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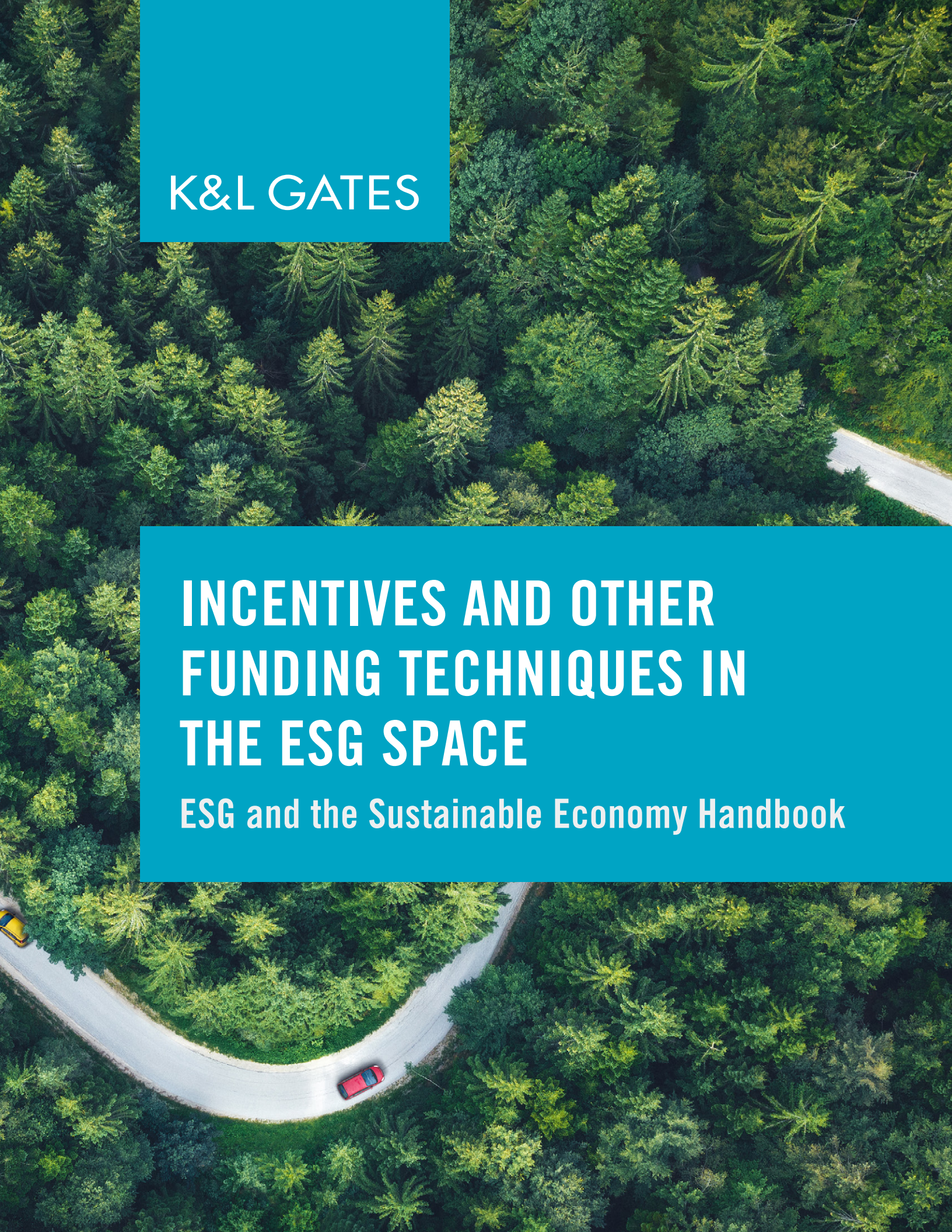


INCENTIVES AND OTHER FUNDING TECHNIQUES IN THE ESG SPACE

ESG and the Sustainable Economy Handbook

CONTENTS

INTRODUCTION

ESG principles can be incorporated into an investment strategy or business operations in many, many ways. ESG factors can also be leveraged to access unique financing tools. Some are industry specific, such as the array of certifications and tax credits currently available in the renewable energy and fuels industries. Others are not, such as sustainability-linked bonds and local government incentives.

These tools can improve the financial performance of a business, thus making it more appealing to investors considering ESG factors strictly in terms of risk mitigation at the company level. For example, whether an investment in a sustainable agriculture operation makes good financial sense could be significantly impacted by whether mitigation credits are available in respect of wetlands that are not farmed, or whether a biomass digester that qualifies for U.S. federal income tax credits is used to process farm waste into renewable natural gas (and perhaps also capture carbon oxides that would otherwise be released into the atmosphere). They can also improve the financial performance of an entire industry, which may be important to an investor utilizing ESG factors to balance risk across an investment portfolio. For instance, federal tax credits for renewable energy have helped to make renewable energy technologies viable in the United States.

ESG also may impact insurance markets. In recent years, we have seen increased underwriter interest in evaluating ESG factors to gauge whether coverage should be extended and at what cost. This is an important trend that warrants attention at many levels of any operating business, including the boardroom.

GOVERNMENT INCENTIVES FOR ESG ACTIVITIES

As aspects of ESG become more important from a policy perspective, governments and industry organizations with standards-setting roles have a choice between wielding a carrot and a stick. The stick is, of course, the various types of regulations and limitations discussed in other sections of this handbook. However, in some countries, government organizations have also created a number of carrots. The following is a high-level discussion of several carrots used in the United States and other select jurisdictions.

TAX INCENTIVES

Tax incentives are used in a variety of jurisdictions, but in most they tend to be limited to specific types of activity, rather than focused on particular industries. Thus, while some generally applicable tax incentives may be useful in some industries that are attractive for ESG investment, they are generally not intended to specifically incentivize the activities that are most valued in ESG investment circles. For example, patent or intellectual property boxes popular in Europe and the United Kingdom may be helpful for the development of newer technologies, such as carbon capture and removal or renewable hydrogen production. As an example, incentives oriented toward ESG's social and governance prongs, like those that encourage hiring individuals in socioeconomically disadvantaged groups, may also be available in some jurisdictions.

On the other hand, some jurisdictions liberally use tax incentives to incent certain types of activities and behaviors, including those consistent with ESG investment principles. The federal and state governments in the United States are particularly prolific in this respect.

There is currently a U.S. federal income tax credit in respect of certain **carbon oxides** (primarily carbon dioxide) that are captured from an industrial process or removed from the atmosphere using direct air capture and then either sequestered in a secure geologic formation, used as a tertiary injectant in a qualified enhanced oil or natural gas recovery project, or utilized in certain photosynthetic, chemical, or biologic processes. The credit is not available with respect to the capture of naturally released carbon oxides or natural processes that capture carbon oxides, e.g., growing trees. The tax credit rate varies based on the technology used, date it was placed in service, and how the captured or removed carbon oxides are disposed of. Although infrequently claimed during most of its history, a change in legislation and the recent release of regulations may result in more taxpayers claiming this credit.

U.S. federal income tax incentives for **renewable energy and fuels** include a variety of programs:

- The Investment Tax Credit (ITC) offsets tax otherwise payable by a U.S. taxpayer by an amount equal to up to 30% of the basis of "energy property" that is placed in service (i.e., becomes available for use) in the United States in a particular year. The taxpayer must directly or indirectly (through one or more partnerships) either own or lease the facility

to claim the credit. The ITC tends be used for solar facilities, but is currently available for a variety of other renewable energy facilities, including open- and closed-biomass, small hydroelectric, waste-heat-to-energy, and hydrokinetic. The ITC is also available for amounts spent on energy storage that is more than 75% charged by energy produced by renewable energy facilities that qualify for the ITC. There is also a version of the ITC available to homeowners who install certain energy property, e.g., rooftop solar panels.

- The Production Tax Credit (PTC) offsets tax otherwise payable by a U.S. taxpayer by an amount equal to an annual adjusted amount per kilowatt hour of energy produced by certain renewable generation facilities and sold to a person that is not related to the owner of the facility. The PTC is available for 10 years after the date on which a qualified facility is placed in service. Taxpayers typically seek to qualify large wind facilities for the PTC, but it is currently available for several other types of technologies.
- There is a credit for hydrogen fuel cell vehicles. The amount of the credit varies depending on the technology used in the vehicle. There is also a separate credit for plug-in electric vehicles, but the availability of the credit varies based on manufacturer.

- There is a 30% income tax credit (subject to caps) for the cost of infrastructure used to support alternative fuel vehicles, including hydrogen and electric vehicles.
- There is an excise tax credit for certain alternative fuels, including hydrogen.
- U.S. state tax incentives for renewable energy tend to fall into three categories: income tax credits or deductions, property tax abatement, and excise tax abatement.
  - In prior years, income tax credits were very popular in a few states. Examples include Oklahoma's income tax credit for wind and North Carolina's income tax credit for solar. However, political tides for income tax incentives largely shifted in the last several years and most income tax credits for renewable energy have now expired. A notable exception is the Green Jobs income tax credit in Virginia.
  - There are still significant state property and excise tax incentives, however. For example, California has a very successful property tax incentive for energy storage facilities, and Texas has a sales and use tax exemption for certain property incorporated into a solar facility. In some local jurisdictions, property tax reductions are available through structural means– such as transferring title, but not beneficial ownership, of a solar facility to a local government to achieve tax exemption. In addition, local tax abatements or reductions are sometimes available through negotiation with government authorities, often in the context of a broader discussion on government incentives.

Several U.S. federal income tax incentives are available for certain **pollution control**, **conservation**, and **environmental remediation** efforts. Some states also have incentives for these types of activities.

- Taxpayers may elect to amortize certain certified pollution control facilities over five or seven years.
- Farmers are allowed to elect to deduct soil and water conservation expenditures and land erosion prevention expenditures that do not give rise to a deduction for depreciation.
- Endangered species recovery expenditures paid or incurred by a farmer are treated in a manner similar to soil and water conservation expenditures and are also deductible if the election is made.
- Up to $10,000 of reforestation expenditures per property may be currently deducted and the excess amortized over 84 months. Reforestation expenditures are defined to include forestation expenditures.

Several U.S. federal income tax incentives are also available in respect to activities in **designated low-income areas**:

- The low-income housing tax credit may be claimed by the owner of a newly constructed or substantially rehabilitated qualified low-income housing.
- The new markets tax credit may be claimed by investors in businesses that qualify as qualified community development entities, i.e., that have a primary mission of serving or providing investment capital for low-income communities or low-income persons and that maintain accountability to residents of those communities through board members.
- The empowerment zone income tax credit may be claimed in respect of wages paid to persons working for a business located in a federally designated empowerment zone, which are generally low-income areas.

- The qualified opportunity zone program incentivizes investment into businesses and facilities located in federally designated opportunity zones (which are generally low-income areas or areas adjacent to them) by permitting investors to defer taxation on capital gains invested into an opportunity zone fund. In some cases, investors may reduce that gain when it becomes subject to tax, and eliminate taxation on any gain recognized on an exit after investors have held their interest in the opportunity zone fund for at least 10 years.

Tax credits are also available for **low-income housing** and **investment in businesses and facilities in low-income or economically disadvantaged areas**. These may be complemented by many of the state and local incentives discussed below.

Another group of U.S. federal income tax incentives are intended to primarily assist **certain groups of people**:

- An employer-provided child care credit and a credit for wages paid to employees using family and medical leave largely benefit women.
- The work opportunity credit provides employers with an incentive to hire persons from targeted groups having a particularly high unemployment rate or other special employment needs. The credit is a percentage of the qualified wages paid during an employee's first year of employment, based on the number of hours worked. Targeted groups of employees include qualified recipients under the Temporary Assistance for Needy Families program, supplemental nutrition assistance program benefits recipients, Supplemental Security Income recipients, veterans, ex-felons, designated community residents, vocational rehabilitation referrals, summer youth employees, unemployed veterans, and disconnected youth.
- An income tax credit is also available to employers for certain wages and health insurance costs paid or incurred by the employer for certain employees who are either an enrolled member of a federally recognized Indian community (or spouse of an enrolled member) who performs substantially all of the relevant services within an Indian reservation and has a principal residence while performing such services on or near the reservation where the services are performed.
- A taxpayer may elect to currently deduct up to $15,000 of the cost of making a facility or public transportation vehicle more accessible to handicapped or elderly individuals (age 65 or older). The facility or vehicle must be owned or leased by the taxpayer for use in the taxpayer's trade or business.

OTHER GOVERNMENT INCENTIVES

Many companies are consciously pursuing ways to reduce their emissions and address their social impact, and government incentives can help make these goals more financially viable. Cost savings to companies also often mean cost savings to customers who purchase products, resulting in lower overall social costs. As the goals of business and government become more aligned, economic incentives have increased in popularity in many states as tools to address rapidly changing environmental challenges ranging from water pollution to global warming. These eco-friendly incentives are supported by local communities that encourage companies to adhere to environmental and health protection initiatives. These projects may also qualify for U.S. Department of Agriculture and/or U.S. Department of Energy loans and loan guarantee programs that can support the financial stack and help the project become feasible.

Some of the ESG-related economic incentives and programs available to projects and businesses include:

- Cash grants
- Infrastructure improvements
- Low-cost financing
- Job training
- Expedited permitting
- Reduced cost land and buildings
- Green energy incentives
- Green bonds (tax exempt)
- Solid waste bonds
- Energy storage incentive programs

Employment in industries relating to the field of renewable, alternative energies includes the manufacture and operation of products used to generate electricity and other forms of energy from alternative sources that include hydrogen and fuel cell technology, landfill gas, geothermal heating systems, solar heating systems, hydropower systems, wind systems, and biomass and biofuel systems.

Some incentives are focused on job creation, particularly in targeted industries such as alternative energy generation, manufacturing of equipment used in alternative energy generation and energy storage, landfill gas, geothermal heating systems, solar heating systems, hydropower systems, wind systems, and biomass and biofuel systems. These incentives are typically focused on the creation of jobs with good benefits and wages, the attraction of a more diverse workforce, and often apprenticeship programs that allow entry-level, unskilled workers to obtain free training, a job, and a defined path toward career advancement.

Negotiating for government incentives can be a long-term effort and should be approached holistically by highlighting the community benefits of a project and the impact of a project on public economic development, as well as the fulfillment of business objectives. In addition, relationships with local government officials and a comprehensive knowledge of the potential incentives and how they interconnect is crucial. Selecting a strategic location in a community that supports a company's vision for growth and expansion–and is willing to incentivize that effort–is critical to the success of a project.

FINANCIAL INSTRUMENTS COMMON IN ESG INVESTMENTS

While financial instruments are not unique to ESG investment strategies, many of the industries that contribute to ESG strategies rely heavily on financial instruments such as derivatives, green or sustainability-linked bonds, and contracts for environmental attributes, which are somewhat similar to derivatives. In the ESG context, these instruments are an important method of investing in projects or markets with certain attributes while also avoiding the risks associated with physical asset ownership. Many of them are also important to project developers for purposes of demonstrating the future expected cash flow necessary to obtain financing for construction. These types of financial instruments appear most frequently in the renewable energy and fuels, carbon capture and removal, and sustainable agriculture and forestry context.

ESG BONDS AND LOANS

There are several categories of **debt instruments** that are intended to facilitate the development of projects or activities featuring ESG components. These bond instruments typically comply with voluntary process guidelines created by the International Capital Market Association (ICMA), the Loan Markets Association (LMA) or other organizations. While these instruments are fundamentally debt, they are issued by businesses in respect of projects that must meet certain certification requirements and auditing of claims made to support classification under the ICMA standards. Thus, the monikers attached to these instruments may be viewed as a representation that additional steps, including external verification, have been taken to ensure that claims about ESG factors--typically environmental or social--have substance. In many cases, these types of attribute-based instruments feature below-market returns.

ESG debt instruments may be in the form of bonds or loans. Economically both are similar, but they differ in how funding is raised and how the evidences of indebtedness can be traded. Bond investors tend to be institutional investors and funds rather than banks, while lenders on a loan tend to be banks. The issuance and funding process for an ESG debt product is essentially the same as that for a corresponding conventional bond or loan, as the case may be. The differences relate more to covenants, reporting, and use of proceeds.

There are several different types of bonds available under the sustainable finance banner, with the character depending on the use of proceeds.

- **Green Bonds and Loans** are issued to finance or refinance certain activities or projects that fit into one of five broad eligibility categories described in the Green Bond Principles (GBP) published by ICMA. These categories are: climate change mitigation, climate change adaptation, natural resource conservation, biodiversity conservation, and pollution prevention and control. Projects that may fall within these categories include renewable energy, clean transportation, water management, eco-efficient packaging, sustainable agriculture, afforestation and reforestation, and terrestrial and aquatic biodiversity conservation and habitat creation. The GBP includes high-level guidelines concerning processes for project evaluation and selection, management of proceeds, and recordkeeping and reporting about how the proceeds are used. Green bonds are subject to the ICMA GBP and green loans are subject to the Green Loan Principles developed by the LMA. Bonds and loans that are committed to marine or water projects, such as promoting sustainable fish stocks, are sometimes described as blue rather than green.
- **Social bonds** are similar to green bonds, but are issued to finance or refinance certain activities or projects that are classified as a social project in the Social Bond Principles (SBP) published by ICMA. As stated in the SBP, "Social Projects directly aim to address or mitigate a specific social issue and/or seek to achieve positive social outcomes especially but not exclusively for a target population(s)." This definition and the SBP generally

recognize that defining a social issue depends significantly on defining the target population and evaluating that population's social milieu. The SBP states that Social Projects may include a variety of projects, including affordable basic infrastructure such as clean drinking water, affordable housing, food security and sustainable food systems, and microfinance. Like the GBP, the SBP also include high-level guidelines for project evaluation and selection, management of proceeds, and recordkeeping and reporting about how the proceeds are used.

- **Sustainability bonds** intentionally comply with both the GBP and the SBP. For example, publicly available materials in connection with a sustainability bond issued by Adidas AG in 2020 indicate that it will use the proceeds of the financing to, among other things, procure fabric made from recycled ocean plastics for use in its products as well as expenditures to help improve opportunities for female workers at its suppliers.
- **Sustainability-linked bonds** (SLBs) are not used to finance particular types of projects or activities. Rather, the Sustainability-Linked Bond Principles (SLBP), as created by ICMA, state that an SLB may be any type of bond instrument the features of which vary based on whether the issuer achieves predefined ESG or sustainability objectives. For example, the coupon or term could vary based on compliance with stated goals. Thus, SLBs are essentially a way for any type of issuer to substantively demonstrate that it is financially committed to achieving ESG goals.
  - The SLBP incorporates five components, which are rather different than those in the GBP and SBP. These components address selection of key performance indicators (KPIs), calibration of sustainability performance targets (SPTs), bond characteristics, reporting of compliance, and verification of compliance. Additional guidance in the SLBP describes how issuers should approach these tasks. For example, KPIs should be "relevant, core, and material to the issuer's overall business" as well as "externally verifiable" and "able to be benchmarked." The SPTs "should be ambitious" and "represent a material improvement in the respective KPIs." Moreover, issuers of SLBs are urged to publicly explain all of these components, particularly the selection of KPIs and SPTs.
  - The KPIs for sustainable bonds can be adopted to the specific requirements of the borrower and the sector. To date, common categories of KPIs include KPIs designed to reduce behavior that negatively impacts the environment, and KPIs that are designed to encourage behavior that is beneficial for the environment, linking performance to governance standards. This is a fast-developing area, and it is likely that KPIs will be linked to new areas that have become newsworthy such as supply chain integrity and seafarers human rights.
- **Collateralized treasury products based on the bonds described above,** such as standardized treasury and cash-management products such as securities loans, repurchase agreements (repo), and credit default products may evolve to accommodate those types of obligations as collateral or reference obligations in an ESG context. For example, while ESG instruments still occupy a relatively small niche in the repo market, in November 2020 Eurex launched the Green Bond GC Basket, a standardized general collateral basket for repurchase transactions that is comprised exclusively of green bonds. There have been signs of tentative take-up of the new product as measured by quoting activity and regular bid and ask prices.

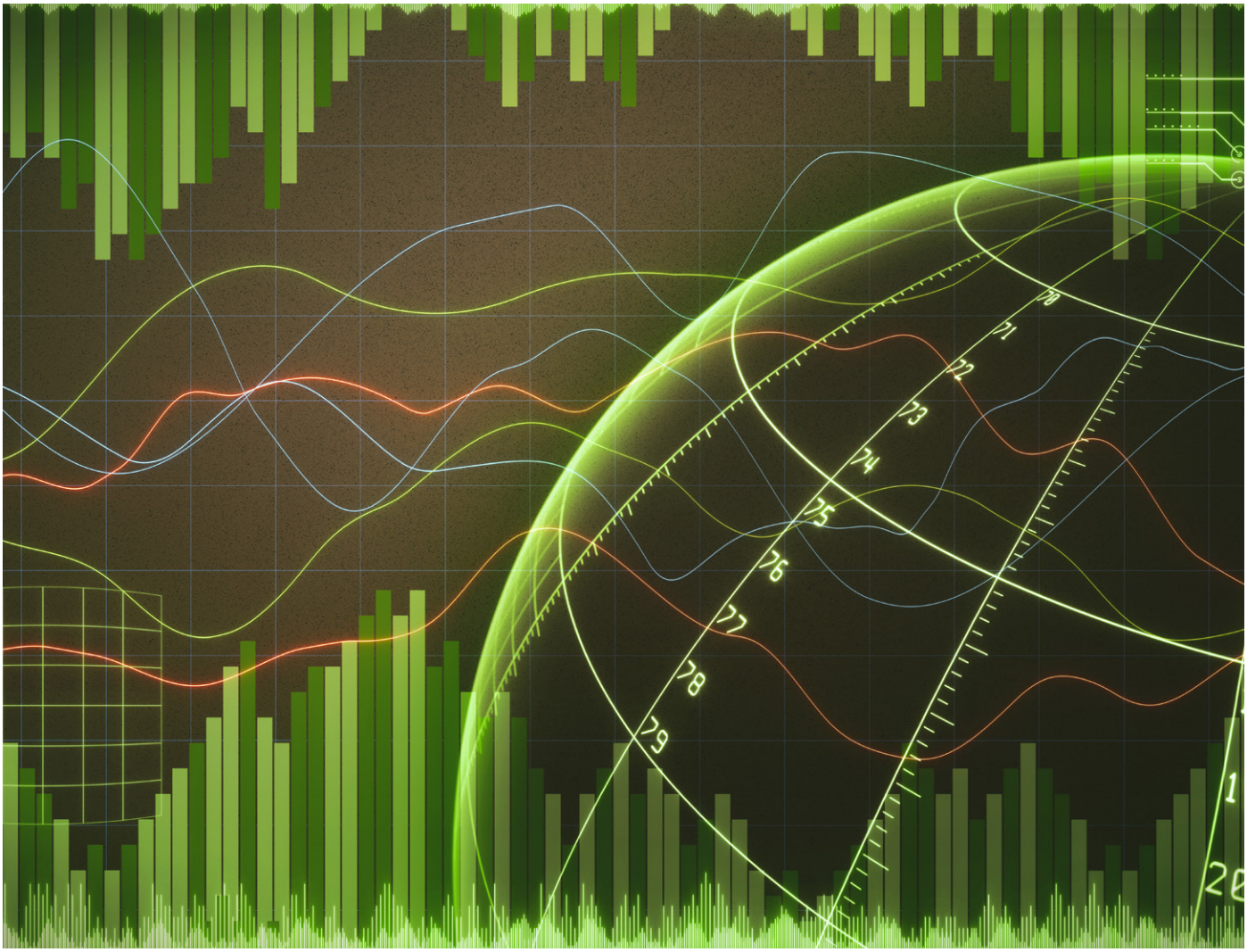
When the ESG component of a sustainable loan or bond is distinct from the financial obligation under that instrument, the ESG component (even if unhedged) may have to be bifurcated from the financial obligation and separately accounted for as a derivative if it meets all three requirements on Topic 815 under US Generally Accepted Accounting Principles. These criteria are met if (1) the economic characteristics and risks of the embedded derivative are not clearly and closely related to the economic characteristics and risk of the host contract; (2) the hybrid instrument is not remeasured at fair value; and (3) a separate instrument with the same terms as the embedded derivative would be considered a derivative instrument subject to derivatives accounting. Parties to sustainable loans and bonds should consult with their accounting advisors to determine whether the contract is subject to bifurcation and whether it may be subject to potential scope exceptions under applicable accounting rules. This may require fine judgments as to the relationship of the sustainability features and the economics of the financial obligation, particularly as relates to the obligor's creditworthiness, whether the sustainability feature is commonly seen in free-standing derivatives, and perhaps the extent to which the sustainability adjustments are specific to the entire party to the contract.

- **Derivatives, including hedges, swaps, futures, and forwards** permit lenders and borrowers to hedge risks related to sustainable finance transactions, facilitate transparency and price discovery and in some cases make it possible to implement unique and creative pricing adjustments of sustainable finance in the context of the particular markets involved.
  - In the renewable electricity context, traditional hedges are a key component of cash flow for generation facilities in electricity markets that do not permit sales of power directly to a utility. In addition, a variety of instruments are available to mitigate performance risks, including proxy revenue swaps and balance of hedge contracts, and wind index futures (available in some markets). Renewable energy buyers may also enter into similar types of contracts to mitigate intermittent generation risks. Particular instruments relevant to the renewable energy industry are discussed further below.
  - Many other industries, notably agriculture and forestry, utilize these types of financial instruments in order to mitigate exposure to market fluctuations and performance risk. In addition, futures in respect of alternative fuels are becoming more popular in futures markets.

Sustainability linked derivatives may be exchange-traded and over-the-counter. The most common derivatives with an ESG component include:

1) conventional interest rate and currency hedges for ESG loans and bonds;
2) free-standing FX hedges for businesses with ESG components;
3) derivatives that promote the trading of renewable energy and renewable fuels, including derivatives such as virtual power-purchase agreements, renewable energy certificates, and wind index futures;
4) credit derivatives that protect against credit risk of an entity that may be affected by climate change or other aspects of ESG; and
5) climate-related derivatives such as weather swaps or catastrophic natural event swaps.

To the extent that sustainability transitions require long-term funding, it is necessary to use hedges to permit market participants to manage price, rate, and currency risk as well as to facilitate transparency, price discovery, and market efficiency



Sustainability-linked hedging derivatives create an ESG-linked cash flow that is affected by compliance with identified ESG targets. These are distinct from conventional derivatives transactions, such as interest rate swaps that hedge economic risks arising from green bonds or loans or credit default swaps that hedge credit risk of entities with sustainability exposures. While conventional hedges to sustainable finance arrangements may have sustainability features, they are typically derivative of the pricing components and sustainability adjustments of the underlying bonds or loans. Free-standing hedging derivatives– such as foreign exchange (FX) hedges for multicurrency businesses–may include the sorts of sustainability adjustments that would normally be seen in credit agreements, based on key performance indicators described in the next section. Three publicly-reported transactions provide examples of how these have appeared in the past two years.

- In 2019, BNPP executed a EUR / NTD FX transaction with Siemens Gamesa, a supplier of wind power turbines, to enable Siemens Gamesa to hedge its FX exposure from selling wind turbines in Taiwan. The transaction did not include a pricing adjustment but did require BNPP to invest certain premium payments into reforestation projects if Siemens Gamesa achieved specified sustainability targets.
- In 2020, Deutsche Bank executed an ESG-linked four-year multi-currency FX option with Primetals Technologies, an engineering and construction company to hedge currency risk in its business across currency jurisdictions.

The hedge is linked to several sustainability targets including greenhouse gas emissions reductions and promotion of a safe and healthy work environment for the staff of Primetals Technologies. The pricing is not affected by the sustainability targets, but if Primetals Technologies fails to meet the targets it must pay a determined amount to a non-governmental organization identified in the contract.

- In 2020, Deutsche Bank executed an ESG-linked one-year USD/THB FX forward contract with Olam International, a multinational food and agriculture company, in order to enable Olam to hedge its FX risk arising from exporting agricultural products from Thailand to other countries. The transaction was structured to give Olam a discount if it met predefined ESG targets based on ten of the United Nations' sustainability development goals across environmental and social categories.

An important feature that helps make sustainability derivatives feasible is the development of market infrastructure such as sustainability indices that facilitate trading and hedging. These include such things as the NAREX WIDE index for German wind index futures, several listed futures and options on renewable energy certificates (RECs), and corporate credit default swap indices that use ESG criteria such as the iTraxx MSCI ESG Screened Europe Index.

The legal and regulatory requirements applicable to swaps under the U.S. Dodd-Frank Act generally apply to a derivative notwithstanding that it is sustainability-linked to ESG. For cash-settled over-the-counter instruments that are considered swaps, these could include clearing mandates, margin rules, reporting and recordkeeping requirements, and business conduct standards. They could also include anti-fraud rules that apply to swaps, such as Commodity Futures Trading Commission (CFTC) Rule 180.

The nature of counterparties to private contracts varies somewhat by industry, but banks and strategic industry participants are very common. The development of hedges may be affected by the growth of ESG debt and hedging products that are described above as well as particular products such as those discussed below in relation to renewable energy.

KPIs and the corresponding pricing and cash flows for ESG debt instruments and derivatives are very diverse and can take a number of forms. In addition to particular examples discussed above, these can include the following:

- Step-down or step-up of fixed rate based on the end-user counterparty's performance against relevant KPIs;

- Payment of a rebate to the end-user or a fee by the end-user to the dealer counterparty; and
- Payment of a specified amount to a relevant charity if specify targets of relevant KPIs are not met.

In most cases, the KPIs are unilateral and based only on the end-user counterparty. However, in some cases a derivative references mutual KPIs and requires settlement based on performance of both parties. For example, in 2020 Enel and JP Morgan entered into a publicly disclosed sustainability-linked cross-currency swap where each party is subject to increased costs if it does not meet environmental targets. The targets for Enel were based on installation of renewable energy generation capacity, while the targets for JP Morgan were based on the amount of ESG funding it arranged in certain categories.

Renewable energy industry derivative instruments are fundamentally different than sustainable hedging instruments, because rather than being designed to incentivize a company to engage in virtuous behavior they are designed to make green behavior possible by facilitating the purchase and trading of renewable energy and renewable fuels. In some cases, they permit financing in the absence of a long-term offtake contracts for renewable energy. Although there are many variants of this sort of product, we focus here on two such instruments that together give a flavor of the basic issues.

- A **virtual power purchase agreement** (VPPA) is a cash-settled, fixed-to-floating price swap (or a contract for differences) that permits the generator of renewable electricity to hedge volatility in wholesale markets. In a VPPA, the buyer and the renewable energy producer agree to a fixed amount per kilowatt-hour (strike price) that the seller will receive for its delivery of energy into the wholesale market. If the market price per kilowatt of the renewable energy is less than the strike price, the buyer must pay the shortfall to the renewable energy producer, while the producer must pay the buyer the difference if the market price is greater than the strike price. The buyer does not receive the physical energy produced by the renewable project, but does receive the environmental attributes associated with its share of the production. The revenue from a VPPA supports returns to investors in the facility itself and is a key component of the cash flows for many generation facilities. VPPAs are popular with large corporations, particularly in the United States and Europe, because they provide the buyer with environmental attributes that help it satisfy its renewable energy goals while providing upside exposure to renewable energy prices. A VPPA is regulated as a swap under United States law, although the RECs and other environmental attributes conveyed by a VPPA are excluded from the definition of swap.
- **Renewable Energy Certificates** (RECs) are physically settled instruments that represent environmental, social, or other non-economic attributes of electricity production using renewable energy resources such as the sun or wind. RECs do not represent any right in the associated power, including any right to share in the proceeds of its sale. A person may purchase RECs from an electricity generator or on various spot or futures markets. Power utilities in some jurisdictions need RECs in order to meet regulatory requirements. RECs are traded under the International Swaps and Derivatives Association (ISDA) documentation under a supplement to the ISDA North American Power Annex. As physically settled instruments, RECs between commercial market participants are generally not regulated as swaps under U.S. law even if cash settled through book-out transactions that comply with the CFTC's Brent Interpretation.

RECs can be purchased from a variety of sources. Often, RECs are bought and sold under the same power purchase agreement (PPA) (i.e., contracts for the physical delivery of electricity) as the underlying electricity commodity. RECs can also be bought and sold on a bilateral basis, from brokers, utilities, and power generators who "unbundle" the RECs from the underlying power. In the U.S. and around the world, RECs are created, tracked from one entity to another, and retired via REC tracking systems, similar to online bank accounts; this avoids double-counting of the same REC. When an owner retires a REC, no one else is able to claim the environmental attributes associated with that MWh of renewable electricity. Use of the REC may include, but is not limited to, (1) use of the REC by an end-use customer, marketer, generator, or utility to comply with a statutory or regulatory requirement, (2) a public claim associated with a purchase of RECs by an end-use customer, or (3) the sale of any component attributes of an REC for any purpose.

- Thirty states and the District of Columbia require electric utilities in their regions to deliver a certain amount of electricity from renewable or other clean energy sources. Of these, twenty states and the District of Columbia have adopted Renewable Portfolio Standards (RPS). Utilities in states that have RPS generally purchase RECs through PPAs to comply with the utility's RPS. The standards range and qualifying energy sources vary. The ability to buy and sell RECs in this context makes RECs somewhat similar to a cap and trade system, but the two concepts are not identical. Some states also include carve-outs (requirements that a certain percentage of the portfolio be generated from a specific energy source, such as solar power) or other incentives to encourage the development of particular resources. In addition, eight states have voluntary electricity goals, which are generally

not legally binding. In contrast, some other states have multiple legally enforceable standards. For instance, Massachusetts has RPS, a clean energy standard, and an alternative portfolio standard.

- Corporations and other entities not subject to RPS are called voluntary REC purchasers. Many multi-national corporations are currently increasing voluntary REC purchases under both PPAs and VPPAs.

Solar renewable energy certificates are similar to RECs, but are issued in respect of electricity produced by residential solar installations.

Renewable Identification Numbers (RINs) are compliance instruments used to satisfy an obligated party's responsibilities under the federal Renewable Fuel Standard, which is a program that requires transportation fuel sold to contain a minimum amount of blended renewable fuels. More specifically, a RIN is a serial number that attaches to each batch of renewable transportation fuel (like ethanol or renewable natural gas) that can be separated from the renewable fuel once that fuel is blended with traditional fuels. RINs have different D codes, depending on the type of renewable fuel used to produce the RIN.

RINs can be traded as currency in two formats: (1) assignment, whereby the RIN is assigned to a batch of renewable fuel (in this case, the purchaser of the fuel obtains both the renewable fuel and the RIN); and (2) purchase of the RIN as an independent asset severed from the fuel to which it was issued. Parties that are subject to the RIN protocol are refiners and importers of gasoline or diesel, renewable fuel exporters and producers, and registered RIN market participants. These parties are required under the Renewable Fuel Standard Program to either buy or generate blended biofuels or purchase credits in its place.

- **Carbon Credits or Offsets** are certifications of the (1) capture of carbon oxides that would otherwise be released into the air as a result of various, often industrial, activities or (2) removal of carbon oxides from the air, generally through photosynthesis, other biological processes, or chemical fixation. Internationally, many carbon credits are used for compliance with government mandates to implement emissions reductions goals, for example, legislation implementing the Kyoto Protocol or Paris Agreement. However, the private sector has become increasingly active in emissions reduction and the carbon credit market to meet corporate sustainability goals.

  There are several organizations that provide standards for the certification of carbon capture or removal; most also require some type of long-term sequestration of the captured or removed carbon. The three units available in respect of the Kyoto Protocol (removal units, emission reduction units, and certified emission reduction) are well known. There are also several nongovernmental

organizations active in this space, e.g., Gold Standard and Verra, which create standards for certification of individual projects. These standards and protocols usually require third party auditors to evaluate compliance with such standards for certifications to be issued. The requirements for certification, types of activities that qualify for certification, and potential recipients of certificates under the various standards are different.

Carbon credits are traded privately and publicly, though credits issued under the various standards are viewed differently in the market. There are also nascent efforts by private parties to contract directly with owners or operators of carbon capture, removal, or sequestration facilities for carbon credits (or similar, uncertificated attributes). In addition, the Institute of International Finance-led Taskforce on Voluntary Carbon Markets recently announced an effort to scale carbon markets that are oriented toward public trading of carbon offsets outside of regulatory mandates.

In the context of project development, carbon credits or offsets are an important part of a project's cash flow and can significantly improve the project's financial performance. However, the value of carbon credits has historically fluctuated significantly outside of markets with a firm regulatory structure for emissions reduction and sometimes even within those markets. Nonetheless, increasing private sector involvement in the market may help maintain or increase values in future periods.

- **Mitigation credits** are available in respect of environmental mitigation efforts in certain natural areas. At a high level, mitigation credits are issued to those who implement conservation programs in environmentally sensitive areas (or, in some cases, create habitat). In the United States, mitigation banking programs in respect of wetlands and streams are sponsored by the U.S. Army Corps of Engineers and Environmental Protection Agency and programs in respect of endangered species and their habits are sponsored by the U.S. Fish and Wildlife Service and National Marine Fisheries Service. Mitigation credits or similar systems are also available in respect of projects outside the United States.

  By purchasing mitigation credits, developers can essentially comply with regulatory requirements and mitigation conditions of approval by investing in the conservation of a site other than the one being developed. Mitigation credits are frequently used for this purpose in the context of agriculture, forestry, and water resource development, but also appear in other contexts, e.g., renewable energy development. Mitigation credits are typically available via private transactions with mitigation banks, i.e., organizations that acquire mitigation credits from third parties or generate them through their own projects. Other types of incentives may be available in respect of mitigation banking, e.g., tax-deductible donations in respect of conservation easements.

  – Other types of financial instruments that are similar to those discussed above have been implemented in certain jurisdictions.[1] These instruments typically exist to help market participants meet government or other regulatory mandates around emissions reductions or similar policy goals. For example, there have been efforts in some U.S. states to create thermal REC programs to support state renewable portfolio standard requirements to source renewable thermal energy sources such as gas produced from biomass. These programs can be helpful for securing financing, particularly in larger markets. California Low Carbon Fuel Standard Credits, in particular, have provided a significant financial incentive for the development of dairy digester and other renewable natural gas projects.

1 These include California's Low Carbon Fuel Standard Credits, Thermal Renewable Energy Certificates (or Thermal RECs), and Renewable Thermal Certificates (or RTCs)

MITIGATING RISK OF ESG-BASED INVESTMENT STRATEGIES THROUGH INSURANCE

ESG-based investment strategies can create significant risks to companies and investment funds. Amidst an evolving regulatory landscape and shifting consumer values, companies that implement ESG-based strategies face unique and heightened risks that are common to many types of business and investment vehicles. For companies and funds utilizing ESG-based strategies, insurance should be a critical part of their risk-mitigation approaches.

Most companies and funds likely already have in place insurance policies that might respond to many key ESG-related risks. Many companies and funds have in place directors & officers (D&O) policies that cover the organization's own liability for third-party claims asserting a wide variety of wrongful conduct. In addition, most companies and funds already have in place general liability insurance, which can cover third-party claims alleging some types of advertising risk and risks due to bodily injury or property damage claims. Companies and funds also can secure additional insurance policies that can extend coverage to more unique risks that they might face, including under specialty insurance policies. These specialty policies may include, among other types of policies, representations and warranties insurance to mitigate ESG-related merger and acquisition liability such as the risk of breaches of ESG-related representations in an acquisition agreement. Another specialty policy to consider is a media liability policy to address consumer actions or other allegations of false or misleading statements based on public disclosures that a company or fund may make relating to environmentally sustainable or socially conscious strategies.

Because insurance plays an important role in ESG-related risk mitigation, companies and funds utilizing an ESG-based investment strategy should focus on insurance before a problem arises, and preferably even before making an investment, closing a merger or acquisition, or adopting an ESG-based initiative. One important reason for this early focus is the considerable variation among insurance policies, which can lead to significant differences in the scope of protection organizations may have.

For example, organizations often rely on their D&O policies to protect themselves from governmental investigations or civil proceedings. However, not all D&O policies provide coverage to the organization itself for its own allegedly wrongful acts, instead covering only individual directors and officers and the organization's indemnity obligations to those individuals. Even when they do cover the organization, some D&O policies limit coverage to specified types of claims, such as securities-related claims, which some courts have construed to narrow coverage to specific legal causes of action or types of allegations. Moreover, even when extended to a broader class of claims, many D&O policies have limitations that can affect whether they cover certain

stages of governmental investigations, and, if so, whether a subpoena or information request alone from a regulator would trigger coverage. D&O policies also vary considerably in what exclusions might apply to classes of ESG-related claims. It therefore is important for companies and funds implementing ESG-based strategies to understand the scope of their D&O policies particularly as U.S. and foreign regulators are developing ESG-related disclosure guidelines, and as investors increasingly scrutinize whether companies or funds employing ESG-related strategies are adhering to their own adopted ESG investment guidelines and risk disclosures.

For this reason, before investing in an ESG-oriented business, companies and funds should ensure that the coverage they and their target companies have actually applies to the types of claims that they anticipate might arise from their unique ESG-related activities. An organization's analysis might involve an audit of the insurance policies it has in place, with a focus on identifying the unique risks that its ESG strategy may create. For instance, a company or fund focused on alternative energy resources, such as nuclear energy, should determine if their policies' nuclear energy-based exclusions would restrict coverage or whether nuclear energy-related coverages would be available. Likewise, a company or fund concentrating on ethical labor practices should ensure some of their policies cover workplace discrimination or other employment claims. For investment funds

seeking to invest in ESG-oriented companies, or for companies seeking to merge with or acquire an ESG-oriented business, the fund or company should undertake due diligence into whether the target company has an insurance portfolio in place that tightly matches the risks particular to their ESG-related activities, representations, and business. They should insist on obtaining and reviewing copies of the relevant policies, rather than relying on sometimes vague representations and warranties regarding what policies the target company maintains. Regardless, they should consider obtaining representations and warranties insurance to back any critical statements upon which they will rely.

In addition to an audit of their investment target's insurance portfolio, ESG-oriented companies and funds should be prepared to act quickly if an investigation or claim arises to maximize the likelihood of an insurance recovery. Once an investigation or claim begins, companies sometimes focus on their defense, leaving consideration of the insurance consequences of the problem until later. This can be a mistake. Many policies require policyholders to take specific actions, such as providing prompt notice, within a specific and sometimes brief timeframe. Equally important is the need to coordinate the company's insurance strategy with its defense approach. Soon after an investigation or claim arises, the company may face decisions where what is best for the defense of the claim may be in tension with the optimum insurance approach, or vice versa. By recognizing these tensions early, companies can resolve or avoid them. To protect their insurance in the early days of a crisis, ESG-oriented companies should prepare a plan before the crisis happens for how to address predictable early insurance decisions.

Companies and investment funds often can use insurance to mitigate their ESG-related risks. To do so most effectively, ESG-oriented organizations should take steps before a crisis arises, and often before undertaking an ESG-related initiative, investment, merger, or acquisition. By doing so, ESG-oriented organizations may ensure that they have in place the right insurance and a robust plan to pursue that insurance if needed.

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GLOSSARY

Acronym	Description
CFTC	Commodity Futures Trading Commission
D&O	Directors & Officers
ESG	Environmental, Social, and Governance
FX	Foreign Exchange
GBP	Green Bond Principles
ICMA	International Capital Market Association
ISDA	International Swaps and Derivatives Association
ITC	Investment Tax Credit
KPI	Key Performance Indicators
LMA	Loan Markets Association
MWh	Megawatt Hour
PPA	Power Purchase Agreement
PTC	Production Tax Credit
REC	Renewable Energy Certificates
RIN	Renewable Identification Numbers
RPS	Renewable Portfolio Standards
SBP	Social Bond Principles
SLBP	Sustainability-Linked Bond Principles
SPT	Sustainability Performance Targets
VPPA	Virtual Power Purchase Agreement

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