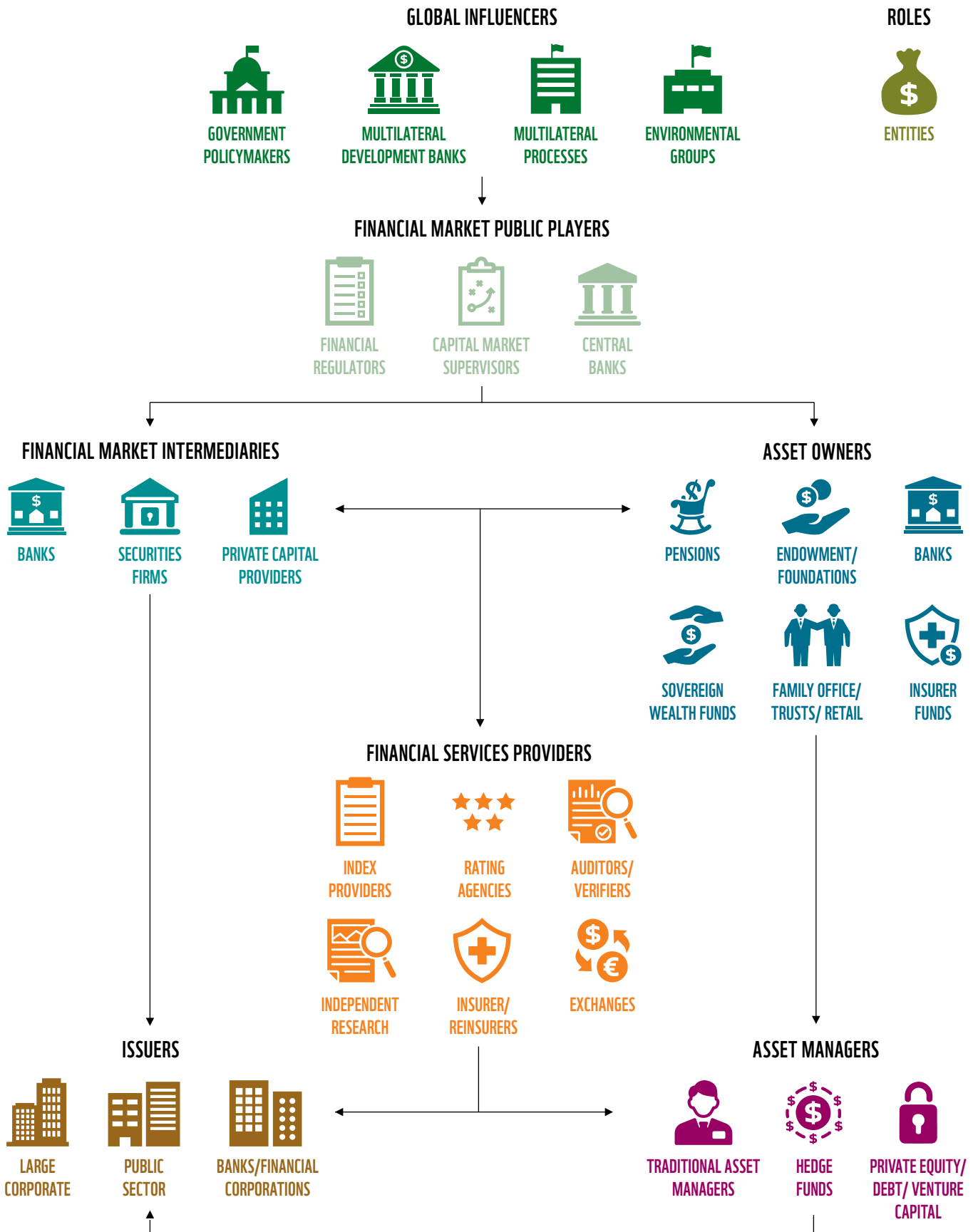
IS IT GREEN OR IS IT DOING SIGNIFICANT HARM?

HOW CAN INVESTMENT DECISIONS

BETTER REFLECT THAT ENHANCED UNDERSTANDING OF HOW THE DEBT CAPITAL MARKETS IMPACT THE PLANET?



# THE FINANCE AND INVESTMENT ECOSYSTEM AND THE KEY STAKEHOLDERS INVOLVED



# WWF'S CALL TO ACTION FOR ZERO CARBON & NATURE-POSITIVE DEBT CAPITAL MARKETS





# WWF'S CALLS TO ACTION ARE FOCUSED ON A SMALL NUMBER OF PEOPLE AROUND THE WORLD.

These key stakeholders in the finance and investment ecosystem have incredible influence. They can help save the Planet if they pull the right levers. They must act before it is too late.

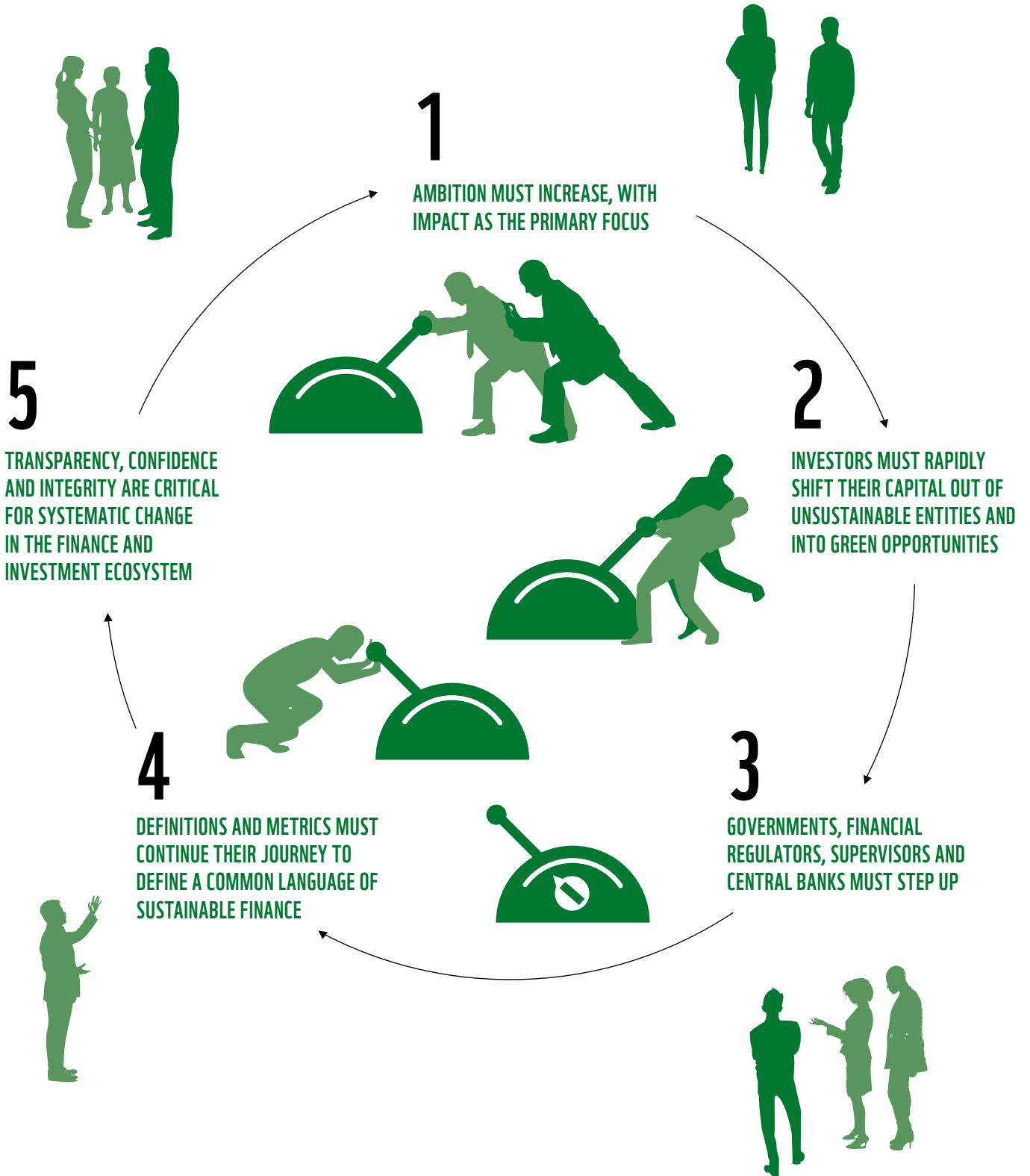


WWF HAS IDENTIFIED  
**RAPID CHANGE  
LEVERS**  
FOR THESE KEY  
STAKEHOLDERS TO PULL

ACROSS OUR  
**FIVE CALLS  
TO ACTION**  
WE SHOW HOW  
RAPID CHANGE IS  
ALREADY HAPPENING



# KEY INFLUENCERS OF THE DEBT CAPITAL MARKETS



# LEVERS FOR RAPID CHANGE IN THE FINANCE AND INVESTMENT ECOSYSTEM

## GLOBAL INFLUENCERS

### MULTILATERAL PROCESSES (G20, G7, ASEAN, INTERNATIONAL PLATFORM ON SUSTAINABLE FINANCE, ETC.)



- Define and agree on harmonised definitions for what is green and what is unsustainable as well as 'do-no-significant harm' criteria
- Agree on roadmap for mandatory climate- and nature-related risk disclosure rules for companies and financial institutions (i.e., TCFD and TNFD)
- Promote ambitious climate and nature commitments by member countries
- Agree on ambitious targets for mobilising green investments, implementing environmental taxes, stopping subsidies for fossil fuels and harmful sectors, and restoring our collective natural capital

### NATIONAL AND REGIONAL POLICYMAKERS



- Implement ambitious climate and biodiversity commitments at regional or domestic level
- Adopt mandatory climate- and nature-related risk disclosure rules for companies and financial institutions, including privately held entities and other investment structures

### ENVIRONMENTAL GROUPS



- Call out greenwashing when it emerges, especially with target-based structures
- Drive increased focus and capacity on understanding, quantifying, tracking and improving the complex relationship between the capital markets, the real economy, and natural capital

### DEVELOPMENT BANKS



- Adopt ambitious targets to eliminate investments in fossil fuels and harmful sectors and actively investing in net-zero, nature positive economic activities
- Streamline and rapidly increase use of blended finance instruments, credit guarantees, currency hedges and other supporting structures for emerging market entities
- Help develop sustainable financial market infrastructure in developing countries

## FINANCIAL MARKET PUBLIC PLAYERS

### FINANCIAL REGULATORS AND CAPITAL MARKET SUPERVISORS



- Enforce mandatory climate- and nature-related risk disclosure rules for companies and financial institutions, including privately held entities and other investment structure
- Adopt mandatory disclosure rules for green alignment for all capital transactions
- Call out capital transactions which lack transparency on climate and nature-related risks
- Put in place registration and oversight of review providers and ESG rating agencies, modelled after supervisory frameworks for financial rating agencies and/or assurance service providers at national, regional and international level, with a focus on building trusted service providers in local markets
- Build market capacity on understanding, tracking and improving the complex relationship between the capital markets, the real economy, and the natural environment

### CENTRAL BANKS



- Extensively apply the existing stimulus toolkit including preferred lending facilities, bond purchasing programmes, reserve requirements to accelerate green investment
- Drive adoption of taxonomies with harmonized terminology, standardized performance metrics, and appropriate safeguards
- Assess nature related financial risks and opportunities in their jurisdiction, lead by example and use monetary policy operations and prudential supervision to mitigate those risks and support an orderly transition
- Collaborate and share with each other to identify and activate the rapid change levers in all jurisdictions with debt capital markets over the coming 2-5 years

## FINANCIAL SERVICE PROVIDERS

### INSURANCE / REINSURANCE



- Identify clients with high levels of significant harm to help them quantify, track and mitigate the impacts
- Set ambitious targets for reducing insured exposure to significant harm investments such as coal mines, fossil fuel exploration & development, fossil fuel supply infrastructure, etc.
- Develop financial products aiming at reducing the negative impact of investments on nature and ecosystems



## FINANCIAL MARKET INTERMEDIARIES

### BANKS AND SECURITIES FIRMS



- Adopt ambitious pledges and commitments to align financing activities with global agreements and goals, including facilitated capital markets activities such as underwriting and arranging of bonds
- Set ambitious short-term targets for increased green transactions and decreased significant harm transactions (i.e., fossil fuels and harmful sectors)
- Align internal incentives and bonuses with the rapid transition in capital raising activities
- Grow the green bond market to trillions per year before 2025
- Include at least one relevant nature-related KPI in all sustainability-linked deals

### PRIVATE CAPITAL PROVIDERS



- Rapidly shift capital out of significant harm investments and into green opportunities
- Set KPIs and ambitious targets for influencing investees to improve climate and nature outcomes, and work with other investors to drive rapid transitions
- Collaborate with emerging market investors to accelerate integration of ESG and environmental impact into their decision making and investment mandates

## ASSET OWNERS

### PENSION FUNDS AND INSURANCE FUNDS



- Make pledges and commitments to align with global agreements and goals
- Adopt ambitious short and medium-term targets to reduce exposure to unsustainable investments
- Create clear mandates, exclusions and influence strategies for asset managers to drive rapid change in portfolios and products

### BANK TREASURIES AND SOVEREIGN WEALTH FUNDS



- Actively collaborate with investors in emerging markets and local currencies to rapidly build a common understanding of climate and nature risks and opportunities, so they can respond and align with a rapid transition in local markets
- Use their inherent influence on the owners and regulators of State-Owned Entities across heavy industry, fossil fuels, chemicals, materials and energy to accelerate and finance their transitions from significant harm to green

## ISSUERS OF DEBT

### LARGE CORPORATIONS



- Disclose information on alignment of all labelled and unlabelled bonds and other debt instruments with internationally accepted green taxonomies and standards
- Ensure transition commitments in sustainability-linked deals have relevant indicators and ambitious short and medium-term targets which are science-based, benchmarked and aligned with global goals for climate and nature
- Set ambitious Science-Based Targets for climate and nature and include at least one relevant nature-related KPI in all sustainability-linked deals
- Adopt internal shadow prices for carbon emissions and nature outcomes and integrate those into investment and operations decision making
- Explicitly include environmental and social governance (ESG) scorecards into the underwriter selection process, including WWF's 'More-Harm-Than Good' indicator and league table

### PUBLIC SECTOR AGENCIES AND TREASURIES



- Promote best practice standards, terms and definitions in their sovereign, sub-national, municipal and supranational debt issuance programmes
- Explicitly include environmental and social governance (ESG) scorecards into the underwriter selection process, including WWF's 'More-Harm-Than Good' indicator and league table
- Influence the owners and regulators of State-Owned Entities (across heavy industry, fossil fuels, chemicals, materials and energy) to accelerate and finance their transitions from significant harm to green

## ASSET MANAGERS

### TRADITIONAL ASSET MANAGERS



- Create funds and products to meet new mandates, exclusions and influence strategies from asset owners
- Set KPIs and ambitious targets for influencing investees to improve climate and nature outcomes, and work with other investors to drive rapid transitions

# 1. AMBITION MUST INCREASE, WITH IMPACT AS THE PRIMARY FOCUS

The foundations have been built. The stage has been set. The time is right to increase ambition and pull the levers which will result in rapid change in the financial arteries of our Planet: the debt capital markets.

WE HAVE SEEN  
GREEN AND LABELLED  
BONDS ACCOUNT  
FOR UP TO

**20%**  
OF THE TOTAL  
BOND MARKET

IN SOME COUNTRIES  
FROM ZERO IN  
JUST 5 YEARS

Green, social and sustainable bonds<sup>20</sup> and other labelled bonds such as blue bonds, transition bonds and sustainability-linked bonds<sup>21</sup> have shown us that rapid change is possible in the global debt capital markets.

We have seen green and labelled bonds account for up to 20% of the total bond market in some countries from zero, just 5 years ago<sup>22</sup>. Labelled bond instruments improve market transparency by providing additional information on the sustainability impacts of the underlying projects.

They are expected to represent more than 10 percent of bond issuances globally in 2021<sup>23</sup>. That growth must broaden and accelerate

as the remaining 90 percent of the instruments traded on debt capital markets today provide very little, if any, information on their environmental impacts.

With over USD 1.7 trillion of outstanding green bonds<sup>24</sup> we have a solid start. However, green bond volumes, diversity and impact must all increase rapidly over the coming 2-5 years. Trillions per year must be the ambition in the near term.

We need much more green investing and a lot less unsustainable investing to shift the finance dial and really make a difference to the Planet.

**Identifying what is truly green is key to revealing the extent of what is unsustainable in the current investment ecosystem, with obvious consequences.**

Investors must act to rapidly reduce their exposure to unsustainable investments with ambitious short and medium-term targets. Investment banks, which play a pivotal role in the origination and distribution of capital, must improve their due diligence processes and insist on the sustainability of projects they help finance.

‘Peak fossil fuel finance’<sup>25</sup> has arrived much sooner than expected. Coal is

facing an uncertain financial future while oil and gas is starting to feel the pressure. It is all downhill from here for coal, oil and gas companies looking for debt capital to expand. Refinancing is starting to get difficult even though the sector’s historical long-term investment performance has been extraordinary.

**Rapid change in the global finance and investment ecosystem is possible when the right levers are pulled.**

The global response to COVID-19 has demonstrated our collective ability to make major changes quickly and decisively. We must harness that momentum for rapid change to also focus on natural capital and its unprecedented decline.

**Vast ecosystem collapse is a high probability scenario in our children’s lifetimes.**

Sustainable Finance has the potential to mobilize incredible amounts of capital for the good of the Planet, but to realize that potential we must see rapid and positive change in our finance and investment ecosystems.

We must force that change with expert insight, collaboration, determination and a keen focus on impacts in the real economy.

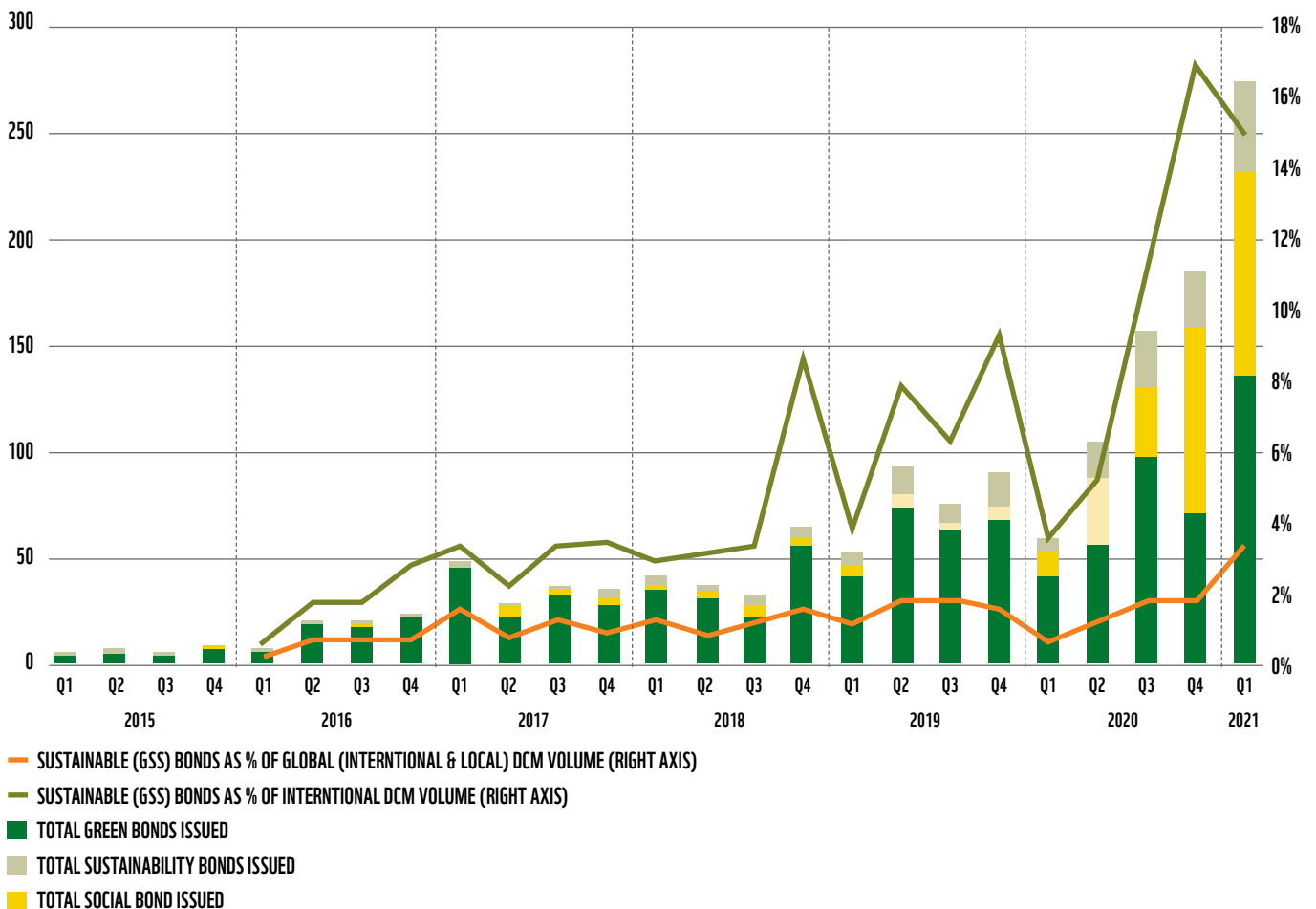
GREEN BONDS AND OTHER LABELLED BONDS HAVE SHOWN US THAT RAPID CHANGE IS POSSIBLE IN THE GLOBAL DEBT CAPITAL MARKETS. ISSUANCE OF LABELLED BONDS IS FORECAST TO EXCEED

# USD 1 TRILLION

FOR ALL OF 2021<sup>26</sup>

There has been strong growth in labelled bonds with their use-of-proceeds earmarked towards green, social and sustainability goals.

## GLOBAL ISSUANCE OF GREEN, SOCIAL AND SUSTAINABILITY BONDS (BY QUARTER, 2018 - 2021)



Source: Bloomberg





THE EUROPEAN INVESTMENT BANK (EIB) HAS CONSISTENTLY BEEN ONE OF THE BIGGEST PLAYERS AND ISSUED A TOTAL OF

**USD 8 BILLION** GREEN BONDS IN 2020

Public sector issuers, including multilateral and national development banks, local and regional and sovereign issuers have played an important role in the creation of this market. It was the multilateral development banks (MDBs), including the European Investment Bank (EIB) and the World Bank/International Finance Corporation (IFC) who helped create the market with the first issuances almost 15 years ago.

In recent years, the EIB has consistently been one of the biggest players and issued a total of USD 8 billion green bonds (called climate awareness bonds or CAB) in 2020. Development banks, government-backed entities, local government and sovereigns represent more than 40% of all green bonds issued between 2015 and 2020.

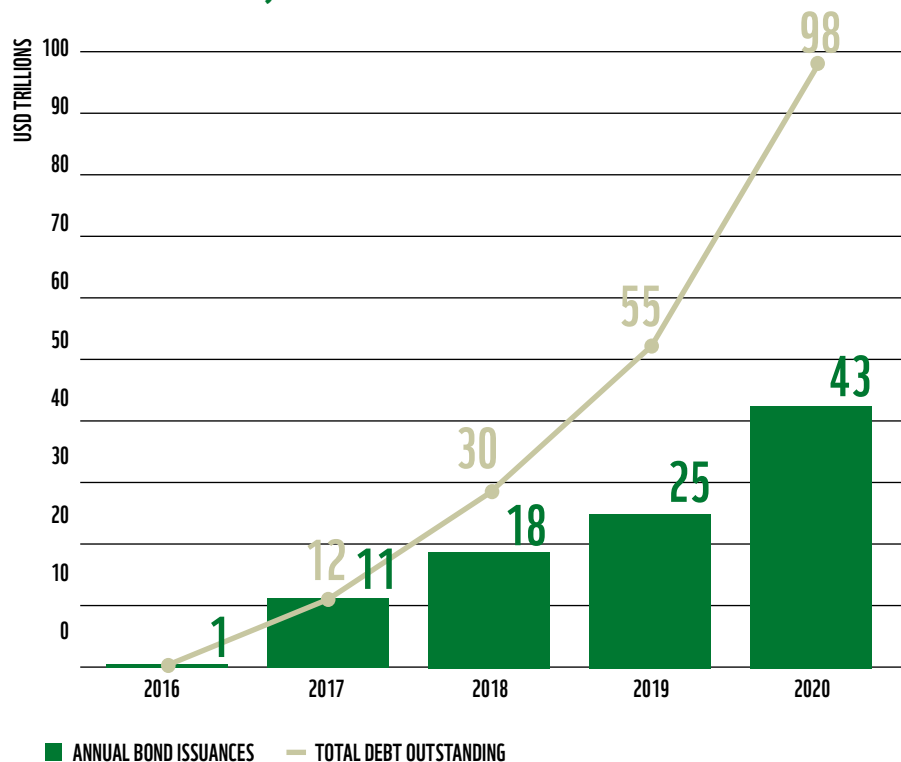
MDBs, and in particular the IFC, have also played an important role in developing green debt capital transactions in emerging markets, either as 'cornerstone investors' (e.g., through the Emerging Green One fund<sup>27</sup>) or through technical assistance and training programmes<sup>28</sup>.

## SOVEREIGN ISSUANCE OF GREEN AND OTHER LABELLED BONDS HAS AMPLIFIED AND ACCELERATED MARKET GROWTH

Rapid change has also been happening in sovereign green markets, where annual issuances of green bonds have grown 50-fold in just five years. Green bonds have triggered a small, but important systemic change in debt capital markets. They have helped transform the dialogue on environmental issues between investors and issuers, including governments who raise money on debt capital markets.

As a result, international investors are starting to ask more questions about issuers' environmental policies and performance. This is creating challenging discussions for countries with fossil fuel production and exports.

## SOVEREIGN GREEN, SOCIAL AND SUSTAINABLE BONDS



Source: Bloomberg

## MARKET INNOVATION AND STRONG INVESTOR DEMAND HAS LED TO THE CREATION OF A NEW TYPE OF LABELLED DEBT INSTRUMENT

### 'SUSTAINABILITY-LINKED BONDS

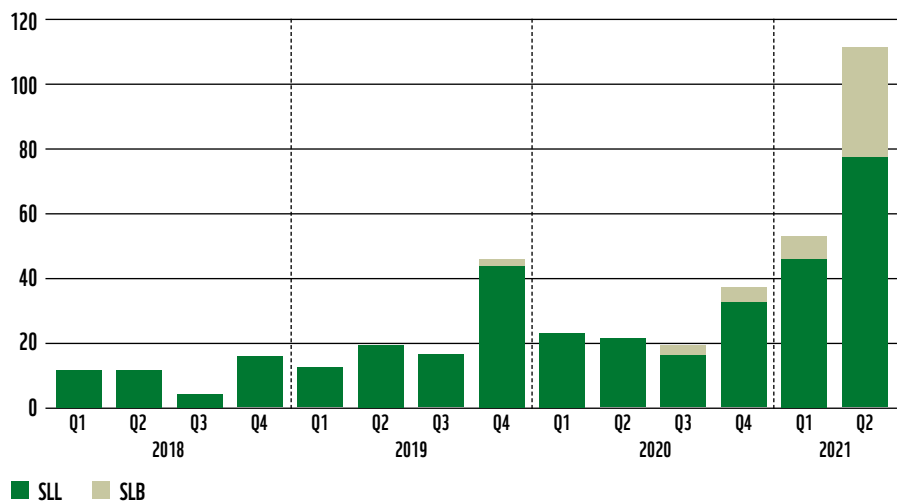
As definitions of green tightened over recent years, and demand for 'green' assets has grown, bond issuers and investment banks have sought innovative solutions to respond. They have created a new type of labelling structure, known as 'Sustainability-Linked Bonds' (SLBs) or Loans (SLLs).

In this structure, issuers commit to meet targets for environmental or sustainability indicators. Achieving the targets (or failing to achieve them) is linked to the bond coupon payment or the loan interest rates. This is usually done via a step-up or step-down (or both) at some point during the term of the bond or loan, i.e, an increase/decrease of the interest payments to the investor<sup>29</sup>.

Unlike traditional green and social bonds, a sustainability-linked bond (SLB) comes with no restrictions on how the proceeds can be used. This flexibility allows a broader universe of issuers to label their capital raising transactions as sustainable finance.

SLB issuers may not have enough green or social capital expenditures to issue a green use-of-proceeds

## ISSUANCE OF SUSTAINABILITY-LINKED BONDS SUSTAINABILITY-LINKED LOANS (SLL) / SUSTAINABILITY-LINKED BONDS (SLB)



Source: Bloomberg

bond or they may lack the capacity to effectively track or report practices required for such use-of-proceeds labelled instruments. Some European issuers have also started to innovate and adopted sustainability-linked approaches as an add-on feature for their use-of-proceeds green bonds providing investors with information on EU-taxonomy alignment as well as a forward-looking performance target<sup>30</sup>.

**Sustainability-linked bond issuance is expected to grow six-fold from USD 10 billion in 2020 to USD 60 billion of new issuance in 2021<sup>31</sup>.**

Market-led guidance has been essential in the early stages of this new market development to help guide innovation and nurture and shape market practices. Green Bond Principle, convened by the International Capital Markets Association (ICMA) issued a first set of process guidelines for sustainability-linked bonds in June 2020<sup>32</sup>.

**However, credible and effective standards are urgently needed to strengthen the environmental integrity of this new type of instrument. More detail is provided in Call to Action #4 on Definitions.**



**SUSTAINABILITY-LINKED BOND ISSUANCE IS EXPECTED TO GROW SIX-FOLD FROM**

**USD 10 BILLION**

**IN 2020 TO**

**USD 60 BILLION**

**OF NEW ISSUANCE IN 2021**

Peak fossil fuel finance is happening now. It is all downhill from here for coal, oil and gas companies looking for debt capital to expand. Refinancing is starting to get difficult even though the sector's historical investment performance is extraordinary.



DURING THE PERIOD FROM 2015-2020 THE FOSSIL FUEL INDUSTRY RAISED MORE THAN

USD

4

TRILLION IN DEBT

While issuance of green bonds is growing rapidly, the fossil fuel industry continues to depend on debt capital markets to finance and re-finance their operations. During the period from 2015-2020 the fossil fuel industry raised more than USD 4 trillion in debt, almost four times more than was raised for green projects<sup>33</sup>.

However, financial institutions are taking steps to restrict their own lending activities in fossil fuels, mostly with a focus on coal (and oil and gas to a much lesser extent, focussing on specific segments such as oil sands, etc.). The chart below shows the growing number of financiers who simply won't engage in these sectors, no matter how good the return profiles may be. Coal, oil and gas companies are starting to experience this trend first-hand.

**The number of financiers willing to even discuss new coal projects has plummeted over the past 2 years, creating serious challenges for coal miners and their existing investors.**

Oil and gas investors are either turning away from the sector or pushing ambitious transition plans on their investee companies. The oil and gas supermajors are shifting much faster than they would like, including via legal and shareholder challenges to their current trajectories for reserve exploitation and the green transition.

Rapid change is also happening in traditional credit risk analysis, as financial rating agencies start to better apprehend the impact of climate risk on issuers' credit profiles, including exposure to carbon transition and physical climate risks.

Research published by Moody's Investor Services in December 2020<sup>34</sup> found that "USD 8.7 trillion, or 11% of Moody's total rated debt globally, is inherently exposed to heightened climate risk, [...] including thirteen sectors with a combined USD 3.4 trillion in debt have very high or high environmental credit risk as the transition to a low-carbon economy gathers pace".

Total debt held by sectors recognised as having heightened environmental credit risk rose 49% since Moody's previous analysis in 2018 and 64% since its 2015 report.

Last but not least, nature-related risks are currently not taken into account by credit rating agencies (see example of sovereign credit analysis in the boxed text below).

## NATURE IS CURRENTLY MISSING FROM ASSESSMENT OF SOVEREIGN CREDITWORTHINESS

Sovereign risk assessments that omit biodiversity and nature-related risks are incomplete, leading to mis-priced risk and reducing the relevance and reliability of sovereign credit ratings. As floods, droughts,

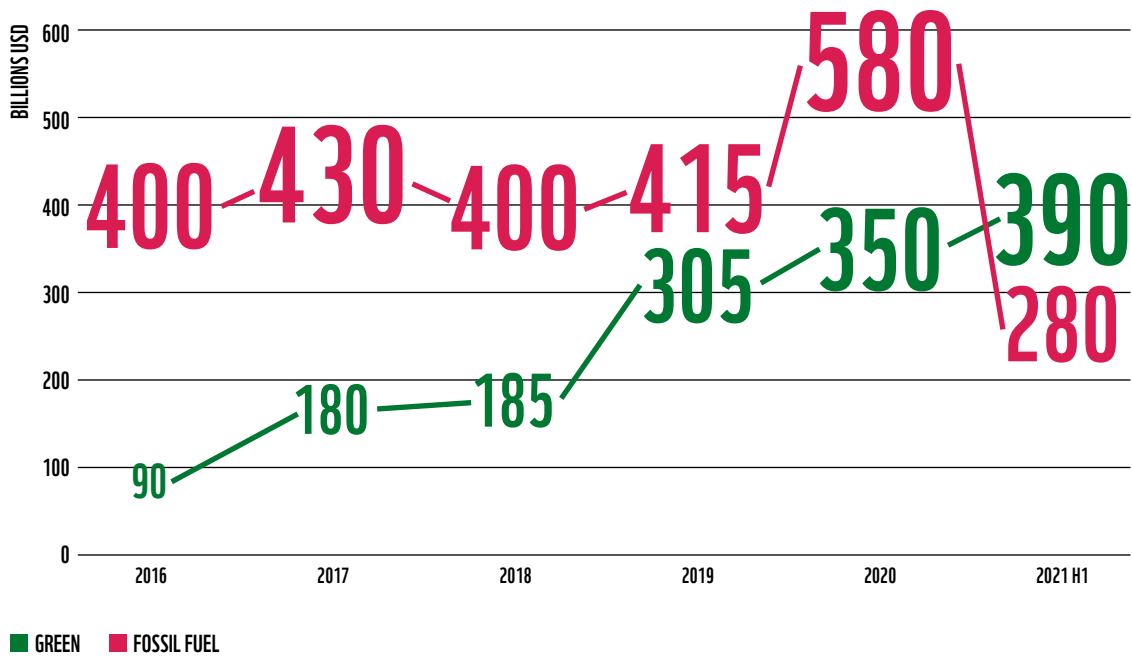
and fires increase in frequency and intensity, in large part due to deforestation and ecosystem destruction, material risks to sovereign debt could rise.

The methodologies published and applied by leading credit ratings agencies largely focus on governance, economic, external, monetary, and fiscal factors, but do not explicitly incorporate biodiversity and nature-related risks.

Source: Finance for Biodiversity / SOAS University of London, 2021 (forthcoming)<sup>35</sup>

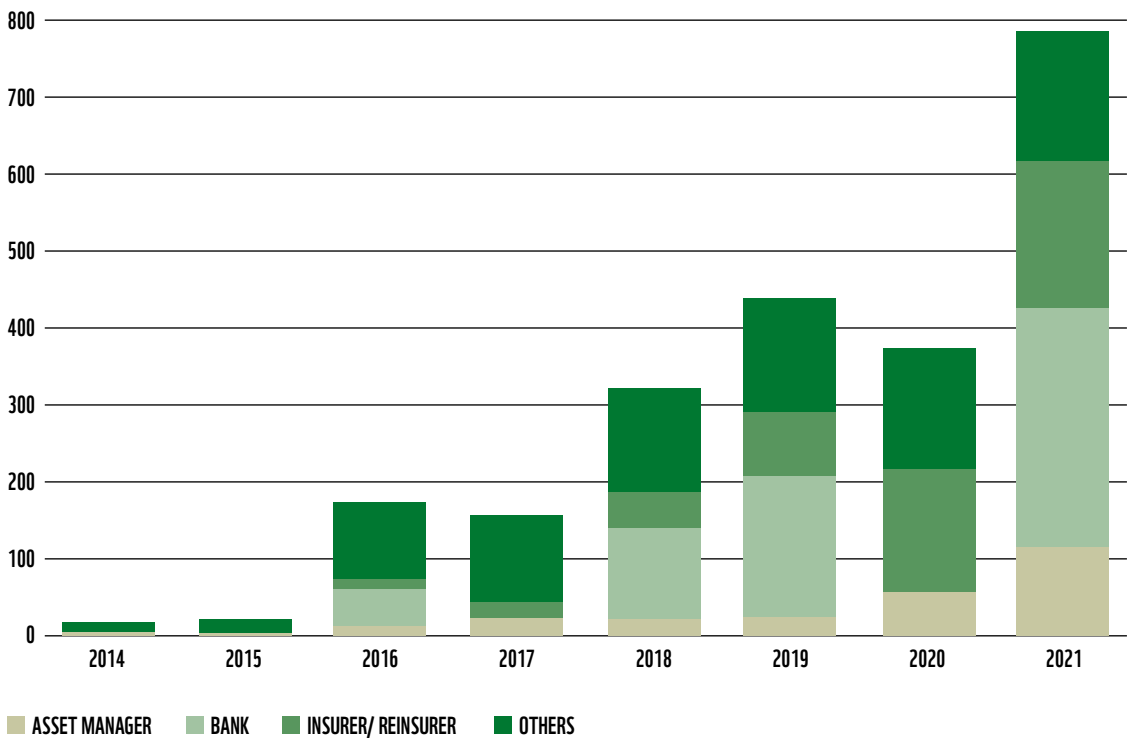


## GLOBAL BOND ISSUANCE: GREEN VS SIGNIFICANT HARM (ANNUAL, 2016 - 2021)



Source: Bloomberg

## NUMBER OF FINANCIAL INSTITUTIONS WHICH ANNOUNCED COAL FINANCING RESTRICTIONS SINCE 2013



Source: Institute for Energy Economics and Financial Analysis (2021): Asset Managers are Leaving Coal, Banks, Insurers Leaving Coal

# 2. INVESTORS MUST RAPIDLY SHIFT THEIR CAPITAL OUT OF UNSUSTAINABLE ENTITIES AND INTO GREEN OPPORTUNITIES

Signals from bond investors in advanced economies have shown that the investment ecosystem can respond and that rapid change is possible.

Coalitions of investors must continue to increase the momentum of their pledges to align with global agreements and goals. They must also define short term targets for green investments to signal that issuers' ambition will be rewarded.

Shifting away from unsustainable activities at a rapid rate must be the focus for asset owners, pension trustees and institutional investors, with clear short and medium-term targets. Small changes to their allocations are not sufficient and extended timelines will not achieve the outcomes we need.

Investors must work with investee companies and governments to drive the transition on the ground. This is a new role for debt holders in the finance and investment ecosystem.

Recent successes by shareholder activists and legal challengers to fossil fuel companies such as Exxon and Shell will no doubt expand the appetite for influence, but exiting unsustainable investments is not the same as shutting them down.

There must be an increased focus on the capital flows outside of the regulated debt capital markets, where many unsustainable investments are flowing in the face of rising investor concerns.

The shift to comprehensive reporting for listed entities must continue, but it must also expand to include privately held entities and other investment structures.

Governments and public agencies will need the support of investors to make the transition to climate and nature positive activities. This is critical for achieving a Just Transition<sup>36</sup> in some sectors and major technological shifts in others.

Investors involved in pledge coalitions must actively collaborate with investors in emerging markets and local currencies. They must rapidly build a common understanding of the risks and opportunities facing investors in all markets from the changes in climate and nature. These insights are critical to shifting investor perspectives and decision-making, particularly in emerging markets where growth is strongest.

Investors must exert greater influence on the owners and regulators of State-Owned Entities across heavy industry, fossil fuels, chemicals, materials and energy.

Signals from bond investors in advanced economies have shown that the investment ecosystem CAN respond and that rapid change IS



possible. Blackrock's approach to seeking clarity on climate risks from its investee companies is an example of how the shift in investor perspectives is becoming real for their clients and asset managers.

We must see similar signals coming from investors in emerging economies and vulnerable countries to drive a more rapid shift in domestic financial flows from significant harm to green.

Integration of Environment-Social-Governance (ESG) risks and environmental impact into the decision making and investment mandates of emerging market investors is critical to driving change in the highest growth economies.

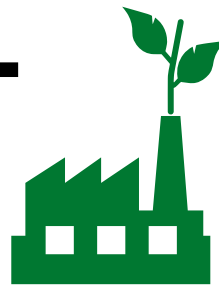
**Unless we have rapid change in emerging market financial flows we will be locked into the business-as-usual destruction of our climate and natural world.**

AMOUNT OF ASSETS CONTROLLED BY MEMBERS OF THE GLASGOW FINANCIAL ALLIANCE FOR NET ZERO (GFANZ), BRINGING TOGETHER THE

## LEADING NET-ZERO FINANCIAL ALLIANCES

REPRESENTING OVER

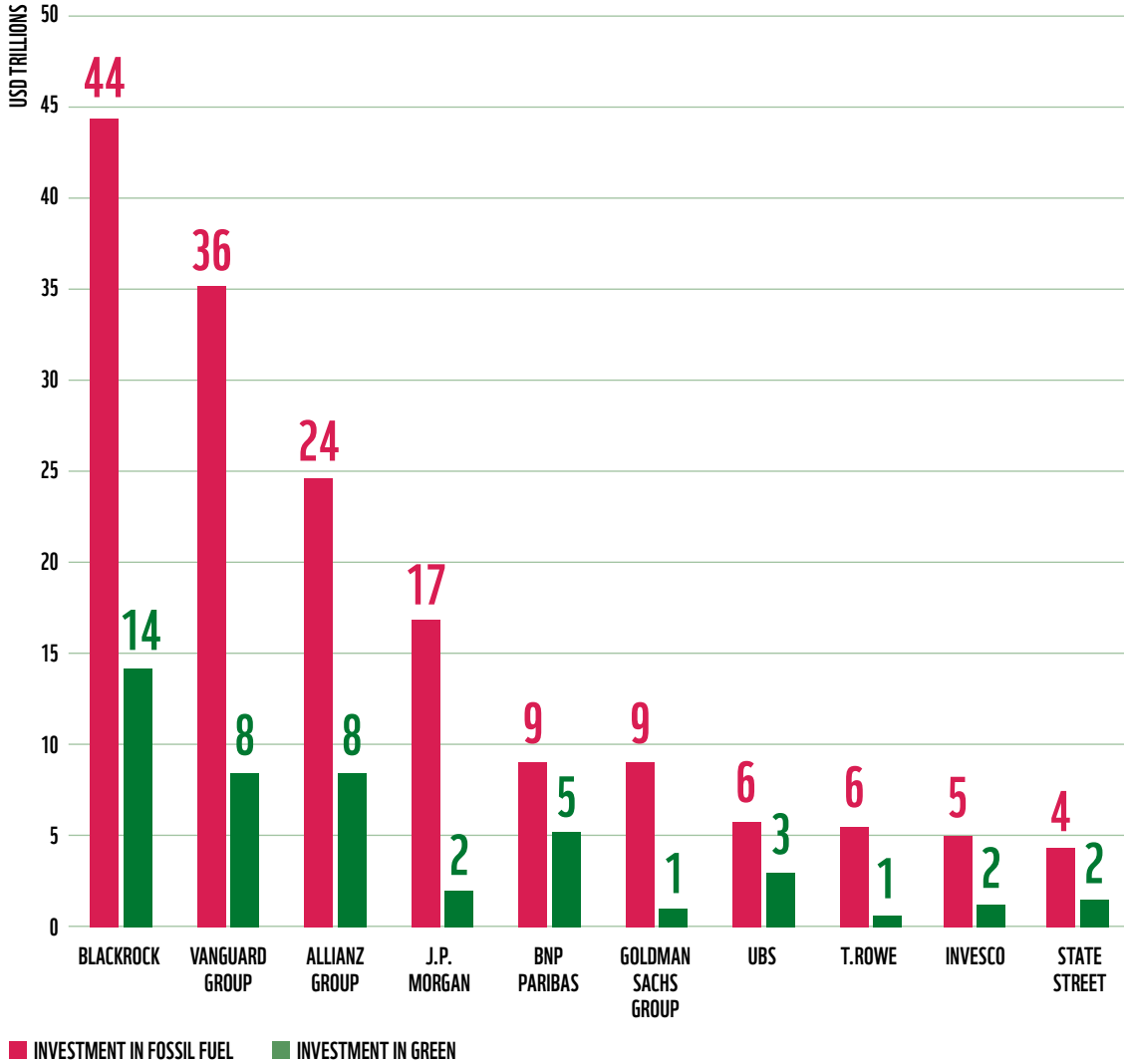
USD **88+**  
TRILLION  
ASSETS<sup>37</sup>,



TO WORK TOGETHER TO ACCELERATE THE TRANSITION OF THE FINANCIAL SECTOR AND THE GLOBAL ECONOMY TO NET-ZERO EMISSIONS

Asset owners, including the world’s largest banks and insurance funds have reiterated bold Net-Zero commitments to be delivered by 2025. However, the corporate and investment banking arms of the largest banks play a pivotal role in the origination and distribution of capital. These deal makers are not yet covered by the pledges and must make the rapid shift to green.

### 10 LARGEST ASSET MANAGERS’ HISTORICAL INVESTMENT IN BONDS ISSUANCES FROM FOSSIL FUEL INDUSTRY VS. GREEN (2016-2020)



Source: Bloomberg



The world's largest institutional investors collectively have significant influence over global debt capital markets. Their mandates and exclusions drive the investment decisions of asset managers. Financial institutions including more than 250 from 32 countries representing more than US\$ 88 trillion have recently reiterated their commitments to work together to accelerate the transition of the finance sector and the global economy to net-zero emission under the **Glasgow Financial Alliance for Net Zero (GFANZ)**<sup>38</sup>. This includes the trio of the industry-led and UN-convened **Net-Zero Asset Owner Alliance (NZAOA)**, the **Net-Zero Insurance Alliance (NZIA)** and the **Net-Zero Banking Alliance (NZBA)**.

Such commitments, if followed by action and acting in concert, have the power to trigger immediate and rapid change in a broad range of asset classes, including fixed income portfolios across many asset managers.

For example, in April 2021, the **UN-convened Net-Zero Asset Owner Alliance** released the Inaugural 2025 Target Setting Protocol which defines how they will issue their intermediary targets and report on progress in line with the Paris Agreement. The Protocol explicitly sets out how individual members will set a target, achievable in the next five years, carefully balancing scientific ambition, active ownership engagement, and divestment constraints.

The Alliance members are pledging to influence investee companies through **engagement strategies**, which is possible both as a shareholder as well as a bondholder and may include submitting shareholder resolutions and voting at AGMs. Additionally, bondholders have influence during due diligence. Engagement may directly lead to a company changing its behaviour and is a powerful tool for investors to achieve real world impact. It is the mechanism through which the impact on real world emissions is most likely to materialise.

Asset owners are also applying **divestment strategies** where an investor divests from a company or sector due to its specific characteristics, most often as the company's business model or the whole sector is not aligned with the values or financial targets of the investor. It can also be part of an escalation tactic and a last resort in an engagement strategy where the requested change has not materialised. Divestment can be applied to several asset classes but is generally most applicable to listed equities and bonds.

Most global banks have also made commitments to align their lending and investment portfolios with net-zero emissions by 2050 under **the Net-Zero Banking Alliance (NZBA)**. The Alliance brings together 53 banks from 27 countries representing almost a quarter of global banking assets (over US\$37 trillion).

The Alliance intends to *'[...] reinforce, accelerate and support the implementation of decarbonisation strategies, providing an internationally coherent framework and guidelines in which to operate, supported by peer-learning from pioneering banks. It recognises the vital role of banks in supporting the global transition of the real economy to net-zero emissions*<sup>39</sup>.



THE ALLIANCE  
BRINGS TOGETHER

53

BANKS

FROM

27

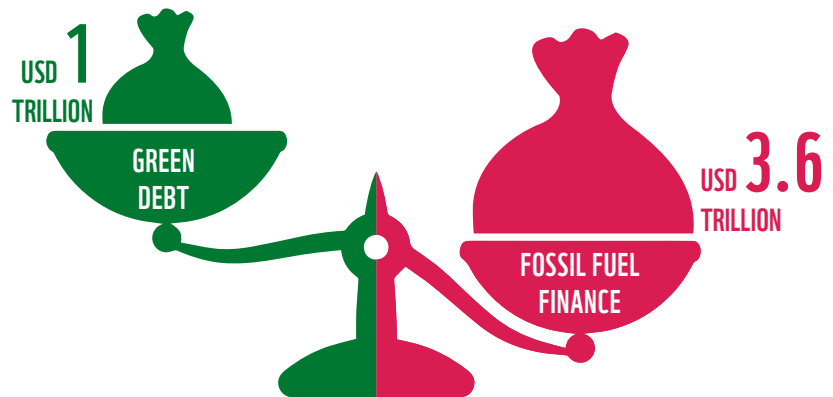
COUNTRIES

REPRESENTING  
ALMOST A QUARTER  
OF GLOBAL  
BANKING ASSETS



© Bogomaz Conservation Photography / WWF-Ukraine

But the shift will not happen fast enough if facilitated capital markets activities fail to make commitments.



  
**USD 16.9**  
**BILLION**  
**IN FEES FROM FOSSIL FUEL**  
**DEBT EARNED BY THE 10**  
**LARGEST BANKS, TWICE AS**  
**MUCH AS FOR TRANSACTIONS**  
**LABELLED AS GREEN**

At present, the investor commitments and pledges only apply to on-balance sheet investment and lending activities<sup>40</sup>.

**Off-balance sheet activities, including facilitated capital markets activities currently remain excluded (e.g., debt security underwriting/arranging, M&A, advisory, etc.). Banks can choose to include capital markets activity in their target setting on a voluntary basis.**

Investment bankers and securities companies play a pivotal role in debt capital markets. They work with their clients to raise funds on debt capital markets and earn a fee from every issuance of a bond. Most of the banks are subsidiaries of global banks that have made bold commitments under the UN-convened Net Zero Banking Alliance.

Investment banking is a very competitive market, where staff and management are rewarded handsomely for achieving their targets, which could – and should – include ESG-related performance metrics. They pay close attention to relative performance according to league tables, which track volumes of bonds underwritten/arranged by the various banking teams in their part of the debt capital markets.

Since 2015, most major international banks have created and grown their dedicated sustainability teams and

green bonds have become an integral part of the fixed income business.

However, while the green bond market has experienced impressive growth, most of the leading global underwriting banks still earn a much larger share of fees from deals involving significant harm than from green transactions. For example, according to data compiled by Bloomberg<sup>41</sup>, in the last 5 years the Top 10 global underwriting banks have earned USD 16.9 billion in fees from fossil fuel bonds they have underwritten between 2015 and 2020. This is almost twice the fees they generated from transactions labelled as green which yielded only USD 7.4 billion in fees.

The USD 3.6 trillion that banks have poured into fossil fuels since 2016 are even more than the USD 3.3 trillion of unsustainable direct financial support that G-20 governments provided to coal, oil and gas, and fossil fuel-fired power generation, in the five years from 2015 to 2019<sup>42</sup>.

Compared to the overall volume of debt underwritten the amount of green debt underwritten by the 10 largest banks only represents a small fraction of their underwriting activities (see chart on next page). **And most of them have yet to make the shift towards green as the revenues they generate from arranging fossil fuel-related capital raising are significantly higher than those derived from green debt.**

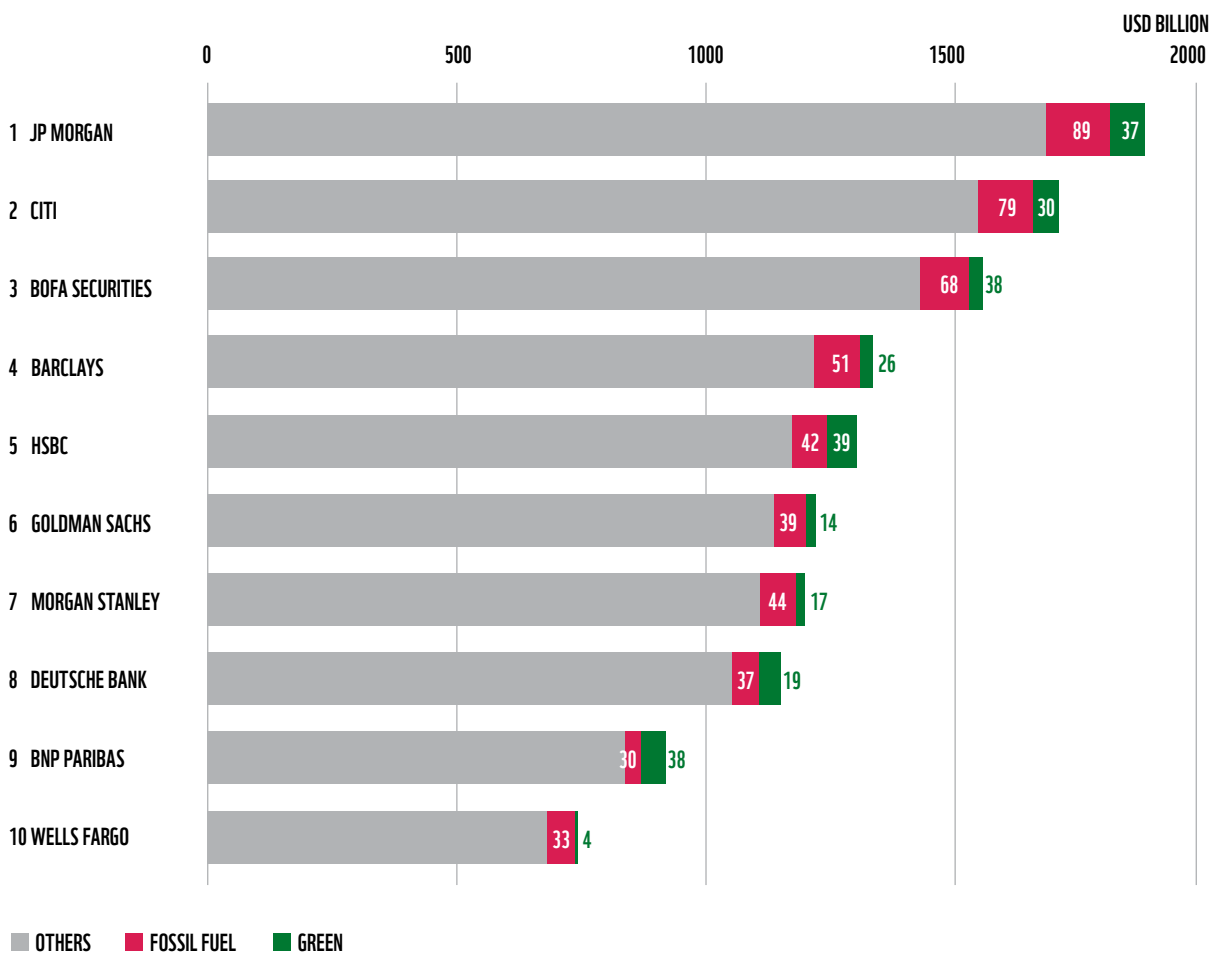
Investment bankers should be incentivised (and rewarded) by their clients to make the shift away from ‘doing-more-harm-than good’ to focus on more sustainable deals.

In June 2020, for example, the International Finance Corporation (IFC), the private sector arm of the World Bank Group and one of the leading

issuers of green bonds, became the first issuer to explicitly and publicly include ESG scorecards into its underwriter selection process<sup>43</sup>.

ESG-orientated (internal) remuneration and compensation schemes for investment banks’ staff and management can also provide powerful incentives for market practitioners.

## GREEN AND FOSSIL FUEL BONDS UNDERWRITTEN BY TOP 10 LARGEST UNDERWRITERS (2016-2020)



Source: Bloomberg.

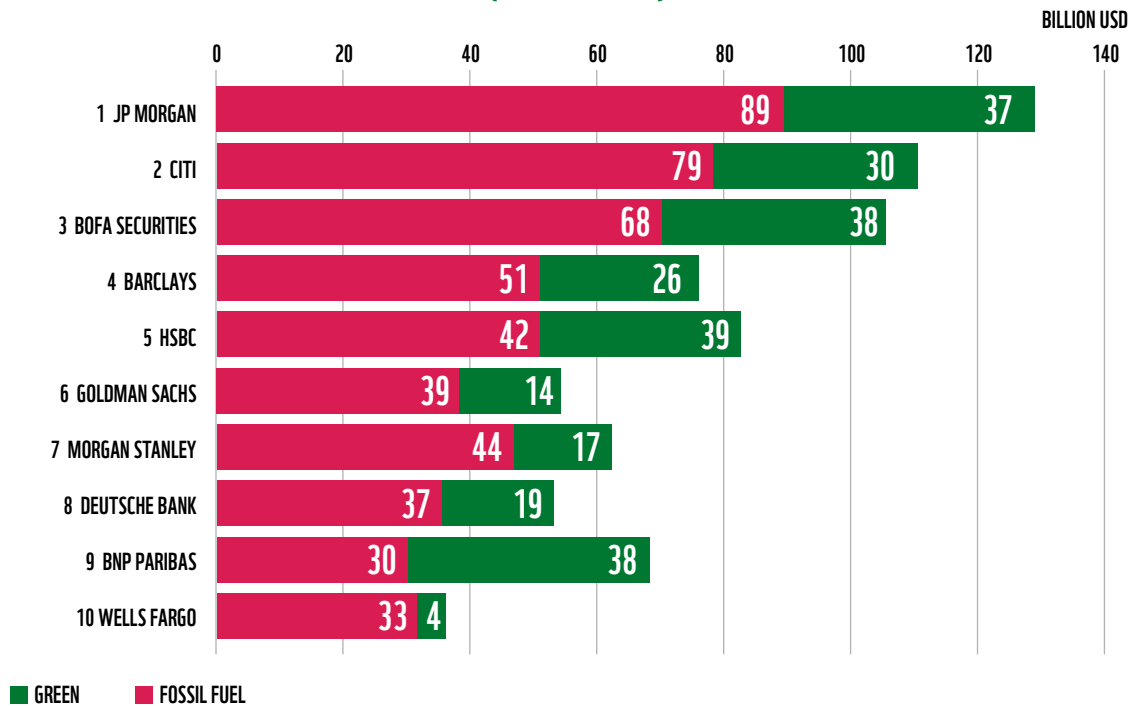
“Green bond” data indicates debt arranged by bank on behalf of corporate and government issuers for climate or environmental projects. These projects had to be deemed eligible for green bonds by lenders and investors.

“Other” data indicates traditional bonds that do not provide any information on the intended use-of-proceeds and are not-labelled as ‘green’ by the issuer.

Fossil fuel include underwriting for entities involved in coal operations, exploration & production, integrated oil, oil & gas services & equipment or pipelines. However, as most of these transaction provide little, if any, information on the use-of-proceeds, this data might also include some green investments (e.g., renewable energy investment by diversified oil and gas companies).

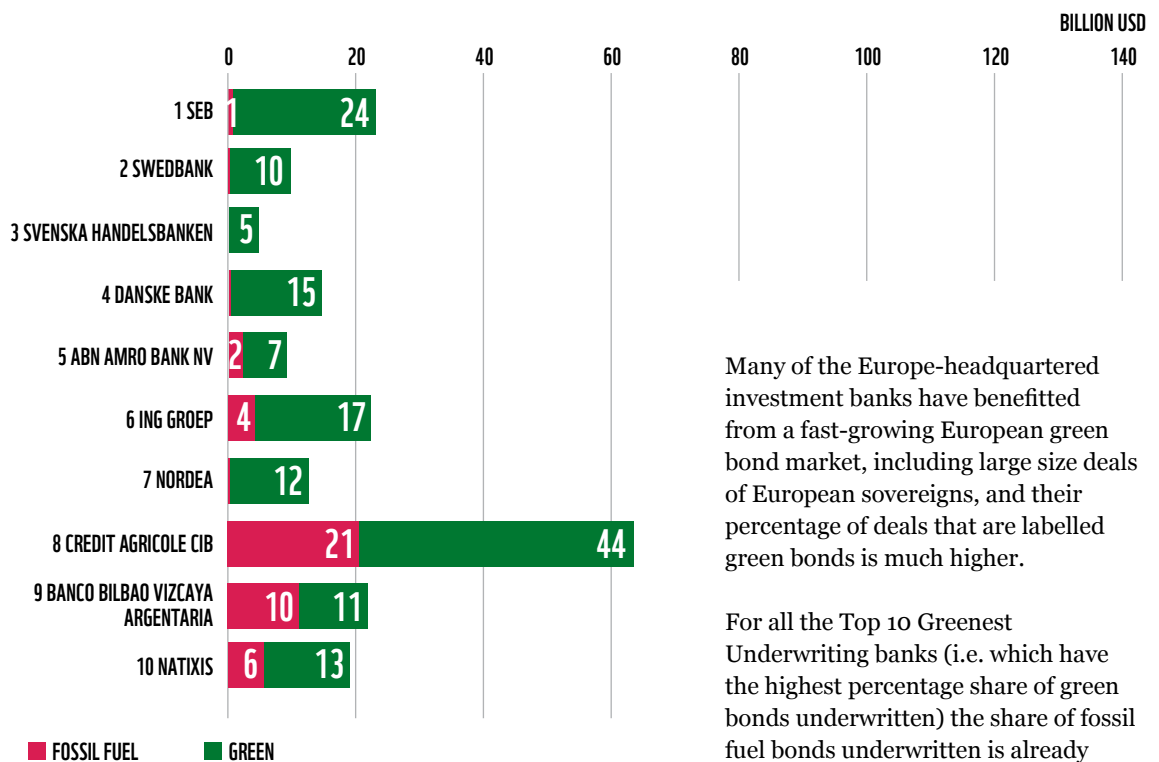
A more detailed methodological note that explains the data and its limitations is provided in the Endnotes.

## GREEN BONDS VS FOSSIL FUEL BONDS UNDERWRITTEN BY TOP 10 LARGEST UNDERWRITERS (2016-2020)



Source: Bloomberg

## GREEN BONDS VS FOSSIL FUEL BONDS UNDERWRITTEN BY TOP 10 GREENEST UNDERWRITER (BY% OF GREEN VS TOTAL)



Source: Bloomberg

Many of the Europe-headquartered investment banks have benefited from a fast-growing European green bond market, including large size deals of European sovereigns, and their percentage of deals that are labelled green bonds is much higher.

For all the Top 10 Greenest Underwriting banks (i.e. which have the highest percentage share of green bonds underwritten) the share of fossil fuel bonds underwritten is already much smaller than for the largest underwriting banks (see chart below).



To shift to a greener financial system, top players in the debt capital market must be incentivised to rapidly reduce their exposure to financing significant harm and rapidly increase their activities in green debt.



WWF has created a new way to illustrate how much more harm than good is being done by the investment banks and securities firms in the transactions they arrange and underwrite.

The “**WWF More-Harm-Than-Good-Indicator**” or “**Significant Harm Ratio**” is calculated by dividing the volume of capital arranged or underwritten which is fossil-fuel related by the volume which is labelled green. The indicator is consistent with the proposal to extend the EU Taxonomy disclosures using a traffic-light system (green, amber, red) to identify activities that significantly harm the region’s environmental objectives<sup>44</sup>.

**The formulation of the indicator shows that some of the leading investment banks are on track in the race to zero in terms of green and fossil fuel transactions. They only have limited underwriting and arranging of fossil fuel debt**

**and a much higher share of green transactions. Their Significant Harm Ratio is close to zero (SHR=0.00).**

**The laggards have Significant Harm Ratios greater than 1. They still do more harm than good!**

Calculating, publishing and discussing the Significant Harm Ratio is intended to support the investment banks and securities firms to actively track their SHR, aggressively manage it downwards, and link reductions in this ratio to the relevant compensation KPIs for managers and staff of these divisions.

The league tables below includes the top most important deal makers and shows their average SHR for the period 2016 to 2020.

It also indicates if their parent entity is a member of the Net-Zero Banking Alliance (highlighted in darker colour<sup>45</sup>).

## WWF 'MORE HARM THAN GOOD' LEAGUE TABLE AND SIGNIFICANT HARM RATIO (SHR)

UNDERWRITING (APPORTIONED AMOUNT) IN THE PAST 5 YEAR (2016-2020)	FOSSIL FUEL UNDERWRITING (USD MILLION)	GREEN UNDERWRITING (USD MILLION)	MORE-HARM-THAN- GOOD* RATIO	NZBA MEMBERSHIP	AS OF 13 SEPTEMBER 2021 (DATA AS OF 3RD SEPTEMBER 2021)	
WELLS FARGO	32 950	3 810	8.56	-	<b>MORE HARM THAN GOOD RATIO &gt;1</b>	
MITSUBISHI UFJ FINANCIAL GROUP INC	38 686	7 281	5.31	Y		
CREDIT SUISSE	26 486	6 604	4.01	Y		
SCOTIABANK	15 464	4 172	3.71	-		
MIZUHO FINANCIAL	28 076	9 669	2.90	-		
RBC CAPITAL MARKETS	31 012	11 056	2.81	-		
GOLDMAN SACHS	38 698	14 000	2.76	-		
CITI	79 196	30 357	2.61	Y		
MORGAN STANLEY	43 512	16 909	0.57	Y		
JP MORGAN	89 226	36 922	2.42	-		
SUMITOMO MITSUI FINANCIAL	19 610	8 864	2.21	-		
BARCLAYS	50 681	25 598	1.98	Y		
DEUTSCHE BANK	36 586	18 578	1.97	Y		
BANK OF AMERICA SECURITIES	68 371	37 800	1.81	Y		
UBS	10 943	6 469	1.69	Y		
BANCO SANTANDER	15 186	8 993	1.69	Y		
TD SECURITIES	16 919	11 074	1.53	-		
STANDARD CHARTERED BANK	6 446	5 775	1.12	Y		
BANCO BILBAO VIZCAYA ARGENTARIA(BBVA)	10 687	9 733	1.10	Y		
DNA ASA	5 287	4 925	1.07	-		
HSBC	41 580	39 343	1.06	Y		
SOCIETE GENERALE	21 562	23 601	0.91	Y		<b>MORE HARM THAN GOOD RATIO &lt;1</b>
BNP PARIBAS	29 978	37 977	0.79	Y		
UNICREDIT	11 296	15 057	0.75	-		
CREDIT AGRICOLE CIB	21 026	44 485	0.47	Y		
NATIXIS (VIA BCPE GROUP)	5 828	13 295	0.44	Y		
ABN AMRO BANK NV	2 194	6 863	0.32	-		
COMMERZBANK	3 223	10 267	0.31	Y		
ING GROUP	4 438	16 568	0.27	Y		
NATWEST MARKETS	1 929	8 897	0.22	Y		
LANDESBANK BADEN-WUERTTEMBERG	359	3 864	0.09	-		
DZ BANK	361	5 877	0.06	-		
NOUMURA	370	6 503	0.06	-		
DANSKE BANK	493	14 696	0.03	-		
SEB	733	24 177	0.03	Y		
NORDEA	267	11 997	0.02	-		
SWEDBANK	219	9 841	0.02	Y		
RABOBANK	-	3 971	-	-	<b>NET ZERO</b>	
SVENSKA HANDELSBANKEN	-	5 375	-	Y		
<b>TOTAL/ AVERAGE</b>	<b>809 876</b>	<b>581 243</b>	<b>1.39</b>	<b>22/39</b>		

**Data limitations.** WWF has used market data from Bloomberg to calculate the Significant Harm Ratios in this table. More detailed explanations on data limitations and the methodology we used to compile the data are provided in the Endnotes<sup>48</sup>

# 3. GOVERNMENTS, FINANCIAL REGULATORS, SUPERVISORS AND CENTRAL BANKS MUST STEP UP

There is incredible change underway among central banks, regulators and supervisors, sovereign funds, and capital markets participants. Some of these entities cooperate internationally under the Network for Greening the Financial System<sup>47</sup>. The clear links between climate risk and financial stability have prompted these key actors to start to pull levers. These efforts must deepen and accelerate.

In 2015 the Financial Stability Board (FSB) mandated the Task Force on Climate-related Financial Disclosures (TCFD) to improve and increase reporting of climate-related financial information. The Network on Greening the Financial System (NGFS) was launched by eight central banks in 2017. More recently the G7 decided to back the Taskforce on Nature-Related Financial Disclosures (TNFD)<sup>48</sup> to explore nature and biodiversity disclosures.

The EU and China are leading the way on green definitions and process standards for green bonds. Other regions and countries are catching up rapidly with solid progress in 2021 across ASEAN, Latin America and Africa with taxonomy development initiatives. The US is looking to rapidly transition its economy and play a leading role in international collaboration on sustainable finance, including among other things the co-chairing (with China) of the G20 Sustainable Finance Working

Group<sup>49</sup>, the International Platform on Sustainable Finance (IPSF)<sup>50</sup>, and the US strategy on international sustainable finance, recently released by the White House<sup>51</sup>.

Action must accelerate in both the advanced economies and in the key growth regions where the debt capital markets are often less mature. Key levers for rapid change in individual jurisdictions must be identified and activated. The table of Levers for Rapid Change in the Finance and Investment Ecosystem highlights some of the levers which are available.

**Levers for rapid change must be identified and activated for each and every debt capital market over the coming 2-5 years.**

Menus of policies, incentives, regulations and other levers can serve to create consistency and tailored solutions. Collaboration and sharing of experience is critical to enabling central bankers to identify and activate the rapid change levers in their respective jurisdiction over the coming 3-5 years.

To this end, sharing and collaboration must increase, particularly in forums such as the Network for Greening the Financial System. The NGFS is growing strongly and now covers 95 member countries (as of 30 June 2021) on all five continents



**LEVERS FOR RAPID CHANGE MUST BE IDENTIFIED AND ACTIVATED FOR EACH AND EVERY DEBT CAPITAL MARKET OVER THE COMING**

**2-5  
YEARS**

THE NGFS IS GROWING STRONGLY AND NOW COVERS 95 MEMBER COUNTRIES ON ALL FIVE CONTINENTS REPRESENTING MORE THAN

75%

OF GLOBAL GREENHOUSE GAS EMISSION AND MORE THAN

75%

OF GLOBAL GBP



representing more than 75% of global greenhouse gas emission and more than 75% of global GBP.

**The NGFS could be the ideal platform for rapid change in advanced, emerging and vulnerable economies, working closely with the International Monetary Fund (IMF) and the World Bank, which are increasingly involved in advising governments on these issues and can consider adopting sustainability-related criteria in debt and development programmes.**

Clear mandates for change must come from governments, including fiscal incentives, environmental taxes and purchasing programs. Central banks can shift the dial based on their lending, asset purchasing and advocacy roles. They have shown over the last 18 months that they have a remarkable toolkit which can be

deployed at-scale and they continue to play a critical role as financial advisors to governments.

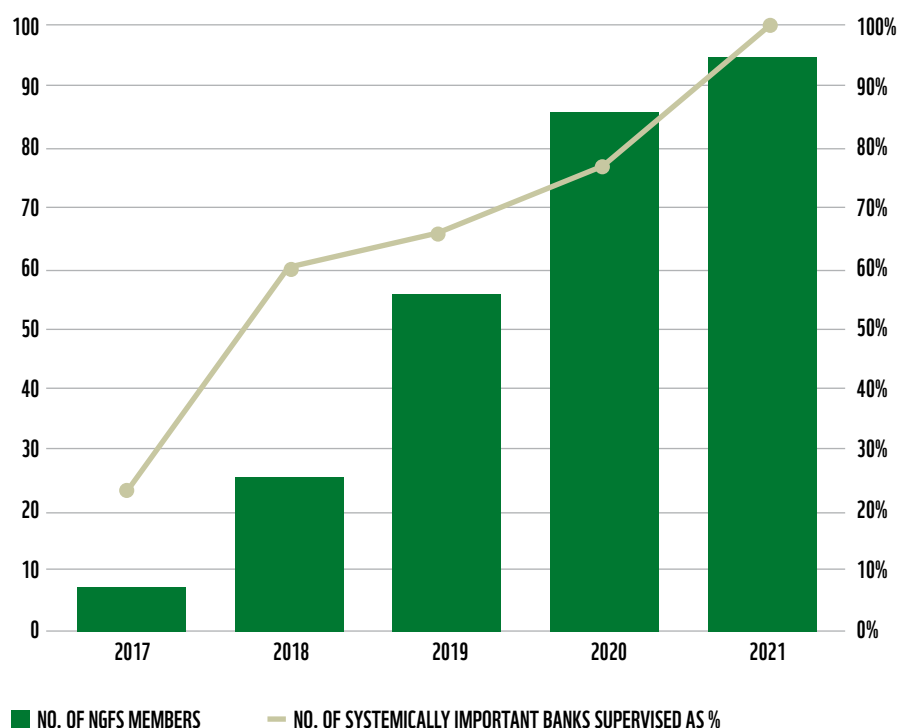
Ambitious targets for transitioning the real economy at local, national and regional levels drive confidence in the longer-term investment horizons which dominate the debt capital markets.

Public institutions at all levels must lean into ambition when they are considering their targets. Investors, both institutional and retail, can lend their support to the creation and extent of these mandates.

Mandatory reporting is critical for embedding information flows and providing an ongoing focus on environment and sustainability performance, at both the entity level and for individual transactions.

Governments should explore Nature Performance Bonds to accelerate their development.

## MEMBERSHIP OF NETWORK FOR GREENING THE FINANCIAL SYSTEM (NGFS), NOW SUPERVISING 100% OF GLOBAL SYSTEMICALLY IMPORTANT FINANCIAL INSTITUTIONS (G-SIFI)





# 30 BANKS

ALL 30 GLOBAL SYSTEMATICALLY IMPORTANT FINANCIAL INSTITUTIONS (G-SIFI) AS DEFINED BY THE FINANCIAL STABILITY BOARD ARE SUPERVISED BY MEMBERS OF THE NETWORK FOR GREENING THE FINANCIAL SYSTEM (NGFS)

Central banks can shift the dial based on their lending, asset purchasing and advocacy roles. They have shown over the last 18 months of the COVID pandemic that they have a remarkable toolkit which can be deployed quickly and at scale. They continue to play a critical role as financial advisors to governments as new crises move to the forefront, such as climate and nature.

Central banks' and financial supervisors play a pivotal role in debt capital markets. They are supervisors of the banking sector (which uses bonds as collateral), but also they are investors in their own right. They manage the central banks' portfolios, including policy portfolios, own portfolios, pension portfolios and third-party portfolios.

More importantly, with the rise of unconventional monetary policy instruments, in particular quantitative easing (QE)<sup>52</sup>, central banks have become major investors in bond markets.

In OECD countries, this trend was further amplified by governments' post-COVID recovery packages. In Europe, for example, the European Central Bank (ECB)'s total spend on asset purchases since March 2020 is expected to reach 2.4 trillion Euro by the end of 2021<sup>53</sup>.

Central banks' portfolios include very large holdings in green, social and sustainable bonds and in some of these

markets central banks are among the most important investors.

In Europe, for example, the ECB is reported to hold almost 20% of the outstanding labelled bonds<sup>54</sup>. These holdings represent almost 4% of ECB's total holdings at the end of 2020 and investments in green bonds are expected to increase even further in the near-future.

There are many examples of where central banks have taken the lead in the rapid change journey:

**Lending Facilities.** Central banks can provide lending facilities to local banks. These lending facilities can be directed to certain lending products from the banks which then channels cheaper and/or longer-term funding into specific parts of the economy. The Brazilian Central Bank, for example, manages the Rural Credit National System (SNCR), where financial institutions grant rural credit, provided that the borrower meets certain conditions related to agro-ecological planning.

**Monetary policy.** Central banks can incorporate climate change considerations in the conduct of monetary policy. For example, in July 2021 the ECB presented an action plan to embed climate change considerations into its monetary policy framework and its monetary policy operations in the areas of disclosure, risk assessment, collateral framework and corporate sector asset purchases.

**Term Funding Facility for local banks.** At the start of the COVID pandemic the Australian Reserve Bank (RBA), for example, created a facility that provided low-cost funding to stimulate further bank lending with certain rules and parameters. For example, for every dollar of extra loans to large businesses, banks could access one additional dollar of funding, and for every dollar of extra loans to SMEs, banks could access five additional dollars of funding. This approach could easily be adjusted to target green lending by the local banks.

**Promoting and stimulating demand.** Central banks typically invest reserves or their other portfolios in a range of high-quality investments. Including green bonds in the central bank's investable universe potentially increases demand for green bonds.

The Investment in the Bank for International Settlements (BIS) green bond fund is a good example. Similar arrangements can be set up to support green bond issuers in the country, perhaps via a green fund if direct investments are not possible.

The People's Bank of China (PBoC) has announced that it will increase its allocation of green bonds in China's foreign exchange reserves and limit its investments in high-carbon assets. The Bank of Japan, for example, has announced that it will set up a green refinancing facility by the end of 2021<sup>55</sup>.

Hungary's Central Bank introduced a favourable prudential treatment for mortgages granted to private individuals carrying out energy efficiency renovations to their properties. This is similar to a green supporting factor as the prudential relief reduces the cost of financing these loans<sup>56</sup>.

**Stress testing.** Central banks and supervisors are key players to raise the awareness of the financial sectors with regard to the financial risks related to climate change. For example, the French Autorité de Contrôle Prudentiel et de Résolution (ACPR) conducted a pilot stress test exercise for banks and insurers under its supervision to assess their exposure (and envisaged measures) to climate-related risks<sup>57</sup>.

**Inter-agency coordination.** Central banks need to coordinate the efforts of various government agencies working on the development of sustainable finance within their jurisdiction.

Central banks can coordinate with local and international think tanks, multilateral development partners, as well as participate in international fora to further development of sustainable finance initiatives.

Malaysia's central bank, for example, has established the Joint Committee on Climate Change (JC3) which now plays a key coordinating role across government ministries, regulators, supervisors, market players and NGOs.

**To drive the rapid change we need, central banks must extensively apply their existing toolkits, including non-conventional policy tools such as lending facilities, bond purchasing programmes or reserve requirements.**

**Central banks can also drive adoption of taxonomies with harmonised terminology, standardized performance metrics, and appropriate safeguards to avoid significant harm to the Planet.**



## RAPID CHANGE IS HAPPENING IN SUSTAINABLE FINANCE IN THE USA

2021 has brought in rapid change for the US finance sector after a period of reduced concerns for negative impacts from investment decisions. In April 2021 the White House released an Executive Order on Tackling the Climate Crisis at Home and Abroad calling for the preparation of a Climate Finance Plan.

The Plan covers five areas:

- Scaling up climate finance and enhancing its impact;
- Mobilizing private sector finance;
- Taking steps to end international official financing for carbon-intensive fossil fuel-based energy;
- Making capital flows consistent with low-emissions, climate-resilient pathways; and
- Defining, measuring, and reporting U.S. public climate finance.

In the fourth area of the Plan, the order states: “Supporting the flow of capital toward activities that are consistent with those pathways requires building an ecosystem of data, information, practices, and procedures that enable financial market actors to internalize climate-related considerations into their decisions. Over time, the more market participants do this, the greater the volume of capital that will shift toward more environmentally sustainable investments.”

Specific initiatives under this area of the Plan include:

- Co-chair the G20 Sustainable Finance Working Group, which in 2021 will develop an initial climate-focused sustainable finance roadmap, work on improving sustainability disclosure and reporting, and consider how to improve the reliability and compatibility of approaches for identifying climate-aligned and sustainable investments
- Support U.S. financial institution engagement with, and implement the best practices emerging from, voluntary, private-sector coalitions working on targets, strategies, and metrics intended to achieve net-zero emissions portfolios and institutional strategies

A further Executive Order was released in May 2021 titled Climate-Related Financial Risk. This covers ambitious efforts and timelines across the government to address: Climate-Related Financial Risk Strategy; Assessment of Climate-Related Financial Risk by Financial Regulators; Resilience of Life Savings and Pensions; and Federal Lending, Underwriting, and Procurement.

Source: FACT SHEET: President Biden Takes Executive Actions to Tackle the Climate Crisis at Home and Abroad, Create Jobs, and Restore Scientific Integrity Across Federal Government, January 2021



# USD 100+ BILLION

Green and sustainable bonds issued by 23 sovereign governments by June 2021<sup>58</sup>. Annual issuances have increased 50-fold or 5000 percent in the last 5 years.

**Governments have an important role to promote 'best practice standards', terms and definitions in their sovereign, sub-national, municipal and supra-national debt issuance programmes.**

However, applying effective and credible standards, as advocated for by WWF<sup>59</sup>, remains challenging for governments.

More specifically, European governments, and the European Commission itself, should “lead by example” by applying the EU Green Bond Standard (EU-GBS)<sup>60</sup>, a voluntary standard backed by EU regulations which is intended to become the ‘gold standard’ for green bond labelling. It uses the EU Taxonomy of Sustainable

Finance to provide a universal set of definitions of what qualifies as a ‘green investment’. European governments should also promote the use of the EU-GBS by local or regional government entities or private or public issuers of which they are shareholders, including, for example, the regional or global multilateral development banks such as the World Bank and the IFC.

Outside of Europe, there is strong potential for further market growth in sovereign green bonds<sup>61</sup>. Five of the ten largest issuers of government bonds (Brazil, China, India, Japan and the USA), all members of the G20, are yet to issue green. They represent more than one third of the total outstanding government debt in the global debt capital markets.



## RAPID CHANGE IS HAPPENING

**Snowball effect in sovereign green bond markets - USD 100 billion in green bonds by 23 governments, a 50-fold or 5000 percent increase in annual bond issuances in just 5 years.**

In May 2016 the Republic of France demonstrated leadership in sustainable finance by committing to be the first government in the world to issue a so-called “sovereign green bond”. The inaugural sovereign green bond deal executed in January 2017 for an amount of 7bn euros, which was tapped more than 10 times. A second green bond was issued in March 2021.

The programme included an independent international ‘Green OAT evaluation council’ that independently assesses the impact of the bond. This feature to enhance transparency was

Source: data compiled by WWF from various sources

widely applauded by institutional investors and won several awards.

With over USD 35 billion of outstanding green debt the Republic of France is today one of the largest issuers of green bonds in the world.

The idea was quickly replicated by other governments. By mid 2021 more than twenty-three governments had issued their sovereign bonds as ‘green’.

Overall, more than USD 100 billion of green sovereign bonds have been issued since 2016. This represents a 50-fold increase in annual bond issuances in less than 5 years.

The European Commission has recently announced a USD 270 billion green bond programme. This will refinance a EU-wide post-COVID recovery package starting in 2021.

Many other governments have announced or are considering similar green issuance programmes.



THE EUROPEAN COMMISSION HAS RECENTLY ANNOUNCED A

USD **270**  
BILLION  
GREEN BOND  
PROGRAMME



# 4. DEFINITIONS AND METRICS MUST CONTINUE THEIR JOURNEY TO DEFINE A COMMON LANGUAGE OF SUSTAINABLE FINANCE

There are encouraging signs that the market is maturing since 2016 when WWF released its first call for action to develop effective and credible standards for green bonds. Markets have not only grown in quantity but also in quality.

There has been much progress since 2016 when WWF released its first report on Environmental Bonds<sup>62</sup>. However, many gaps remain in the use of green definitions and we must see accelerated development of other definition sets (known as “taxonomies”). These definition sets must include transition, low impact and unsustainable activities<sup>63</sup>.

Global alignment on a “common ground” taxonomy with local tailoring or tiering for certain sectors is the near-term objective of international collaboration via the International Platform for Sustainable Finance and other regional initiatives.

International investors value taxonomies as they enhance global market transparency, promote transition and help them identify investment opportunities that contribute truly to environmental objectives across the globe<sup>64</sup>, provided they are robust, coherent and internationally harmonised.

**All taxonomies must have harmonized terminology, standardized performance metrics, and appropriate safeguards across other environmental aspects (i.e., do-no-significant harm criteria).**

Expanding our definitions to other environmental issues beyond climate change is a critical next step, including ecosystems and biodiversity. The resilience and adaptation of our human and natural systems must receive renewed focus to manage the disruptive changes already flowing through all ecosystems and societies.

Natural capital quantification must become part of the sustainability journey for corporations, bankers, investors and infrastructure developers. As we have seen with shadow carbon pricing<sup>65</sup>, organisations can consider and account for externalities in their investment decisions even if governments and regulators are yet to mandate carbon prices or natural capital accounting<sup>66</sup>.

Target-based structures for debt instruments, such as Sustainability-Linked Bonds, will continue to see rapid growth. These transition commitments by issuers must have relevant indicators and ambitious short and medium-term targets.

Indicators must be focused on the entity’s key environmental impacts (including scope 3 emissions<sup>67</sup>) and

be aligned with ongoing entity-wide reporting requirements. Targets must be science-based, benchmarked and materially better than regulations.

**All sustainability-linked deals must consider natural capital and all issuers should include a relevant nature-based key performance indicator (KPI) in their borrowing arrangements.**

We must see increased focus and capacity on understanding, tracking and improving the complex relationship between the capital markets, the real economy, and the natural environment we all depend upon for life.

Over the past five years we have witnessed an impressive journey towards a common language in sustainable finance. Definitions and standards are being tightened over time to take into account evolving market practices.

Debt capital markets have been at the forefront and are the ‘success-story’ of the Sustainable Finance movement, pioneering taxonomies and leading the way towards effective and credible standards.

**The Green Bond Principles (GBP), purveyed by the International Capital Markets Association (ICMA), have become the dominant market practice with 97% of all international issuances claiming alignment with the GBP<sup>68</sup>.**

The GBP have been revised three times over the past 5 years to adapt to market practices and higher standards and have been complemented by a suite of handbooks and guidance to assist with capacity building.

The GBP are also the basis for regional or national guidelines and standards endorsed by government bodies. For example, the ASEAN Capital Markets Forum, a high-level grouping of capital market regulators from all 10 ASEAN<sup>69</sup> jurisdictions

in South-east Asia, adopted the **ASEAN Green Bond Standard** in November 2017.

The **Climate Bonds Initiative**<sup>70</sup> pioneered a taxonomy-based verifiable standard in 2014. The Climate Bonds Standard has been revised and adjusted to now be at version 3.0. Recent updates covered alignment with international frameworks (including the proposed European Standard), requirements and mandatory disclosure of the Green Bond Framework document, and details of a formalized Update Report provided by issuers.

The **International Standards Organisation (ISO)** has published an international standard ISO 14030 for Environmental performance evaluation of green debt instruments<sup>71</sup> in 2021. The standard includes four parts: a process standard for green bonds; similar for green loans; a detailed taxonomy; and a dedicated chapter on verification. The ISO approach also allows other credible taxonomies to be used under the standard.

In **China**, the green bond standards purveyed by the People’s Bank of China since 2016 have been revised in April 2021. The underlying ‘endorsed green project catalogue’ was revised after a public consultation in 2020 to harmonize within China and to better align with international practices and standards. Clean coal projects are now excluded from the list of eligible green projects.

In **Europe**, an international standard intended to become the ‘gold standard’ for international green bond markets was developed by a group of experts, including ICMA, several member of the Green Bond Principle and WWF. A legislative proposal based on the standard will define new rules for green bonds in European law (see boxed text on the following pages).

**A detailed comparison of the main features of these standards and how they have matured over time is presented in the table below.**

**THE GREEN BOND PRINCIPLES (GBP), PURVEYED BY THE INTERNATIONAL CAPITAL MARKETS ASSOCIATION (ICMA), HAVE BECOME THE DOMINANT MARKET PRACTICE WITH**

**97%**

**OF ALL INTERNATIONAL ISSUANCES CLAIMING ALIGNMENT WITH THE GBP**

# FROM RELATIVELY FLEXIBLE, PRINCIPLE-BASED PROCESS GUIDELINES, SINCE 2015 TO MUCH MORE PRESCRIPTIVE, TAXONOMY-BASED STANDARDS IN 2021

	GREEN BOND PRINCIPLES		CLIMATE BOND STANDARDS		GREEN BOND ENDORSED PROJECT CATALOGUE + RELATED POLICY/GUIDELINE		ASEAN GREEN BOND STANDARDS	ISO 14030	EUROPEAN GREEN BOND STANDARD
OWNER	ICMA		CLIMATE BONDS INITIATIVE		PBOC, CSRC, NDRC		ASEAN CAPITAL MARKETS FORUM	ISO	EUROPEAN COMMISSION
	2014	2021	2015	2021	2016	2021	2018	2021	2022
MARKET REACH*								UNDER DEVELOPMENT	UNDER DEVELOPMENT
REGULATORY ENDORSEMENT**									
TAXONOMY ALIGNMENT									
COVERAGE OF HIGH-LEVEL ENVIRONMENTAL OBJECTIVES									
TECHNICAL SCREENING CRITERIA AND THRESHOLD									
SCREENING CRITERIA FOR DO-NO-SIGNIFICANT HARM									
EXTERNAL REVIEW REQUIREMENT									
PRE-ISSUANCE									
POST ISSUANCE									
REPORTING REQUIREMENT									
ALLOCATION REPORTING									
IMPACT REPORTING									

ORIGINAL PROGRESS

Notes:

\*Market Reach for regional or national approaches is defined as the relevant jurisdiction(s) covered by the approach.

\*\* Regulatory Endorsement includes the supporting of global approaches such as the Green Bond Principles in regional or national guidelines (half Harvey Ball) as well as moves to include green labelling in the jurisdiction's regulatory instruments (three quarters or full Harvey Ball).



## RAPID CHANGE IS HAPPENING: THE EUROPEAN GREEN BOND STANDARD, A HIGH-QUALITY STANDARD FOR INTERNATIONAL DEBT CAPITAL MARKETS.

In July 2021 the European Commission published a long-awaited proposal for a regulation on the establishment of an European Green Bonds Standard (EU-GBS). The draft regulation will be finalised by EU legislators over the next 12-18 months.

The proposed European Green Bond regulation seeks to facilitate the issuance of 'high-quality green bonds'. It is intended to become an international 'gold standard' for the global green bond market that any issuer of debt securities can use to label a bond as 'environmentally sustainable'. The legislative proposal includes almost all key features of the initial proposal from the Technical Expert Group, which includes WWF. It provides "uniform requirements for issuers of bonds that wish to use the designation 'European Green Bond' (or 'EuGB') for their environmentally sustainable bonds in the Union, and a registration systems and supervisory framework for external reviewers".

The EU Green Bond Standard offers major improvements over current market practices in the following areas:

- **Major milestone towards 'effective and credible standards for global green bond markets'.** While not perfect (yet), the proposed voluntary standard

-- if received positively by the market and adopted largely by bond issuers -- represents a major progress towards effective and credible international standards for the green bond market.

- **Clear definitions of green - the requirement for European green bonds to be strictly, 100% aligned with EU-Taxonomy, including do-no-significant harm criteria (DNSH)** to avoid unintended side effects for a broad range of environmental objectives, beyond climate change is, by far, the most important progress over an above current market practice. However, a weak EU taxonomy would result in a weak EU green bond standard, possibly even increasing the risk of 'greenwashing'. The EU taxonomy is currently still under development. While the EU taxonomy was intended to be science-based and ambitious enough to result in 'substantial contributions' towards the achievement of the EU environmental objectives, a weak EU taxonomy could even take the European green bond market in the wrong direction: backwards!
- **Improved legal documentation and ESMA-led registration and supervision.** WWF also welcomes clear improvements in connection to bonds' legal documentation as well as a strong and clear mandate for the EU's securities markets regulator - European Securities and Markets Authority (ESMA) - to set up a comprehensive regime for registration and supervision of external verifiers.



THE DRAFT REGULATION WILL BE FINALISED BY EU LEGISLATORS OVER THE NEXT

**12-18**  
MONTHS

THE EUROPEAN  
COMMISSION SHOULD  
COMMIT TO APPLYING  
THE CORE COMPONENTS  
OF THE STANDARD TO  
ITS OWN

USD **270**  
BILLION

NEXTGENERATION  
EU GREEN BOND  
PROGRAMME AND  
ENCOURAGING EU  
MEMBER STATES TO  
USE THE STANDARD  
FOR THEIR OWN  
GREEN BOND  
ISSUANCES

Several major European issuers including the European Investment Bank (EIB) or the Governments of Luxembourg or Italy have already committed to using the standard, although it currently only exists in draft form and the legislation that enshrines the standard in European laws is yet to be finalised. Interestingly one issuer, the Austrian energy utility Verbund, has not only pledged to align with the EU-Taxonomy and the EU-Green Bond Standard on a best effort basis, but also innovates by linking the cost of debt to climate-related targets (i.e., newly-installed production capacity of hydropower, wind power and photovoltaic, solar renewable energy; additional transformer capacity to facilitate interaction with the grid and integrate renewable energy generation). If the European Commission itself and all issuers who were directly or indirectly involved in the development of the standard (e.g., Members of Technical Expert Group including major issuers such as the German development bank KfW and the EIB or the Spanish utility Iberdrola; EU member state governments) committed to adopt the standard as soon as it becomes available the standard's could become the prevailing *de facto* market reference for Euro-denominated green bond market by 2022).

The European Commission has committed to applying the upcoming European Green Bond Standard “as much as feasible” to its own USD 270bn NextGeneration EU green bond programme. In its green bond framework, published in September 2021, the European

Commission pledged to apply “*the EU Taxonomy and the upcoming Standard for European Green Bonds where feasible, based on the information available.*” The European should work with EU Member States to provide detailed information on EU Taxonomy alignment of expenditures and encourage EU member States to use the standard for their own green bond issuances.

This shows that effective and credible standards are needed now. WWF calls upon the European Council of Member States and the European Parliament to promptly proceed with the negotiation of the final text so that issuers can eventually start using the EU Green Bond Standard.

However, a **potential inclusion of controversial activities (nuclear, gas, unsustainable forestry and agricultural practices) in the EU taxonomy might be a major drawback for the green bond market in Europe and beyond.** For example, no debt security labelled as a ‘green’ that is currently traded on European debt capital markets includes any form of nuclear energy. So there is a significant risk the EU Green bond standard increases, rather than reduces greenwashing, if controversial and/or unsustainable forms of energy production based on nuclear energy, fossil fuel combustion, bioenergy or certain types of unsustainable agriculture or forestry practices are included in the EU-Taxonomy.

Source: WWF analysis based on EC proposal for a European Green bond Standard, June 2021.<sup>72</sup> And NextGeneration EU green bond programme<sup>73</sup>, September 2021.

## MARKET GUIDANCE AND STANDARDS FOR GREEN BONDS HAVE MOVED FROM RELATIVELY FLEXIBLE PRINCIPLE-BASED PROCESS GUIDELINES IN 2015, TO MUCH MORE PRESCRIPTIVE STANDARDS IN 2021. WE NEED TO SEE RAPID DEVELOPMENT OF STANDARDS FOR TARGET-BASED OR ‘SUSTAINABILITY-LINKED’ BONDS (SLBS) AND LOANS.

Effective and credible standards are urgently needed to strengthen the credibility of Sustainability-Linked Bonds and Loans.

An important gap remains in the relatively young market segment of Sustainability-Linked Bonds (or ‘SLB’) and Loans (‘SLL’). Voluntary market guidelines for both global loan and bond markets published recently by industry bodies including ICMA and the regional loan market associations have helped set the foundations for the market<sup>74</sup>.

The European Central Bank has also played an important role by adapting its collateral rules in order not to impede the development of the market<sup>75</sup>.

While this new type of instrument has the potential to trigger tremendous positive change across a broad range of debt instruments, these deals should aim towards effective and credible standards and metrics, in the same way the green bond market has progressed. Within five years green bonds have gone from relatively flexible process guidance via the ICMA-led Green Bond Principles towards the rapid deployment of robust standards and definitions.

This shift will likely entail further regulatory intervention. The European Commission announced in July 2021 its intention “to work on other bond labels such as transition or sustainability-linked bonds...”<sup>76</sup>.

In the meantime, market practices for target-based structures should be strengthened beyond the published principles in the following areas:

- **Use Key Performance Indicators (KPI) from regulated disclosure frameworks.** Selected KPIs should align with disclosure requirements under mandatory or voluntary non-financial reporting frameworks applicable by law in the issuer’s jurisdiction. As a result, only relevant KPIs that are robust, reliable, comparable and backed-up by widely accepted methodologies should be used.
- **Voluntary, sector-specific KPIs should only be used in cases where no relevant regulated KPIs are available for a given sector.** The use of company-specific KPIs should not be acceptable. Even where no robust sector benchmarks are available or commonly-accepted calculation methods are not publicly available, company-specific KPIs open the door to greenwashing at massive scale (see example in boxed text).
- **Non-financial ratings, such as ESG scores provided by**

**rating agencies, should be avoided as a reference point.**

The robustness, comparability and reliability of these non-financial ratings have been repeatedly called into question. Investors have concerns that *[..] the inaccuracies, the use of old or backwards-looking data, or more fundamental concerns about whether ESG performance can ever be distilled into a single score*<sup>77</sup>. Moreover, according to IOSCO, the leading international policy forum for securities regulators and a recognised standard-setter for securities regulation “users have raised serious questions about relevance, reliability and greenwashing”<sup>78</sup>. ESG ratings currently fall outside the scope of the regulatory or supervisory frameworks of most countries.


- **The issuer should clearly communicate to investors and broader stakeholders how the issuance of its sustainability-linked bond fits into its broader sustainability strategy and objectives.**

The Science Based Targets Network (SBTN)<sup>79</sup> is a collaboration of leading organizations working to equip

THE WORLD'S LARGEST COAL EXPORT TERMINAL, PORT OF NEWCASTLE, HANDLED


 **160**  
MILLION TONNES

OF COAL IN 2020

 **400**  
MILLION TONNES

OF CO2

||  
ABOUT

 **1%**  
OF TOTAL GLOBAL EMISSIONS IN 2020

organisations with the guidance to set science-based targets for all of Earth's systems. The Science Based Targets Initiative (SBTI) has been recognised as an authoritative source to strengthen the credibility and robustness of climate-related performance targets in Sustainability-Linked Bond transactions.

**Target-based structures for debt instruments, such as Sustainability-Linked Bonds, will continue to see rapid growth. These transition commitments by issuers must have relevant indicators and ambitious short and medium-term targets.**

Indicators must be focused on the entity's key environmental impacts (including scope 3 emissions<sup>89</sup>) and be aligned with ongoing entity-wide reporting requirements. Targets must be science-based, benchmarked and materially better than regulations.

All sustainability-linked deals must consider natural capital and all issuers should include relevant nature-based

key performance indicators (KPI) in their borrowing arrangements.

Science-Based Targets for Climate and Nature are needed to strengthen credibility of SLB transactions and the robustness of the underlying Key-Performance Indicators.

A nature-related KPI developed under the SBT-N framework should become a mandatory feature of every Sustainability-Linked Bond instruments as soon as these become available (expected in 2022).

**Science-Based Targets for Climate and Nature are needed to strengthen credibility of SLB transactions and the robustness of the underlying Key-Performance Indicators.**

**A nature-related KPI developed under the SBT-N framework should become a mandatory feature of every Sustainability-Linked Bond instruments as soon as these become available (expected in 2022).**

### Sustainability-linked bond and loans lack credibility if they fail to focus on critical environmental impacts

The world's largest coal export terminal, Port of Newcastle, handled 160 million tonnes of coal in 2020, which when burned release around 400 million tonnes of CO<sub>2</sub>. This is about 1% of total global emissions in 2020 and more than the annual emissions from all but the 20 largest emitters. The Port has secured a sustainability-linked loan (SLL) of USD 398 million in equivalent from the National Australia Bank that can benefit from lower interest rates if the company can meet the targets across a range of social and environmental metrics.

#### LOAN SIZE

AUD 515 million (USD 398 million)

#### UNDERWRITER

National Australia Bank

#### TENOR

5 years

#### TYPE

Sustainability-Linked Loan

#### SECOND-OPINION BY

Second-opinion provider DNV GL judged the transaction to be aligned with the Sustainability Linked Loan Principles.

#### Sustainability Performance Targets:

- Reduce Scope 1 & 2 GHG emissions, which are currently around 2,500 tonnes of CO<sub>2</sub> per year, < 0.001% of related Scope 3 emissions.
- 100% screening of all new and existing suppliers for modern slavery risk
- Student internship for the University of Newcastle
- Accreditation of mental health first aiders in each company department

**However, the SLL structure fails to recognise the most significant carbon emission from the project, which are related to scope 3 of the coal handled by the port.**

Source: WWF analysis, based on publicly available information.



## SCIENCE BASED TARGETS FOR NATURE INCLUDING ROBUST KEY-PERFORMANCE METRICS ARE SCHEDULED TO BECOME AVAILABLE AS OF 2022

Collaborative efforts led by the Science Based Targets (SBT-B) for Nature Initiative are underway to improve the way

nature-related issues are taken into account in business operations.

SBT-N has four aims:

- Develop methods for cities and companies to set integrated targets across all Earth systems by 2022.
- Build on the progress of establishing science-based targets for climate to achieve widespread adoption of science-based targets on water, land, biodiversity and ocean by 2025.
- Demonstrate significant progress in line with key global policy

milestones like the SDGs, and goals and targets under the UNFCCC, UNCCD, CBD, by developing an indicator framework that tracks how SBT setters deliver progress.

- Work to embed adoption of science-based targets within capital markets by partnering with policy makers, financial institutions and service providers such as benchmarkers and credit agencies.

Source: Science-Based Targets for Nature<sup>81</sup>, 2020



## WHAT ABOUT ME?



# 5. TRANSPARENCY, CONFIDENCE AND INTEGRITY ARE CRITICAL FOR SYSTEMIC CHANGE IN THE FINANCE AND INVESTMENT ECOSYSTEM

Use of agreed principles, guidelines and standards has increased since 2016 with near-global adoption of the Green Bond Principles as the minimum requirements for green labelling.

Information providers, rating agencies, third party verifiers and assurance providers NGOs and sophisticated investors must continue to call out and sanction greenwashing when it emerges, especially with target-based structures in hard-to-abate and unsustainable sectors. These challenges on potential greenwashing must be amplified and properly examined to help manage the integrity of labelling in a voluntary environment.

The use-of-proceeds approach for green labelling has created new levels of transparency in debt capital market transactions. **These must be expanded to ensure that all debt capital market instruments, including bonds, and not only those labelled as green provide relevant information on the environmental impacts of the underlying investments.**

More importantly, links to disclosures at entity-level and their strategies for transformation must be better articulated. Global reporting standards for ESG risks and impacts

are moving forward in 2021 and must become common practice in all debt capital markets by 2025.

**Independent review of green and sustainability claims must be mandatory for all labelled debt transactions.**

Registration and oversight of review providers and ESG rating agencies, modelled after supervisory frameworks for financial reporting and assurance, must be put in place both at regional level<sup>82</sup> and internationally<sup>83</sup> with a focus on building trusted service providers in local markets.

Increased transparency up and down the finance and investment ecosystem empowers investors and stakeholders to demand change and track progress. Mandatory disclosure on climate risk and green portfolio alignment is coming soon for investors, asset managers, banks and companies. Even emerging market regulators and central banks are moving on these issues with surprising pace.

**Clarity on what is green creates a much deeper understanding of what is unsustainable.**

This allows both mandates and exclusions to flow through the

system and drive rapid change across the financial markets, as we have seen with the Government Pension Investment Fund (GPIF) in Japan (see boxed text on the following page).

This lever of mandates and exclusions from asset owners to asset managers is enormously powerful. This is especially the case in “follower” investor communities in emerging markets and some advanced economies, where domestic players are reluctant to show disruptive leadership.

**Formalised investment exclusions have enormous potential to drive change in the real economy. These must be extended to include private capital providers and must cover all areas of significant harm to the climate and nature.**

Recent pledges and commitments by key players in the finance and investment ecosystem will flow through to the real-economy investment decisions being made in the years ahead. This transition must be nurtured and supported by all relevant market players. The pace of change must accelerate.

The availability of better data, high integrity investment information and a clear mandate to avoid significant harm can combine to drive rapid change. While climate impacts have been the focus to date, our broader impacts on nature must also come into these data flows and conversations.

Global capacity building must be the near-term focus to enable the ongoing integrity of this rapidly growing market. These efforts must include sharing of best practices, broad education of the finance sector, qualifications for market practitioners, and support for green dispute resolution mechanisms.

**Rapid systemic change can happen in the real economy if the right levers are pulled in the debt capital markets.**



**JAPAN IS HOME TO THE SINGLE LARGEST PENSION FUND IN THE WORLD WITH OVER**

**USD 1.5 TRILLION IN ASSETS**

## **RAPID CHANGE IS HAPPENING IN JAPAN'S INVESTMENT COMMUNITY**

**Japan's Government Pension Investment Fund (GPIF) mandates ESG analysis for all of its contracted asset managers**

Japan is home to the single largest pension fund in the world with over USD 1.5 trillion in assets. Its journey into ESG started in 2015, when it published its investment principles and signed the Principles for Responsible Investment (PRI).

But 2017 was when it really kicked into gear. GPIF revised its evaluation criteria of external asset managers, weighting more heavily towards stewardship and ESG-related activities.

“It is our belief that considering ESG issues properly will lead to an

increase in corporate value, foster sustainable growth of the investee companies, and enhance the medium- to long-term investment return for the pension recipients,” GPIF stated.

Since then, the Japanese market has shifted rapidly to embrace ESG reporting and asset manager stewardship practices.

The GPIF's recent survey said that companies are carrying out information disclosure not only through integrated reports, but also through new disclosure criteria such as the TCFD.

“Moreover, there has been a growing virtuous cycle, where the disclosure of non-financial information of investee companies including ESG information is further increased, and more and more investors have been utilizing such information,” the fund said in its report on the survey.

Source: GPIF's website

Mandatory reporting is critical for embedding information flows and providing an ongoing focus on environment and sustainability performance, at both the entity level and for individual transactions.



© Tom Viers / WWF-UK

**Transparency is an important lever for positive change and the disclosure rules for debt-capital markets are being tightened in Europe and beyond.**

Mandatory reporting is a critical enabling factor and many governments have taken decisive action to improve the availability and robustness of information disclosed by companies. In Europe, corporate disclosure rules have been tightened significantly as part of the Action Plan on Sustainable Finance released

in 2018 (see boxed text on the following page).

**WWF believes that the time is now ripe for a comprehensive and consistent disclosure regime on taxonomy-alignment of ‘use-of proceeds’ of bonds and other debt-capital instruments for all companies who seek to access EU capital markets, including issuers located outside the EU and therefore not yet subject to disclosure requirements at entity level<sup>84</sup>.**



Indeed, under the current EU legislative framework there currently are no mandatory disclosure requirements on the EU taxonomy alignment of the use-of-proceeds of debt-capital market instruments and their contribution to European environmental and climate policy goals, unless disclosed by the issuer on a voluntary basis (e.g., by those adopting the EU-Green Bond Standard and EuGBS label on a voluntary basis).

Disclosure rules on debt capital markets need to be further improved to enable fast-paced, disruptive change. This should include transparency of environmentally sustainable investments in the pre-issuance disclosures and in periodic reports for all debt-capital instruments, including bonds.

**WWF believes that all issuers of debt-capital instruments,**

**including bonds, on European debt capital markets (including corporate, sovereign and sub-sovereign issuers) - whether marketed as 'green' or not - should be required to disclose, at issuance, how and to what extent the funds raised will be invested across the spectrum of green to significant harm.**

**This is particularly relevant for certain types of issuers for which the transparency rules for large companies at entity level<sup>85</sup> do not apply or are not relevant under the EU regulations. This includes supranational, sovereign, sub-sovereign, governmental, quasi-governmental, and agency issuers for which information such as the proportion of taxonomy-alignment of turnover is either irrelevant or currently impossible to compile.**

## RAPID CHANGE IS HAPPENING WITH GREEN DISCLOSURES IN EUROPE

New disclosure rules for large companies are coming under the EU-taxonomy regulation and the proposed corporate sustainability reporting directive (CSRD).

The EU Taxonomy Regulation (2020/852) requires a broad range of large European companies, including all listed companies subject to the non-financial reporting legislation, to disclose the share of the turnover, their capital expenditure (CapEx) and operating expenditure (OpEx) at entity level, starting 2022.

In addition, on 21 April 2021 the EC has tabled an additional legislative proposal on corporate sustainability reporting (CSRD). This will increase the number of

companies required to disclose from about 11 000 companies to about 50 000, essentially covering all large companies with more than 250 staff (compared to 500 in the past), whether they are listed or not.

In response to investors demands for sustainability information the proposed new rules will improve the availability of sustainability-related data. These companies will be required to report entity-level data against a mandatory EU sustainability reporting standard, to be adopted by 2022.

Taken together, these new European disclosure rules represent a major milestone towards better and more comprehensive disclosure of the 'greenness' of the activities conducted by companies, providing insights on their ESG risks and opportunities of European companies.

Source: European Commission



NEW DISCLOSURE RULES IN EUROPE WILL INCREASE THE NUMBER OF EUROPEAN COMPANIES REQUIRED TO DISCLOSE FROM ABOUT

11,000 COMPANIES

TO ABOUT

50,000

# FUTURE SCENARIOS FOR RAPID CHANGE

WWF HAS CREATED FIVE FUTURE SCENARIOS FOR WHAT COULD HAPPEN OVER THE COMING THREE TO FIVE YEARS IN THE DEBT CAPITAL MARKETS.

2025 IS A CRITICAL MILESTONE TO ENSURE THAT GLOBAL DEBT CAPITAL MARKETS LEVERAGE THEIR POWER TO ADDRESS THE ENVIRONMENTAL CHALLENGES OF OUR GENERATION WITHIN THE CRITICAL 'MAKE-OR-BREAK' DECADE FROM TODAY TO 2030.

# RAPID CHANGE SCENARIOS TO 2025

## WWF's scenarios for sustainable debt capital markets in 2025

The following pages describe five future scenarios<sup>86</sup>.

Why use scenarios? Scenarios are stories about the future. Useful scenarios are plausible, challenging and rigorously constructed to address the most critical questions faced by decision-makers.

The scenarios presented in this publication were developed by WWF as a blueprint for further discussion with debt capital market practitioners to illustrate that rapid change is possible, provided that the right levers are pulled.

Each story that has emerged describes a plausible future of the debt capital markets ecosystems, based on real-life examples from deals and practitioners.

1. How will the 'greening of debt capital markets' evolve, if there is only timid or little decisive action by governments and regulators? What outcomes will we see in the next decade?

The first scenario, called '**Business-as-Usual**', explores what could happen if past experience prevails to guide future action and vested interests continue to dominate.

They are not predictions of the future but possibilities for its emergence.

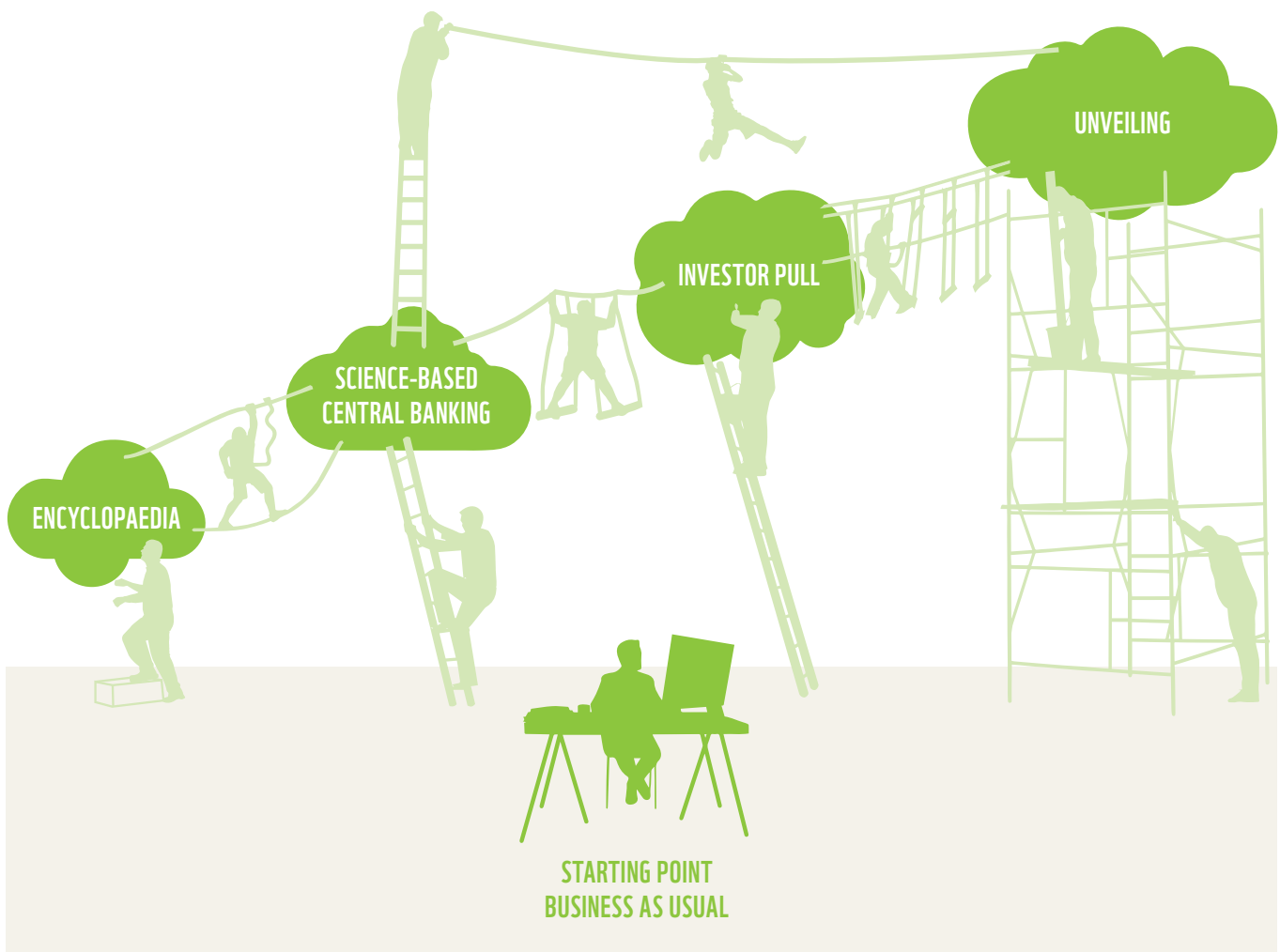
The scenarios are intended to provoke readers, challenging their assumptions about what may happen, and provide a useful shared basis for debate. They are not mutually exclusive and can complement each other.

WWF plans to further develop and refine the scenarios, and calls upon policy makers, central bankers, regulators, supervisors, and senior executives from the financial services industry, as well as thought leaders, scenario planners and relevant public figures to step up and collaborate for the rapid change our Planet needs.

In developing the scenarios we have identified the following key questions that need to be addressed:

2. Will the international cooperation and policy-dialogue among governments be fast enough to deliver on the quest to develop a 'common language' for what counts as 'environmentally sustainable' in finance? Will this development be further supported and accelerated by swift and decisive action by governments and regulators?

Our second scenario, called '**Encyclopaedia**' - a **global common language**, describes options for rapid change in this area.



3. Will central bankers realise that ecosystem stability and financial stability are intrinsically linked? Will central bankers move on from 'market-neutrality' to promote 'ecosystem-stability' in their investment decisions? How will they deliver on their mandate to protect financial stability in a world where disorderly disruption of ecosystems takes place?

Our third scenario is dubbed '**Science-Based Central Banking**', and assumes that central bankers listen to and act on scientific evidence that financial stability cannot be guaranteed if ecosystems fail.

4. Will the select group of the world's leading asset owners, as the guardians of the pension savings of the citizens of the world, demonstrate leadership and push the limits of their current business models through coordinated and collective action towards a 'greener future'?

Our fourth scenario '**Investor Pull**' narrates a future where asset owners seek to prevent disruptive and disorderly transitions through coordinated efforts to drive rapid change and just transitions.

5. Will innovation be incremental or fundamental? Will it be driven by traditional or new players, and what types of innovation will we see – for example, in products and services, distribution and sales channels, operations, and new business models? Will retail investors, enabled by better disclosures, big ESG-data, technology and innovation take the lead and drive change through clear, and outspoken investor preferences to make their money matter?

Our last scenario '**Unveiling**' sets out how full transparency on ESG-data could drive fast-paced and disruptive change across the financial services industry.



# 'BUSINESS-AS-USUAL'

## USING PAST EXPERIENCE TO GUIDE FUTURE ACTION

While past performance is not always indicative of future results, this scenario paints a world where the future is designed mostly based on past experience, such as the successful development of a market for green, social, and sustainability bonds. Voluntary market initiatives emerge, mostly driven by market innovation, 'first-mover' advantage and reputational benefits.

However, government leadership at the global level is weak, momentum of multilateral efforts is slow and international policy dialogue is dominated by vested national or regional interests. '**Business-as-usual**' considerations are prevailing:

- **Weak G20 mandates result in limited harmonisation of taxonomies**, in spite of the laudable work of the G20 Sustainable Finance Working Group, relaunched under the Italian G20 presidency in 2021, and the ongoing efforts of the International Platform on Sustainable Finance
- **Governments large and small, including G20 countries, continue to provide massive support to fossil fuels and continue to delay the 'inevitable policy response'<sup>87</sup> in the real economy that is needed to address dangerous climate change and biodiversity loss.** Tax and fiscal incentives and industrial

policies to promote sustainability across the real economy are further delayed to protect vested interests and concerns prevail that rapid change might represent an 'unreasonable burden' on business operations. Harmonised investment frameworks, including 'taxonomies' to promote sustainability are weakened and dominated by governments, which fail to resist pressure from their domestic industries' lobbyists<sup>88</sup>.

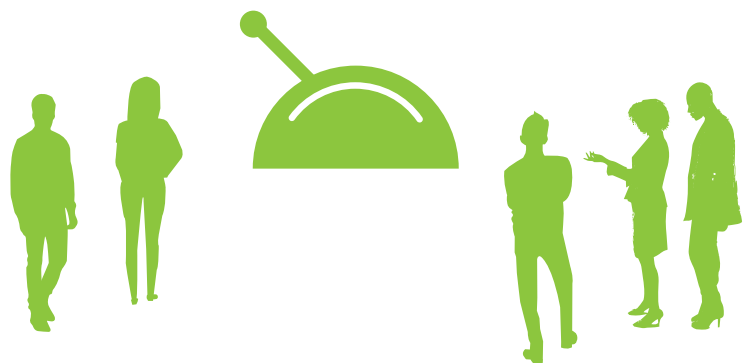
- **Central Banks**, which are among the largest investors in the international bond markets, stick to their traditional mandates, dominated by 'market neutrality'. They are reluctant and slow to take into account the new challenge the Planet is facing.
- **Voluntary initiatives, such as the ICMA-led Green Bond Principles**, are dominated by 'business-as usual' considerations of incumbent market participants and fail to take into account the need for bold, disruptive and urgent action to develop effective and credible standards that are prescriptive.
- **Disclosures remain voluntary and optional.** Transparency and disclosures by issuers' and investors' at entity or instrument level (i.e., bonds issued) remain voluntary, sketchy and incomplete. Hence, data is not comprehensive or comparable.

WHAT IF ...

...ALL G20 GOVERNMENTS,  
AS PART OF THEIR

# ‘INEVITABLE POLICY RESPONSE TO ADDRESS DANGEROUS CLIMATE CHANGE’

DECIDED TO DEVELOP AND  
IMPLEMENT ROBUST TAXONOMIES  
THAT DEFINE WHICH DEBT CAPITAL  
MARKET INVESTMENTS ARE  
GREEN AND WHICH INVESTMENTS  
INVOLVE SIGNIFICANT HARM?



# ‘ENCYCLOPAEDIA’ REGULATORY PUSH TOWARDS A GLOBAL COMMON LANGUAGE

*“G20 Summit is the occasion to mark a new beginning in multilateral cooperation to address global challenges we all face. And with our partners, we stand ready to be a real driver of this new beginning”*

Statement<sup>80</sup> by EU President von der Leyen at the joint press conference with President Michel ahead of the G20 Summit in Venice, Italy, in November 2020.

The scenario ‘Encyclopaedia’ describes a world in which governments actively pursue their efforts to implement the ‘inevitable policy response’ in the real economy that is needed to address dangerous climate change and biodiversity loss.

Their efforts result in an internationally coordinated push to strengthen financial regulation and, as the title reflects, a ‘global common language’ emerges. A new global ‘encyclopaedia’ that clarifies what type of finance and investments heal the Planet, and what hurts it.

The result is the emergence of a sustainable financial services industry as an ecosystem of highly capable providers, such as providers of taxonomy-related ESG data, Internet-technology companies and external review / assurance providers each focusing on creating a competitive advantage over incumbents.

This scenario includes, among others, the following key features:

- **Ambitious G20 mandate on sustainable finance and taxonomy development.** In 2021, governments of G20 countries endorse a clear roadmap for policy dialogue on taxonomies, covering both taxonomies for ‘green’ and for ‘significant harm’, accelerating the momentum of the International Platform on Sustainable Finance (IPSF). The G20 Working Group on Sustainable Finance, co-chaired by the USA and China, the IPFS co-chairs, China and the EU, deliver on their mandate to create a universal sustainable finance taxonomy that can be applied globally, including (a) common principles such as substantial environmental benefits and clear do-no-significant harm criteria, (b) sector-specific Key Performance Indicators and

Metrics that are compiled using robust, internationally recognised methodologies.

- **All G20 governments “lead by example” and use best practice standards, terms and definitions/taxonomies in their sovereign, sub-national, municipal and supranational debt issuance programmes.** As of July 2021, eight G20 governments have issued green bonds or have announced issuances sovereign bonds in green format. The 12 remaining G20 governments that have yet to issue green bonds<sup>89</sup> include five out of the largest 10 issuers of government debt (i.e., Brazil, China, India, Japan and the USA) representing more than one third of the total outstanding government debt in the global debt capital markets. European governments in particular, and the European Commission itself, use the EU Taxonomy and the EU Green Bond Standard for their issuance programmes.
- **Regional policy leadership, in particular by the EU, China and the US.** The revised EU action plan on Sustainable Finance, released by the European Commission in July 2021 is fully supported by EU member states and policy files of critical importance for debt capital markets make swift progress, including an extension of the EU-Taxonomy framework to identify intermediate performance levels. China continues to improve the transparency and integrity of its reporting regimes and its capital markets are integrated into the nation’s drive for zero emissions as soon as possible.
- **Science prevails over vested industry interests.** The work of the EU’s Platform on Sustainable Finance, mandated by the EU to develop science-based criteria for the EU taxonomy, is not overruled by sector-specific lobbying efforts.

WHAT IF ...

...CENTRAL BANKERS ANNOUNCED TODAY THAT, AS OF 2025 AT THE LATEST, BONDS THAT

**DO NOT PROVIDE INFORMATION ON TAXONOMY ALIGNMENT**

OF USE-OF-PROCEEDS WOULD NO LONGER BE ELIGIBLE FOR THEIR ASSET PURCHASING PROGRAMMES AND/OR AS MARKET COLLATERAL?

... REGULATORS REQUIRED BY 2025 THAT ALL BOND ISSUERS REPORT ON CLIMATE AND NATURE-RELATED RISKS AND OPPORTUNITIES BASED ON THE TCFD AND TNFD FRAMEWORKS?





# ‘SCIENCE-BASED CENTRAL BANKING’ CENTRAL BANKERS AS NATURE’S NEXT STEWARDS

This scenario depicts a world where central bankers and other members of the Financial Stability Board, the FSB, realise that ecosystem stability is a necessary and fundamental prerequisite for financial stability.

Building on the efforts already undertaken by the Network for Greening the Financial System (NGFS), a coalition of the willing created in 2017, the G20 expands the mandate of the FSB to morph into a **Financial and Ecosystems Stability Board (FESB)**, that collectively commits to coordinating the development of regulatory, supervisory and other financial sector policies and conduct outreach to non-member countries to promote not only financial- but also ecosystem stability.

More specifically, the extended mandate of the FESB takes into account WWF’s recommendations for central bankers<sup>92</sup> including (but not limited to):

- **Reverting the burden of proof.** Central bankers anticipate, assess and mitigate risks to the financial system, and assume that environmental degradation, including biodiversity loss, poses macroeconomic and financial risks in their jurisdictions unless it can be shown otherwise. As a result, central bankers adopt forward-looking approaches through early intervention that can prevent an identified weakness from developing into a threat to safety and soundness<sup>93</sup>.

“Market Neutrality, which guides the execution of market operations, should not put a brake on carbon neutrality”

François Villeroy de Galhau, Governor of the Banque de France, February 2021<sup>94</sup>

The FESB promotes international ecosystem stability by coordinating national financial authorities and international standard-setting bodies as they work toward developing strong regulatory, supervisory and other financial sector policies. It fosters a level playing field by encouraging coherent implementation of these policies across sectors and jurisdictions<sup>91</sup>.

Central banks and financial supervisors recognize the urgency to act and prove that (a) they do not underestimate measurements of climate-related financial risks and (b) take into account the amplification effect of biodiversity loss; and that the financial risks derived from biodiversity loss are known and adequately mitigated.

- **Assess vulnerabilities affecting the global ecosystems** that are interdependent with financial system as well as to identify and review, on a timely and ongoing basis within a macroprudential perspective, the regulatory, supervisory and related actions needed to address these vulnerabilities and their outcomes.
- **Take preventive measures, applying the existing toolbox extensively to mitigate, ex-ante, the risks deriving from biodiversity loss alongside climate change-related risks.** The current regulatory framework provides the tools to act, across micro-prudential supervision, macro-prudential supervision and monetary policy. Central bankers address environmental risks in their own portfolios and initiate the required research to be conducted. More specific recommendations how central bankers and financial supervisors can use the existing toolbox are described in the publication *Greening the Financial System: tilting the playing field – The role of central banks*<sup>95</sup> and the recent WWF publication *Nature's next stewards - Why central bankers need to take action on biodiversity risk*<sup>96</sup>.
- **International policy dialogue and cooperation.** Central banks and financial supervisors act consistently and advocate for common international financial regulation that includes environmental dimensions, including:
  - Support robust taxonomy frameworks for what is green and what involves significant harm.
  - Require issuers to report transparently on climate and nature-related risk and opportunities under the TCFD and TNFD<sup>97</sup> frameworks.





- Establish and implement guidelines for climate and nature-related supervision of Systemically Important Financial Institutions (SIFI).
- Support contingency planning for cross-border climate crisis management, particularly with regard to systemically important firms.
- Collaborate with the International Monetary Fund (IMF) to conduct Early Warning Exercises for environmental risks.
- Promote member jurisdictions to implement agreed commitments, standards and policy

recommendations, through tracking of progress, peer review and disclosure.

**Set a forward-looking deadline for climate and risk disclosures to become conditions for eligibility.**

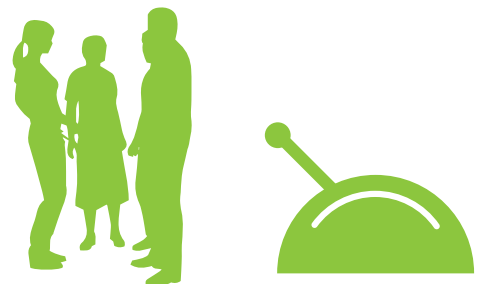
Central bankers announce that as of 2025, at the latest, issuers of bonds that do not provide information on environmental impacts would no longer be eligible for the central bank's asset purchasing programmes and/or as market collateral. This could be implemented in a phased approach, starting with use-of-proceeds and impact reporting and requiring data on taxonomy alignment as soon as relevant disclosure rules become effective.

WHAT IF ...

... INVESTOR COALITIONS  
ANNOUNCED TODAY, THAT BY 2025  
AT THE LATEST, THEY WILL

# REFUSE TO INVEST IN DEBT CAPITAL MARKET INSTRUMENTS

THAT DO NOT SAY ANYTHING  
ABOUT THE ENVIRONMENTAL  
IMPACT OR THE INTENDED USE-OF-  
PROCEEDS, UNLESS THESE BONDS  
ARE ISSUED AS SUSTAINABILITY-  
LINKED BONDS TIED TO AMBITIOUS,  
SCIENCE-BASED TARGETS THAT ARE  
ALIGNED WITH GLOBAL CLIMATE  
AND BIODIVERSITY GOALS?





# ‘INVESTOR PULL’ COORDINATED EFFORTS DRIVEN BY GLOBAL INVESTOR COALITIONS

In this scenario, asset owners start realising that ‘Peak Fossil Finance’ is already happening and are on the frontline to make the shift towards green happen rapidly.

The world’s largest institutional investors brought together under the Glasgow Financial Alliance for Net Zero (GFANZ)<sup>98</sup> work together to accelerate the transition of the financial sector and the global economy to net-zero emissions. These asset owners, banks (including their corporate and investment banking activities), asset managers, and insurance funds represent over \$88 trillion of financial assets<sup>99</sup> and collectively ‘own’ bond markets almost in their entirety. When acting

in concert, they have the power to trigger immediate and bold action.

This scenario is based on the assumption that these asset owners hold the key to rapid change, through actions, including (but not limited to):

- **Apply WWF criteria for credible Net Zero Commitments by Financial Institutions<sup>100</sup>.**
- **Develop principle-based frameworks for green investment reporting** taking into account existing methodologies and criteria e.g. the Green Bond Principles, EU taxonomy/ EU-Green Bond Standard, real estate certificates and others<sup>101</sup>.

*“I welcome the leadership of the [...] global banks for their new commitments to net zero and for joining forces with the Glasgow Financial Alliance for Net Zero (GFANZ), which will act as the strategic forum to ensure the financial system works together to broaden, deepen, and accelerate the transition to a net zero economy”*

Mark Carney, UN Special Envoy for Climate Action and Finance and Prime Minister Johnson’s Climate Finance Advisor for COP26, April 2021<sup>103</sup>

- **Disclose the share of green and significant harm bonds in their holdings**, according to internationally accepted taxonomies (e.g., Green Asset Ratio, see: Unveiling scenario).
- **Asset Owners instruct asset managers with mandates to give a clear preference to ‘green debt instruments’.**
- **Zero Carbon & Nature-Positive Debt Underwriting.** Leading global underwriting banks, members of the Net Zero Banking Alliance<sup>[5]</sup>, explicitly include their off-balance sheet activities (e.g., debt security underwriting,/arranging, M&A advisory, etc.) in their 2025 targets. Using the WWF’s More-Harm indicator’ and league table they incentivise their corporate and investment branches and instruct them to monitor progress on a quarterly basis. By 2025 at the latest, they withdraw from any underwriting transaction that refines fossil fuel activities.
- **Bondholder engagement.** Asset owners expand their engagement with investee companies beyond their role as shareholders to also exercise their influence over corporate strategies through their role as bondholders. **This includes promoting ambitious forward-looking Science-Based Targets for Climate and Nature.**



- **Promote best practice green bond standards.** Adopt the requirements of the best practice standard for green bonds, the EU-GBS, when designing their green fixed-income investment strategies and communicate their preference and expectations actively to green bond issuers as well as to underwriters and arrangers<sup>102</sup>.
- Eventually, **adopt investment and underwriting policies that include forward-looking commitments** to exclusively invest in bond instruments that earmark funds towards ‘green purpose’, and – ultimately - **divest their investment in debt instruments that do not meet these criteria by 2025 at the latest.**





WHAT IF ...

...

**ROBUST, RELIABLE,  
CONSISTENT, AND  
COMPARABLE  
ENVIRONMENTAL DATA  
BECAME READILY  
AVAILABLE, FOR FREE**

FOR A LARGE UNIVERSE OF  
INVESTABLE ASSETS, INCLUDING  
DEBT CAPITAL INSTRUMENTS AND  
THE ENTITIES THEY FINANCE?





# 'UNVEILING' RADICAL TRANSPARENCY DRIVES FAST-PACED, DISRUPTIVE CHANGE, ENABLED BY INNOVATION, TECHNOLOGY AND BIG-DATA



INVESTORS, IN PARTICULAR RETAIL INVESTORS AND MILLENNIALS, ARE EXPECTED TO INHERIT ABOUT

USD **30** TRILLION

IN WEALTH FROM THE BABY-BOOMERS IN THE NEXT TWO DECADES IN THE USA ALONE

This last scenario is based on the assumption that 'the internet of things', combined with full transparency on environmental risks and opportunities, enabled through mandatory taxonomy-related reporting, has the potential to trigger rapid and disruptive change in the financial services industry.

Investors, in particular retail investors and Millennials, are expected to inherit about \$30 trillion in wealth from the baby-boomers in the next two decades in the US alone. These investors are reported to believe their investments can influence change<sup>104</sup> and, are the underlying 'drivers' of this scenario. Indeed, according to research commissioned by WWF<sup>105</sup> consumers are rapidly changing their behaviour, with searches for sustainable goods and services increasing globally by 71% since 2016.

The 'Unveiling' scenario reflects this trend:

- **Retail investors want their money to matter.** Mandatory requirements to take into account

retail-investors' sustainability preference help make such a shift possible. Government-led labels for eco-friendly investments, based on effective and credible taxonomies, such as the EU-Ecolabel for financial products become available in the short term.

- **Disclosure frameworks for environmental-related information deliver robust, reliable, consistent, and comparable data for a large universe of investable assets.** Through a mix of strong investor-demand and targeted public policy interventions and market guidance, entity-level climate and nature-related disclosures<sup>106</sup> become mandatory both at entity-level (e.g., TCFD and TNFD<sup>107</sup>) as well as for individual debt instruments. Mandatory disclosure requirements include taxonomy-alignment disclosures for all market participants including issuers, underwriters, investors and companies (i.e. mandatory disclosure of taxonomy alignment of use-of—proceeds

for all debt capital market instruments; ‘Green Asset Ratios (GAR)’ for financial institutions and taxonomy-alignment of green revenue, CapEx and OpEx for companies, WWF Do-More-Harm-Than-Good indicator for underwriters period).

- **Corporate sustainability reporting standards are robust, comprehensive, and comparable.** As suggested under the proposed EU Corporate Sustainability Report Directive (CSRD), regulators build on existing reporting frameworks and standards with global reach (e.g., IFRS, GRI, etc.) and significant spill-over effects materialise for companies from all jurisdictions.
- **Big-data will play a major role using new ESG information made available from mandatory disclosure requirements and other sources (e.g. satellite data).** In this context, spatial finance approaches<sup>108</sup> increasingly allow the market to gather asset-specific and more real-time and forward looking environmental impact and dependency data. This enables investors to identify the climate and nature-related risks and



*“Better nature-related data that enables informed decision-making by financial institutions and companies is how we will solve the global ecological crisis. Financial disclosures are essential to a market-based solution to nature loss.”*

David Craig, Former CEO and Founder of Refinitiv and Strategic Advisor to London Stock Exchange Group (LSEG) and Co-Chair of the Taskforce on Nature-related Financial Disclosures (TNFD), June 2021

opportunities of their investments, independent from and/or in combination with disclosure. Public-sector-led registries of ESG data, such as the European Commission’s plan to set up a European Single Access Point (ESAP) and/or private sector-led ‘big-data’ repositories, provide the needed data infrastructure. More mandatory disclosure of

asset-geolocation and ownership structure facilitate the move to greater transparency.

- **Disruptive technologies and innovation.** New technologies enable retail investors to make the shift to more sustainable investment preferences, bypassing the traditional financial services industry.



# NEXT STEPS AND DEEPER DISCUSSIONS

**THIS REPORT IS INTENDED TO START  
DISCUSSIONS.**

**THE PLANET NEEDS THE KEY  
STAKEHOLDERS IN THE DEBT CAPITAL  
MARKETS TO STEP UP AND PULL THE  
RAPID CHANGE LEVERS IN FRONT OF THEM.**

**THERE IS NO TIME TO WASTE.**

**DEEPER DISCUSSIONS BETWEEN WWF  
AND SOME STAKEHOLDERS HAVE ALREADY  
BEGUN, BUT WE DON'T NEED TO BE PART  
OF EVERY DISCUSSION.**



A city skyline is visible in the background, with several tall buildings and a prominent dome. Thick, dark smoke or steam rises from the city, filling the sky. The foreground is a dark, uneven terrain covered in soil and scattered plastic waste, including crumpled bags and a bright green bottle. The overall scene suggests a stark contrast between urban development and environmental degradation.

**EVERYONE HAS A ROLE TO PLAY AND THESE DISCUSSIONS MUST HAPPEN EVERYWHERE, IN ALL DEBT CAPITAL MARKETS AROUND THE WORLD.**

**WE HAVE IDENTIFIED SOME KEY TOPICS TO EXPLORE AND AREAS TO MOVE FORWARD (SEE TEXT BOX).**

**WILL YOU PARTICIPATE TO SEE IF THE DEBT CAPITAL MARKETS REALLY CAN SAVE THE PLANET?**



## KEY TOPICS AND AREAS TO MOVE FORWARD THROUGH DEEPER DISCUSSIONS AMONG KEY STAKEHOLDERS:

1. Further elaborate the scenarios with analysis and quantification.
2. Further work on SLBs and SLLs to ensure target-based structures are relevant and include nature-related KPIs.
3. Supporting central banks to take on their new role as stewards of nature.
4. Encouraging investment bankers and their masters to rapidly shift. The Significant Harm Ratio tells them how far they still have to go to be doing more good than harm.
5. More transparency up and down the finance and investment ecosystem to enable informed choices, strong mandates and clear exclusions.



# ENDNOTES

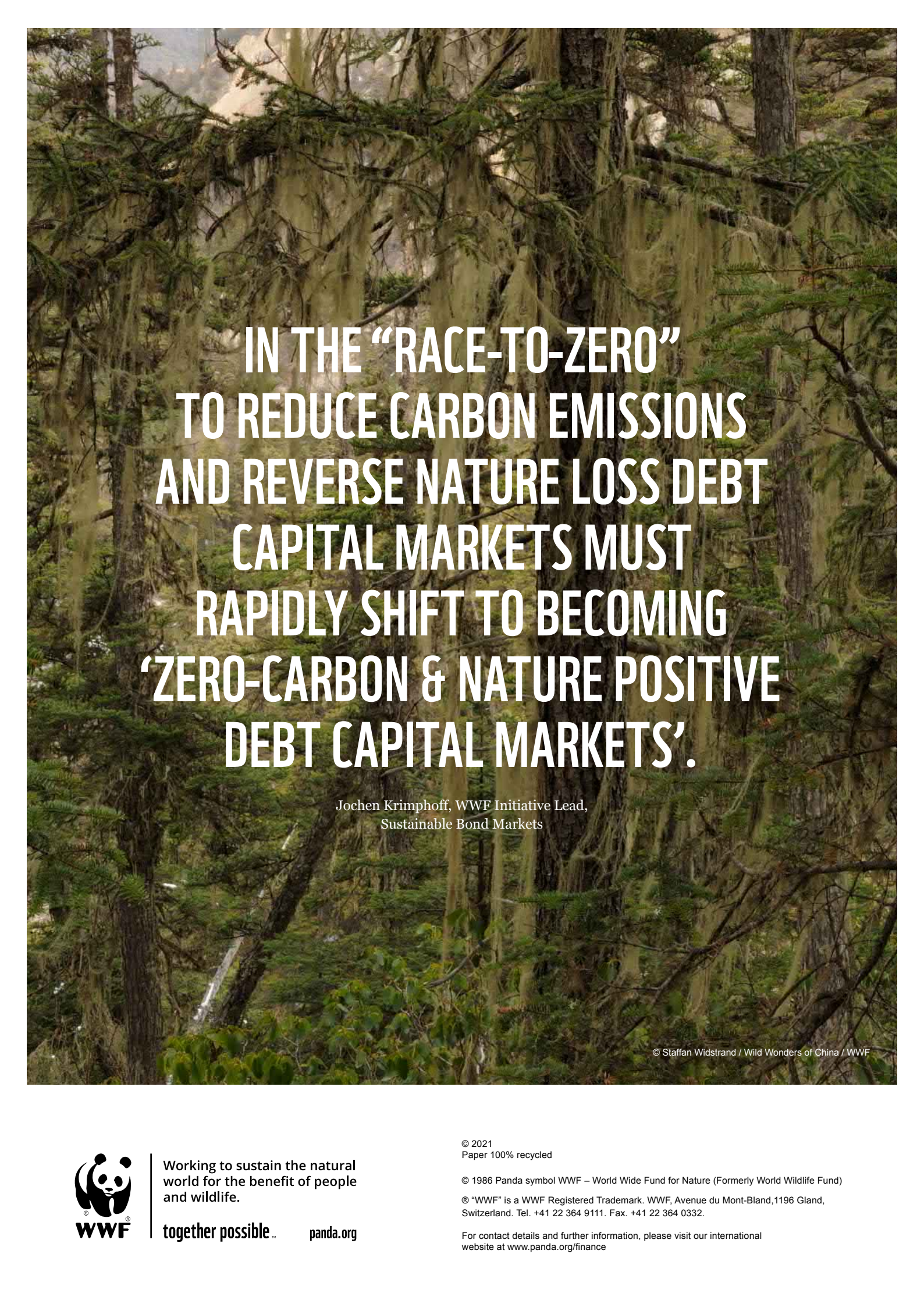
1. The UN Framework Convention on Climate Change COP26 in Glasgow in the UK in November 2021 and the UN Convention on Biological Diversity COP15 in Kunming in China in 2022.
2. WWF argued that debt capital instruments labelled as green, must 'keep their green promise' and 'called for collective action towards effective and credible standards for green bonds', WWF 2016.
3. Sustainable bond issuance to reach a record \$850 billion in 2021, Moody's Investor Services, 29 July 2021.
4. WWF's Living Planet Report 2020, September 2020.
5. Scrap the sale of gasoline cars and stop investing in fossil fuels to meet net-zero targets, IEA says, CNBC, May 2021.
6. i.e., a forceful policy response to climate change (and other environmental crises) within the near term. It assumes that it is inevitable that governments will be forced to act more decisively than they have so far, leaving investor portfolios exposed to significant risk, see: What is the Inevitable Policy Response?, UN-PR1.
7. Respectively Taskforce on Climate-related Financial Disclosures (TCFD) and Taskforce on Nature-related Financial Disclosures (TNFD).
8. According to the SIFMA Capital Markets Fact Book 2021, (p. 26) approximately USD 750 trillion are traded daily on US bond markets alone. The US bond market represents approximately 39% of global outstanding fixed income markets, which amounted to approximate USD 105 trillion in 2019.
9. World Economic Forum (2020) Nature Risk Rising: Why the Crisis Engulfing Nature Matters for Business and the Economy, January 2020.
10. WWF (2020), Living Planet Report 2020 - Bending the curve of biodiversity loss. Almond, R.E.A., Grooten M. and Petersen, T. (Eds). WWF, Gland, Switzerland, October 2020.
11. The USD 750 billion that is expected to be spent on clean energy technologies and efficiency worldwide in 2021 remains far below what is required in climate-driven scenarios. Clean energy investment would need to double in the 2020s to maintain temperatures well below a 2°C rise and more than triple in order to keep the door open for a 1.5°C stabilisation. Moving to a climate-aligned energy pathway hinges on a broad range of government actions, including attention to the financial architecture that can accelerate direct investments in market-ready solutions and promote innovation in early-stage technologies. As emphasised in the new IEA Roadmap to Net Zero by 2050, policies need to drive a historic surge in clean energy investment this decade, see: <https://www.iea.org/reports/world-energy-investment-2021/executive-summary>, May 2021.
12. Financing Nature: closing the Global Biodiversity Financing Gap, Paulson Institute, The Nature Conservancy, Cornell Atkinson Center for Sustainability, September 2020.
13. Southeast Asia's Turning Point, Deloitte, August 2021.
14. Data compiled by WWF: According to the International Institute for Finance's Global Debt Monitor (February 2021), total debt outstanding at the end of 2020 is USD 281 trillion. According to the SIFMA 2021 Capital Markets Fact Book (July 2021) the global bonds market outstanding is 2020 was USD 123.5 trillion. According to McKinsey's Global Private Markets Review 2021, private equity amounts to USD 858 billion at the end of 2020 (down 21% from 1.091 trillion in 2019). Global Debt Capital market data show amount of debt instruments. Global Equity markets show investors. Data includes both government and private sector.
15. Dasgupta, P. (2021), The Economics of Biodiversity: The Dasgupta Review. (London: HM Treasury).
16. The sovereign transition to sustainability Understanding the dependence of sovereign debt on nature, London School of Economics, Grantham Institute, Planet Tracker, February 2020.
17. IMF (2021), "Review of the debt sustainability framework for market access countries", IMF Policy Paper, Washington, DC: International Monetary Fund.
18. Climate and Nature Sovereign Index, WWF Spatial Finance, in cooperation with Ninty One, July 2020.
19. How to integrate nature into sovereign debt sustainability analysis. Finance for Biodiversity and Centre for Sustainable Finance at SOAS University of London, Work in Progress (forthcoming, October 2021).
20. Green, Social and Sustainability bonds are a new type of fixed income securities issued by governments, companies and financial institutions that finance projects with specific and intentional environmental, social or sustainability benefit in mind.
21. Sustainability-Linked Bonds ("SLBs") are any type of bond instrument for which the financial and/ or structural characteristics can vary depending on whether the issuer achieves predefined Sustainability/ ESG objectives. In that sense, issuers are thereby committing explicitly (including in the bond documentation) to future improvements in sustainability outcome(s) within a predefined timeline. SLBs are a forward-looking performance-based instrument. Definition sourced from ICMA Principles.
22. E.g., in Europe, see Sustainable bonds represent fifth of Euro bonds issued in 2021, says M&G, Environmental Finance, 21 July 2021.
23. Sustainable bond issuance to reach a record \$850 billion in 2021, Moody's Investor Services, 29 July 2021.
24. Total value of outstanding use-of-proceeds green, social and sustainability bonds, Environmental Finance Bonds Database, accessed July 1, 2021
25. The "peak oil" equivalent for finance flows towards fossil fuel industries. See Oil 2021 - Analysis and forecast to 2026, International Energy Agency (IEA), March 2021.
26. Sustainable Debt Monitor: A Record-Breaking Year, Institute of International Finance (IIF), July 2021.
27. IFC, Amundi to Create World's Largest Green-Bond Fund Dedicated to Emerging Markets, 2017.
28. Green Bond Technical Assistance Program - Global Public Goods (GB-TAP), an IFC-managed and administered program, to create a market for green bonds in developing countries launched in 2018.
29. According to Investopedia, a "step-up bond" is a bond that pays a lower initial interest rate but includes a feature that allows for rate increases at periodic intervals. The number and extent of the rate increase, as well as the timing, depends on the terms of the bond. A step-up bond provides investors with the benefits of fixed-income securities while keeping up with rising interest rates. However, the initial rate offered on a step-up bond could be lower than the rates offered in other fixed-income investments. Although there are many benefits to step-up bonds, investors should also be aware of the inherent risks associated with these debt securities.
30. e.g. VERBUND - Innovative EU taxonomy aligned "Green and Sustainability-linked Bond" was successfully placed, 25 March 2021.
31. Sustainability-linked bonds in 'rapid growth' as more firms tap ESG debt market, S&P Global Market Intelligence, June 2021.
32. The International Capital Markets Association (ICMA) acts as the secretariat of the Green Bond Principles (GBP), a coalition of investors, underwriters and issuers of bonds, which have developed voluntary process guidelines for issuing green bonds ('Green Bond Principle') as well as The Sustainability-Linked Bond Principles (SLBP), Green Bond Principles, June 2020.
33. Data collected by WWF from public sources for this report (see section 2 on investors), inspired by the article: Banks Always Backed Fossil Fuel Over Green Projects—Until This Year, Tim Quinson and Mathieu Benhamon, Bloomberg Green, May 2021.
34. Thirteen sectors with \$3.4 trillion of debt face heightened environmental credit risk, Moody's Investor Services, December 2020.
35. To integrate nature-related risks into sovereign ratings, Finance for Biodiversity is working with the Bennett Institute University of Cambridge and Centre for Sustainable Finance at SOAS University of London to produce a methodology for incorporating nature into sovereign credit ratings. It will test the extent to which such risks can already be identified as contributing factors to ratings actions and conduct a forward-looking assessment into how ratings might change based on projections from the latest scientific models. This research is due for release in November 2021.
36. <https://www.iisd.org/topics/just-transition>.
37. The Glasgow Financial Alliance for Net Zero (GFANZ), chaired by Mark Carney, brings together over 250 financial institutions across Race to Zero initiatives from 32 countries, representing over USD88 trillion in assets. These institutions include: 128 asset managers from 21 countries representing USD43 trillion in assets under management; 53 banks from 27 countries with USD37 trillion in assets; and 70 asset owners and insurers from 16 countries with over USD 8 trillion in assets under management. Each entity has made its own net-zero commitment with potential overlap across initiatives, institutions and assets see: Global insurance and reinsurance leaders establish alliance to accelerate transition to net-zero emissions economy, UN Environment, 11 July 2021. However, some of the assets included in the total amount might be double-counted where asset owners outsource the management of their assets to (outside) asset managers.
38. Members include 128 asset managers from 21

- countries representing USD 43 trillion in assets under management, 53 banks from 27 countries that are members of the UN-convened Net-Zero Banking Alliance (NZBA) and represent USD 43 trillion and the 70 asset owners and insurance companies from 16 countries that are members of the UN-convened Net-Zero Asset Owner Alliance (NZAoA) and control more than USD 8 trillion in asset.
39. Guidelines for climate target setting for banks, UN Environment Financial Initiative, April 2021.
40. on-balance sheet securities held for client facilitation and market-making purposes (as opposed to held for investment) are currently not included in the scope of the pledges, see: Guidelines for climate target setting for banks, UN Environment Financial Initiative, April 2021.
41. Banks Always Backed Fossil Fuel Over Green Projects—Until This Year, Tim Quinson and Mathieu Benhamon, Bloomberg Green, May 2021.
42. Climate Policy Factbook - Three priority areas for climate action, BloombergNEF, July 2021.
43. IFC Launches an ESG Survey to Enhance the Annual Scorecard Ranking of the Underwriters, June 2020.
44. Call for feedback on the draft reports by the Platform on Sustainable Finance on a social taxonomy and on an extended taxonomy to support economic transition, Platform on Sustainable Finance, 12 July 2021.
45. As of September 9th, 2021, 55 banks from 27 countries have made commitments Net Zero Banking Alliance. These banks include, among other the following 22 leading underwriting banks: Bank of America, Barclays, BBVA, BNP Paribas, Citi, Credit Suisse, Commerzbank, Credit Agricole, Deutsche Bank, HSBC, ING Group, Morgan Stanley, MFUG, Natixis' parent company BCPE Group, Nat West Group, Santander, SEB, Société Générale, Standard Chartered, Svenska Handelsbanken, Swedbank and UBS.
46. Data compiled for this report only covers bonds and does not include loans. This is why the total amount of fossil fuel bonds underwritten by the 38 banks we selected for this report is significantly lower than the USD 3.4 trillion in the Bloomberg Article or the USD 3.8 trillion in the report Banking on Climate Chaos (March 2021). Data was compiled using Bloomberg's Global Bond League Tables and applying on the 'book runner apportioned amount' for each underwriter. Data on fossil fuel underwriting includes underwriting for entities involved in coal operations, exploration & production, integrated oil, oil & gas services & equipment or pipelines. WWF looks forward to further dialogue with market participants to confirm these figures and discuss how they can reach zero significant harm in the deals they underwrite and arrange.
47. The Network for Greening the Financial System (NGFS) is a network of 83 central banks and financial supervisors that aims to accelerate the scaling up of green finance and develop recommendations for central banks' role for climate change. The NGFS was created in 2017 and its secretariat is hosted by the Banque de France.
48. G7 backs new Taskforce on Nature-related Financial Disclosures, 6 June 2021,
49. G20 Sustainable Finance Working Group: The Italian G20 Presidency re-established the Sustainable Finance Study Group (SFSG) within the G20 Finance track and agreed to elevate it to a working group, April 2021.
50. The International Platform on Sustainable Finance (IPSF) is a forum for dialogue between policymakers, with the overall aim of increasing the amount of private capital being invested in environmentally sustainable investments.
51. U.S. International Climate Finance Plan, April 2021.
52. This is where central banks purchase longer-term securities from the open market in order to increase the money supply and encourage lending and investment.
53. Another EUR 1.6 trillion in QE to reach the light at the end of the tunnel, Allianz, December 2020.
54. ECB holds about 20% of all green bonds, Environmental Finance, June 2020.
55. Bank of Japan Opens Push on Climate Change in Contrast to Fed, Wall Street Journal, 16 July 2021.
56. Hungary's central bank tests green capital discount with eco-friendly mortgages, S&P Global Market Intelligence, January 2020.
57. Analyses et synthèses n°122 : Les principaux résultats de l'exercice pilote climatique 2020, French Autorité de Contrôle Prudentiel et de Résolution, May 2021.
58. Belgium, Chile, Egypt, Fiji, France, Germany, Ghana, Hong Kong, Hungary, Indonesia, Ireland, Italy, Lithuania, Luxembourg, Mexico, Netherlands, Nigeria, Poland, Seychelles, South Korea, Spain Sweden, Thailand, United Kingdom (in alphabetical order), as of 12 September 2021.
59. See WWF report "Green bonds must keep the green promise!", calling for collective action to develop effective and credible standards for the green bonds market.
60. Commission next steps on EU Green Bond Standard, 2020.
61. As of September 2021, France, Germany, Italy, Spain, and the UK have already issued green bonds, see: Climate Bonds Initiative's Sovereign GSS Bond Survey, 2021.
62. Green bonds must keep the green promise!, WWF, June 2016.
63. Green finance is defined in a number of different financial frameworks used in Europe and globally. Some frameworks such as the Green Bond Principles supported by ICMA lay out high level definitions, some list specific assets such as in the China Green Finance Catalogue or the EU Taxonomy regulation, whilst others such as OECD's Rio Markers tracking system for climate, biodiversity and anti-desertification finance are published with extremely detailed guidance documents. The terms 'Transition', 'Low Impact', and 'Unsustainable' are widely used when talking about the economy, specific sectors, financial portfolios or companies. In this report we use these terms as described by the European Commission's Platform on Sustainable Finance, which focusses on the transition of a set or portfolio of economic activities or assets:
- **'Sustainable'**. The EU Taxonomy Regulation (852/2020) defines sustainable economic activities as those which: a) Contribute substantially to one or more environmental objectives, which are further defined in the regulation (Articles 10 to 16); b) Does not significantly harm any of the environmental objectives, with further definitions of harm provided for each environmental objective defined in Article 17; c) Is carried out in compliance with the minimum safeguards; and d) Complies with technical screening criteria.
  - **'Transition'** is used on multiple occasions in the EU Taxonomy Regulation (852/2020) to describe changes in economies needed to meet the EU's environmental goals. For example, Recital 4: "Sustainability and the transition to a safe, climate-neutral, climate-resilient, more resource efficient and circular economy are crucial to ensuring the long-term competitiveness of the Union economy." This use of the term "transition" is similar to the common use by governments, investors and companies to describe environmental improvements at a portfolio level. See section 4.1 in Platform on sustainable finance, Transition finance, March 2021.
  - **'Unsustainable'** or **'significant harm'**. The current design of the Taxonomy is often, however, misinterpreted as binary. As a result, activities unable to report as 'green' may be mistakenly considered by some users as environmentally 'unsustainable'. In reality the Taxonomy is not binary, but rather only allows activities meeting high standards of environmental performance against objective criteria to be classified as green. In this report we understand 'unsustainable' or 'significant harm' interchangeably to refer to activities that fail to meet the Do No Significant Harm (DNSH) criteria in the EU taxonomy investment framework (see: Report on Taxonomy, extension options linked to environmental objectives, Platform on Sustainable Finance, July 2021).
  - **'Low Impact'** or **'non-significant impact (NSI)'**. This terms refers to economic activities will have an extremely low environmental impact. (see: Report on Taxonomy, extension options linked to environmental objectives, Platform on Sustainable Finance, July 2021).
64. The International Platform on Sustainable Finance (IPSF), a forum for dialogue between policymakers, with the overall aim of increasing the amount of private capital being invested in environmentally sustainable investments, see IPSF's first annual report, October 2020.
65. Shadow carbon pricing is a tool in internal financial and economic appraisal to encourage low-carbon investment or deprioritise high-emission projects. An internal or 'shadow price' on carbon creates a theoretical or assumed cost per ton of carbon emissions, see: the Gold Standard website.
66. A detailed review of Natural Capital Accounting methodologies and tools is available from: Natural Capital Accounting and Organisation's Strategies: An overview of available tools, WWF-France, 2019.
67. The GHG Protocol, a globally recognised standard for accounting of greenhouse gas emissions,



- classifies a company's GHG emissions into three 'scopes'. Scope 1 emissions are direct emissions from owned or controlled sources. Scope 2 emissions are indirect emissions from the generation of purchased energy. Scope 3 emissions are all indirect emissions (not included in scope 2) that occur in the value chain of the reporting company, including both upstream and downstream emissions. GHG Protocol website, frequently asked questions (FAQ), accessed September 2021.
68. see ICMA GBP Infographic, June 2021.
69. namely Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand and Vietnam.
70. [www.climatebonds.net](http://www.climatebonds.net).
71. ISO/FDIS 14030-1 - Environmental performance evaluation — Green debt instruments — Part 1, 2, 3 and 4, International Standards Organisation (forthcoming).
72. European Commission proposal for a European Green bond Standard, June 2021.
73. European Commission gearing up for issuing €250 billion of NextGenerationEU green bonds, September 2021.
74. See Sustainability-Linked Loan Principles, issued in 2019 and, more recently the Sustainability-Linked Bond Principles issued by ICMA in June 2020, see [www.icmagroup.org](http://www.icmagroup.org).
75. ECB to accept sustainability-linked bonds as collateral, 22 September 2020.
76. Communication from the commission to the european parliament, the council, the european economic and social committee and the committee of the regions Strategy for Financing the Transition to a Sustainable Economy, COM/2021/390 final, 6 July 2021.
77. see, for example: Rate the Raters 2020 - Investor Survey and Interview Results.
78. See: Recommendations regarding Environmental, Social and Governance (ESG) Ratings and Data Providers, International Organization of Securities Commissions (IOSCO) consultation report, July 2021.
79. <https://sciencebasedtargetsnetwork.org/about-us/>
80. See Endnote 67 for definitions of scope 1-3
81. Science-Based Targets for Nature, Initial Guidance for Business September 2020.
82. See recommendations made by the EC-mandated Technical Expert Group in June 2018 and the Proposal for a Regulation of the European Parliament and of the Council on European green bonds COM(2021) 391 final, 6 July 2021.
83. See: Recommendations regarding Environmental, Social and Governance (ESG) Ratings and Data Providers, International Organization of Securities Commissions (IOSCO) consultation report, July 2021.
84. For example, the so-called 'green bond' issued by China Construction Bank in May 2021, denominated in euros and listed on the Luxembourg Green Stock Exchange, which quite problematically does not contain any information on alignment with the EU taxonomy, neither on use-of-proceeds, nor at entity level, see: 15 LGX welcomes EUR 800m green bond by China Construction Bank, May 2021.
85. under Article 8 of the Taxonomy Regulation (2020/852).
86. This section was inspired by the report Technology and Innovation in Financial Services: Scenarios to 2020, published by the World Economic Forum in 2007. The concept of scenario-planning was inspired by this report.
87. i.e., a forceful policy response to climate change (and other environmental crises) within the near term. It assumes that it is inevitable that governments will be forced to act more decisively than they have so far, leaving investor portfolios exposed to significant risk, see: What is the Inevitable Policy Response?, UN-PRI, 2021.
88. For example, on the role of gas and nuclear energy in the EU taxonomy see Out With Science In With Lobbyists: Gas, Nuclear and the EU Taxonomy, Reclaim Finance, July 2021.
89. As of 15 September 2021, only 7 of the G20 governments have already issued bonds in green format: France, Germany, Indonesia, Italy, Mexico, South Korea, United Kingdom and the EU.
90. Statement by EU President von der Leyen at the joint press conference with President Michel ahead of the G20 Summit in Venice, Italy, in November 2020.
91. See: about the FSB; The mandate of the FSB, adapted by the authors to take into account the mandate of 'ecosystems stability'.
92. Nature's next stewards - Why central bankers need to take action on biodiversity risk, WWF, July 2021.
93. Core Principles for effective banking supervision. Basel Committee on Banking Supervision (BCBS) (2019), Bank for International Settlements.
94. The role of central banks in the greening of the economy, Speech by François Villeroy de Galhau, Governor of the Banque de France, Paris – Banque de France, 11 February 2021.
95. Greening the financial system: Tilting the playing field – the role of central banks, Climate Bonds Initiative, World Wide Fund for Nature and SOAS Centre for Sustainable Finance, October 2019.
96. Nature's next stewards - Why central bankers need to take action on biodiversity risk, WWF, July 2021.
97. Respectively Taskforce on Climate-related Financial Disclosures (TCFD) and Taskforce on Nature-related Financial Disclosures (TNFD)
98. Alliances of the world's largest institutional investors, including the trio of the UN-convened Net-Zero Asset Owner Alliance, the Net-Zero Insurance Alliance and the Net-Zero Banking Alliance.
99. The Glasgow Financial Alliance for Net Zero (GFANZ), chaired by Mark Carney, brings together over 250 financial institutions across Race to Zero initiatives from 32 countries, representing over USD88 trillion in assets, These institutions include: 128 asset managers from 21 countries representing USD43 trillion in assets under management; 53 banks from 27 countries with USD37 trillion in assets; and 70 asset owners and insurers from 16 countries with over USD8 trillion in assets under management. Each entity has made its own net-zero commitment with potential overlap across initiatives, institutions and assets see: Global insurance and reinsurance leaders establish alliance to accelerate transition to net-zero emissions economy, UN Environment, 11 July 2021.
100. WWF criteria for credible Net Zero Commitments by Financial Institutions, see Net zero - an introductory guide for Financial Institutions, WWF-France, July 2021.
101. As recommended by the Inaugural 2025 Target Setting Protocol, published by the U.N.-convened for monitoring, reporting and verification of the Net-Zero Asset Owner Alliance (see page 61) in 2021.
102. See: Recommendation #04, Report on the EU-Green Bond Standard, Technical Expert Group on Sustainable Finance (TEG), June 2019. Page 44.
103. Mark Carney, UN Race to Zero campaign, COP26 Presidency launch Net Zero Financial Alliance, April 2021.
104. What The Rise Of The Millennial Investor Means For A Sustainable World, World Economic Forum (WEF), February 2021.
105. An eco-wakening: Measuring awareness, engagement, and action for nature, The Economist Intelligence Unit, May 2021.
106. Taskforce on climate-related disclosures (TCFD) and forthcoming Taskforce on nature related disclosures (TNFD).
107. G7 backs new Taskforce on Nature-related Financial Disclosures, 6 June 2021.
108. Spatial Finance: Challenges and Opportunities, World Bank; WWF. 2020. Spatial Finance: Challenges and Opportunities in a Changing World. Equitable Growth, Finance and Institutions Insight, World Bank, Washington, DC. © World Bank. <https://openknowledge.worldbank.org/handle/10986/34894> License: CC BY 3.0 IGO.





**IN THE “RACE-TO-ZERO”  
TO REDUCE CARBON EMISSIONS  
AND REVERSE NATURE LOSS DEBT  
CAPITAL MARKETS MUST  
RAPIDLY SHIFT TO BECOMING  
‘ZERO-CARBON & NATURE POSITIVE  
DEBT CAPITAL MARKETS’.**

Jochen Krimphoff, WWF Initiative Lead,  
Sustainable Bond Markets

© Staffan Widstrand / Wild Wonders of China / WWF



Working to sustain the natural  
world for the benefit of people  
and wildlife.

together possible™ panda.org

© 2021  
Paper 100% recycled

© 1986 Panda symbol WWF – World Wide Fund for Nature (Formerly World Wildlife Fund)

© “WWF” is a WWF Registered Trademark. WWF, Avenue du Mont-Bland, 1196 Gland,  
Switzerland. Tel. +41 22 364 9111. Fax. +41 22 364 0332.

For contact details and further information, please visit our international  
website at [www.panda.org/finance](http://www.panda.org/finance)