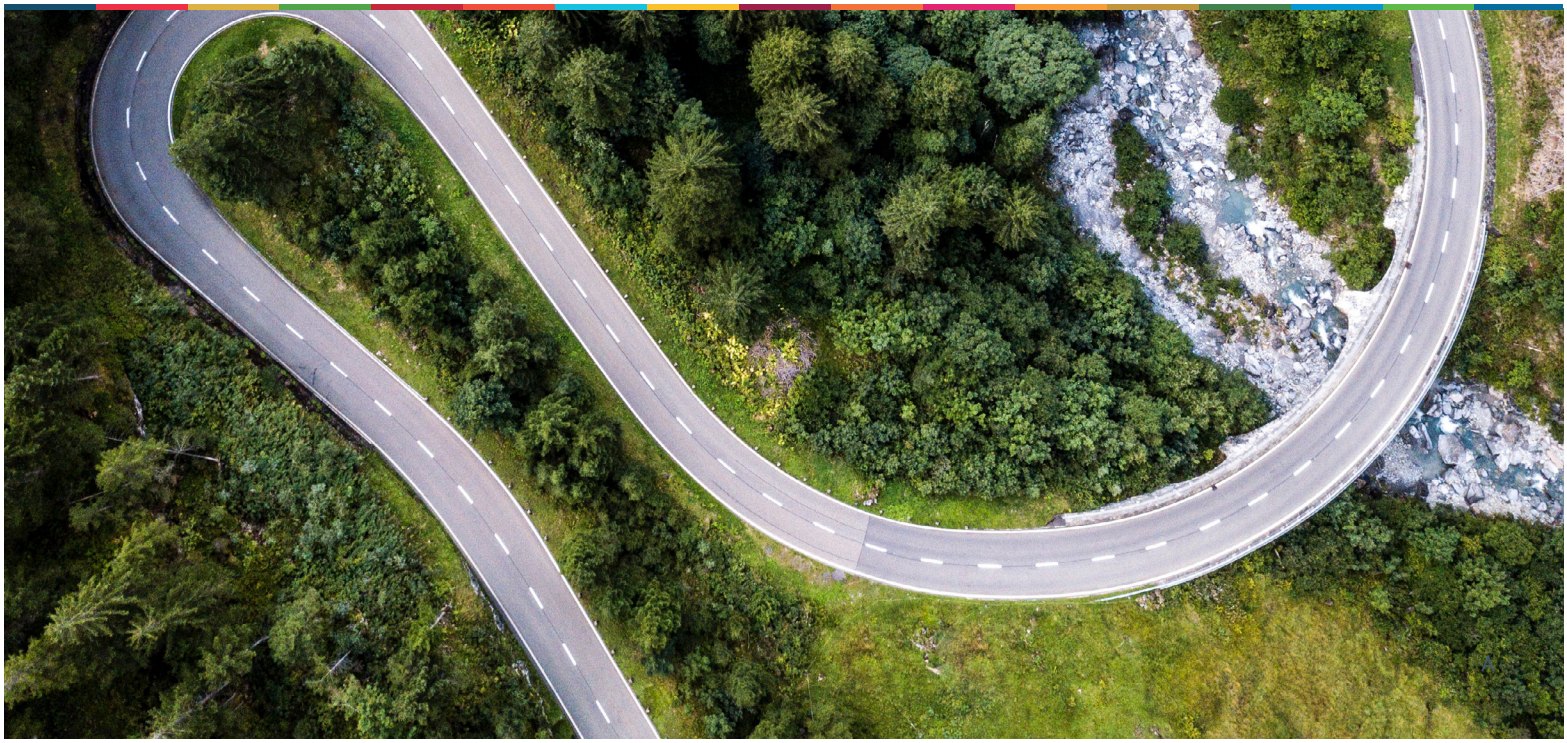
SDG Bonds & Corporate Finance

A Roadmap to Mainstream Investments

A White Paper Prepared by
The UN Global Compact Action Platform
on Financial Innovation for the SDGs

United Nations
Global Compact

UNEP FINANCE INITIATIVE



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As a special initiative of the UN Secretary-General, the **United Nations Global Compact** is a call to companies everywhere to align their operations and strategies with ten universal principles in the areas of human rights, labour, environment and anti-corruption. Launched in 2000, the mandate of the UN Global Compact is to guide and support the global business community in advancing UN goals and values through responsible corporate practices. With more than 9,500 companies and 3,000 non-business signatories based in over 160 countries, and more than 70 Local Networks, it is the largest corporate sustainability initiative in the world.

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ABOUT THE ACTION PLATFORM ON FINANCIAL INNOVATION FOR THE SDGs

The *UN Global Compact's Financial Innovation for the SDGs Action Platform* brings together a multi-disciplinary group of finance practitioners and experts to develop innovative private financial instruments that have the potential to direct private finance towards critical sustainability solutions. Led in collaboration with the Principles for Responsible Investment (PRI) and the United Nations Environment Programme Finance Initiative (UNEP FI), the platform will develop guidance on impact investment strategies that support the Sustainable Development Goals (SDGs), map current and emerging financial instruments, and provide a laboratory for the development of new innovative instruments. Ultimately, the goal is to improve the risk/return profile of SDG investments to attract institutional investors.

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INTRODUCTION

In September 2015, all 193 Member States of the United Nations (UN) adopted the 2030 Agenda for Sustainable Development, a 15-year plan to end extreme poverty, fight inequality and injustice, and protect our planet. At the heart of Agenda 2030 are the 17 Sustainable Development Goals (SDGs) and 169 underlying targets.

According to the UN Commission on Trade and Development (UNCTAD), achieving the SDGs will require between US$3 trillion and US$5 trillion in investment annually in developing countries alone. At today's level of public and private investment, the Commission estimates an ***annual shortfall of about US$2.5 trillion***. While additional public funds will be necessary to finance the SDGs, it is widely acknowledged in the international community that the capital markets can play a key role in closing the financing gap.

According to some estimates, implementation of the goals will open ***market opportunities reaching trillions of dollars***, creating a significant pipeline of investment opportunities. The Business Commission for Sustainable Development finds in its flagship report, *Better Business, Better World*, that the SDGs provide the private sector with a new growth strategy that opens valuable market opportunities. It identifies 60 sustainable and inclusive market "hotspots" in four key economic sectors that are worth at least US$12 trillion: Energy US$4.3 trillion, Cities US$3.7 trillion, Food and Agriculture US$2.3 trillion, and Health and Well-Being US$1.8 trillion.[1]

At the same time, investor interest in the SDGs is growing. Many of the world's largest institutional investors see them as a key framework to fill the ***growing demand for impact investments***. CalPERS has called the SDGs a "gift to investors" and the 17 goals have become a reference point for sustainability investment strategies for a number of large institutional investors. A recent PRI publication on the SDG Investment Case points out:

> Since the launch of the Principles for Responsible Investment in 2006, the preamble to the Principles has said: "We recognise that applying these Principles may better align investors with broader objectives of society." Never before have these "broader objectives of society" been more clearly defined than in the SDGs.[2]

The confluence of these two trends suggests that a ***market for mainstream SDG investments*** could be created, with enough scale, liquidity and diversification, to attract large institutional investors and finance a broad set of private- and public-sector activities in support of the SDGs. Efficient capital markets can play a key role in encouraging companies and others to experiment with and improve upon a wide range of solutions to ensure that the most effective approaches are discovered and financed.

1 *Better Business, Better World*, Business Commission for Sustainable Development, January 2017.
2 *SDG Investment Case*, Principles for Responsible Investment, 2017.

With the release of ***SDG Bonds and Corporate Finance – A Roadmap To Mainstream Investments***, we are hoping to inspire and guide companies, governments, cities, and others involved in the implementation of Agenda 2030 to tap into the private capital markets and benefit from cheaper and more reliable funding. Our goal is also to inspire major players in the investment community, investors — banks and other financial institutions — to increase their allocation of capital toward SDG investments and to contribute to lowering the cost of capital to finance the SDGs.

We seek to introduce a ***flexible framework*** to support the many ways businesses and governments can contribute to the SDGs, while creating a large and diversified market for investors. In addition, we seek a paradigm shift in which companies and other issuers can compete for capital based not only on their investment thesis, but also on their impact thesis and how they will use funds to contribute to the SDGs.

Our primary ***focus is on fixed-income*** products as a financing mechanism that can provide access to large amounts of cheaper capital for a broad set of actors involved in the realization of the SDGs, ranging from companies, Governments, and cities to infrastructure projects and public-private partnerships. Fixed income is also a longer-term, lower-risk asset class that matches the profile of SDG activities and has enough scale — with US$6.7 trillion of annual issuance — to fill the SDG financing gap.[3] We also see an opportunity to ***leverage the equity market*** as a corollary to the corporate bond market.

Another major ***focus is SDG financing in emerging markets*** since this is where investments are *most needed* and where access to capital is most limited and expensive. In these markets, sovereign bonds and foreign direct investment (FDI) are the main source of external financing, in part because of their inherent stability. In least developed countries (LDCs), FDI is the primary source of financing after official development assistance (ODA) and remittances.

Multinational companies with significant operations in emerging markets and access to global capital markets can significantly contribute to closing the SDG funding gap through FDI. By extension, ***corporate finance*** can become a ***major source of SDG investments*** through corporate bonds and equity that support an integrated SDG strategy in emerging markets.

This Roadmap is structured in two sections: section one addresses key considerations in the creation of a market for mainstream SDG investments; section two introduces an integrated model for corporate SDG finance.

Section one defines a ***broad portfolio of SDG investments*** that can be financed through SDG bonds. We envision that a market for corporate SDG bonds could develop quickly, as a growing number of companies will require capital to pursue opportunities associated with the SDGs, or to transition to a sustainable business model. There is also a large potential market around sovereign, municipal and project bonds that can support the implementation of countries' national plans for the SDGs. Demand for SDG bonds could also develop around structured products to de-risk and scale investments in public-private partnerships and blended capital products.[4]

3 Source: The Future of Global Debt Issuance: 2025 Outlook, Aite Group, September 2017.

4 Blended Finance is an approach to structured finance that enables development and philanthropic funding to mobilize private capital into a project or company that promotes development outcomes, by mitigating risk and/or ensuring commercial risk adjusted returns. World Economic Forum.

Section one also ***identifies gaps in the current market for corporate SDG investments*** and suggests several paths forward. These include expanding the scope of the asset- and project-based market for green, social and sustainability bonds. Another path is to introduce a model for corporate SDG finance whereby corporate-level SDG contributions are integrated into companies' strategy and governance, and can be financed by general-purpose bonds and equity.

We then explore how a broad and liquid market can contribute to ***maximizing the scale and credibility of SDG investments***. This can be achieved through the self-disciplining effect of public markets and risk mitigation inherent in sustainable investments.

Lastly, we explore how a diversified market for SDG investments can attract the growing but equally diverse investor base interested in the SDGs, based on a trade-off between impact and risk/return considerations.

Section two delves further into an ***integrated model for corporate SDG finance*** to support corporate-level contributions to the SDGs. We provide guidance on how companies can develop a unique theory of impact and develop credible impact measurements that can be integrated into the company's main strategy and governance procedures, as well as its corporate finance strategy. Lastly, we introduce considerations on how to structure general-purpose corporate SDG bonds.

An Integrated Model for Corporate SDG Finance

Step 1. **Develop a credible SDG impact theory**

↓

Step 2. **Measure and monitor the impact of SDG investments**

↓

Step 3. **Integrate SDG impact in corporate strategy and governance**

↓

Step 4. **Structuring considerations for corporate SDG bonds**

DEFINITIONS AND DISCLAIMER

The terms defined below are used descriptively with conceptual definitions to help the understanding of how public capital markets can contribute to financing the SDGs. Our purpose is not to introduce official names, standards, or principles related to any financial products.

Over time, the market will establish clear labels and categories for these products. These will be created as issuers and their advisers adopt designations that best reflect their strategy and investors promote categories that provide clear signals to the market and support portfolio construction.

SDG Bonds: Broad category that includes use-of-proceed and general-purpose bonds either issued by companies, Governments, and municipalities, or for assets and projects.

Use-of-proceed SDG Bonds: Bonds with strict accountability of the use of proceeds toward eligible green, social, or climate activities and a link to the SDGs. They are issued in accordance with the Green and Social Bond Principles (ICMA) or the Climate Bond Standard (CBI). Use-of-proceed SDG bonds can be issued by companies, Governments and municipalities as well as for assets and projects. They can be unsecured, backed by the creditworthiness of the corporate or Government issuer. They can also be secured with collateral on a specific asset.

General-purpose SDG Bonds: Bonds issued by companies that have adopted a corporate-level strategy to contribute to the SDGs and that are committed to providing accountability for the general use of funds and corporate-level SDG impacts. General-purpose SDG bonds can also be issued by Governments and they are unsecured.

SDG Equity: Common stock of companies that have adopted a corporate-level strategy to contribute to the SDGs and that are committed to providing accountability for the general use of capital and corporate-level SDG impacts.

Corporate SDG Finance: Strategic use of different financial instruments to fund corporate-level SDG strategies, including (but not limited to) the instruments listed above.

ACKNOWLEDGEMENTS

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The Action Platform on Financial Innovation for the SDGs develops guidance on impact investment strategies that support the Sustainable Development Goals. Additionally, it maps current and emerging financial instruments and provides a laboratory for the creation of new innovative instruments. The purpose is to improve the risk-return profile of SDG investments to attract institutional investors.

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Development Banks	国家开发银行 CHINA DEVELOPMENT BANK	CAF DEVELOPMENT BANK OF LATIN AMERICA	IFC International Finance Corporation WORLD BANK GROUP	THE WORLD BANK	
Investor Initiatives	PRI Principles for Responsible Investment	UNEP FINANCE INITIATIVE	GLOBAL IMPACT INITIATIVE	Sustainable Stock Exchanges Initiative SSE	
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SECTION I: BUILDING A MARKET FOR MAINSTREAM SDG INVESTMENTS

The key to creating a market for mainstream SDG investments is to ensure the market is sufficiently large, liquid, diversified, and transparent for institutional investors. In this section, we e define a broad portfolio of SDG investments that can be financed through SDG bonds. We also explore how a broad and liquid market can contribute to maximize the scale and credibility of SDG investments. We then introduce an alternate model for general-purpose corporate SDG bonds to accommodate a broader range of issuers.

A. DEFINING A BROAD PORTFOLIO OF FIXED-INCOME SDG INVESTMENTS

The immense financing gap for the SDGs, the trillions of dollars in market opportunities, and the multitude of actors involved in achieving the SDGs all contribute to tremendous investment opportunities, many of which can be financed through the bond market.

In this section, we define a broad portfolio of fixed-income SDG investments, ranging from large corporations and banks developing market solutions for the SDGs, to national and subnational governments looking to fund public programs related to the SDGs. This portfolio also includes large infrastructure projects and smaller investments that can be pooled together and securitized.

Corporate SDG Bonds (Non-Financial)

New business models, markets, or sources of payment for SDG-related activities can become attractive investment opportunities for companies and can be financed through corporate bonds. Companies transitioning to these sustainable business models are expected to have substantial capital needs for research and development, human resources, physical assets, and other corporate activities.

This includes:

- Companies operating in prime SDG sectors and geographies[1]
- Companies adopting new circular or inclusive business models
- Companies addressing new markets and consumers for sustainable goods and services
- Financial institutions providing consumer finance and other services that support sustainable consumption or access to essential products and services

Companies can finance their SDG activities using general funds raised through traditional corporate finance mechanisms. However, such financing makes it difficult for investors to identify companies that meaningfully contribute to the SDGs. Also, financing SDG-related activities through generic financial products makes it hard to determine whether the funds are used for SDG-related activities and if the investment has a credible impact on SDGs.

One solution is to introduce SDG-themed bonds with corporate governance mechanisms to ensure that investments are directed toward SDG-related activities. This approach reveals the final impact of corporate activities (the 'what') as well as the way they were executed (the 'how'). The process of issuing such bonds provides an opportunity for companies to communicate with capital markets and differentiate themselves from less sustainable peers. Through bond documentation and structure, companies can formulate a credible theory and strategy for SDG impact. They can allocate specific assets or resources to implement the strategy and

1 Prime SDG sectors are those that contribute most to the SDGs including health, food, water & sanitation, energy, infrastructure, education, and finance. Prime geographies depend on each goal but often include low- and middle-income countries.

commit to credible governance mechanisms that ensure transparent monitoring of activities and results.

These corporate SDG bonds can take the form of ***use-of-proceed bonds*** whereby companies can identify specific assets or projects that contribute to the SDGs and commit to a strict accountability on use-of-proceed bonds. In the absence of such assets and projects, or if companies are looking to finance a more comprehensive SDG strategy at the corporate level, corporate SDG bonds can be issued as ***general-purpose bonds*** with a commitment to accountability on the general use of proceeds and corporate-level impacts (general-purpose bonds).

To date, there has not been any SDG bond issued by companies in real-economy sectors. However, some social bonds have been issued by real-economy companies with social projects that contribute to the SDGs. In addition, many corporate green bonds have social elements, suggesting that companies are looking to expand the scope of activities they finance through the use-of-proceed bond model.

Furthermore, some companies and investors are interested in leveraging general-purpose bonds to support a corporate-level strategy to contribute to the SDGs. (Examples of corporate-level strategies for SDG are included in Appendix B.)

SDG Bonds by Banks and Financial Institutions

Larger banks and financial institutions can raise funds on global capital markets and in turn provide loans or other non-capital market financial products supporting the SDGs. Such financial intermediation is critical because it makes capital available for activities or issuers who do not have access to public markets. Financial intermediation also leverages the original investment into many more investments or financing at the local level, with high potential impact.

This includes:

- Mortgages, loans and credit solutions to support financial inclusion
- Loans and credit solutions to finance consumption of SDG-related products (such as energy efficiency and renewable energy)
- Leases to finance circular economy models

If done at the local level, financial intermediation can also result in a local transfer of ownership of the business and financial assets, driving economic and social development. It can also trigger a multiplication effect of money creation that is typical in a well-functioning economy.

To date, a large proportion of green bonds are issued by financial companies as they reached US$33.3 billion in 2017 or 21% of the green bond market.[2] In addition, many social bonds and sustainability bonds (including all those designated as SDG bonds) were issued by financial institutions. For example, the commercial banks ANZ, HSBC and Société Générale have raised capital from private investors to finance their commercial and other banking activities in support of the SDGs.

SDG Bonds can also be issued by multilateral, regional, and national development banks, leveraging the capital of donor countries to fund sustainable development projects. For example, the World Bank leverages its triple-A credit rating to issue between US$50-US$60 billion in the global capital markets every year, with proceeds supporting development programs aligned with the SDGs. These include access to healthcare, waste management, water, sanitation, and rehabilitation of ecosystems.

Development banks can borrow on the private capital markets on favorable financial conditions based on their Government backing and high credit rating. In turn, this capital can be used to finance programs and activities that support the implementation of the SDGs. Recently, the World Bank partnered with Swedish insurance company Folksam Group to issue a US$350 million bond for specific development activities aligned with the SDGs.[3]

2 *Blossoming green-bond market growing toward $250 billion year*, Bloomberg Intelligence, March 08, 2018.
3 *World Bank Bond Highlights Investor Focus on Sustainable Development Goals*, World Bank Group, February 2018.

Asset-Backed and Project SDG Bonds

Non-corporate assets and projects can also form the basis for SDG investments. Most commonly, stand-alone infrastructure projects (those not financed through corporate balance sheets) are funded using fixed income based on the stability of the cash flow they generate and the value of the underlying asset. For example, the financing for a bridge or road can be based on toll revenues tied to the general driving activity.

While these infrastructure projects are typically financed through bank loans, banks often refinance such loans, selling them as securities on the bond market once the project is complete, operational, and no longer carries construction risk.

Bonds can also be a vehicle to finance smaller financial assets that contribute to the SDGs and are spun-off from the balance sheets of companies or banks. Examples include leases for electric vehicles, loans for residential solar panels, loans to small farmers, and small and medium enterprises (SMEs) in areas or populations with little access to finance. While these financial assets are too small and risky to be financed on the bond markets on a stand-alone basis, they can be pooled together and 'securitized' as a bond, provided they are relatively standard.

Pooling of assets is a form of financial intermediation in which funds raised on capital markets can be used to finance projects or assets that are too small or too risky for the borrower to gain direct access capital markets. It is related to the financial intermediation role that banks play and share some of the same multiplier effects. (For more on this topic, see *SDG Bonds by Banks and Financial Institutions* earlier in this section and *Creating a Credible Theory of Impact* in Section II).

To date, there have not been any issuance of asset-backed or project SDG bonds. However, many green bonds have been issued to finance infrastructure and financial assets. In 2017, asset-backed and mortgage-backed securities represented 16% of the green bond market with US$24.8 billion in issuance.[4] The scope of the market could easily be expanded to a broader range of topics covered in the SDGs.

Sovereign and Municipal SDG Bonds

While the private sector plays a significant role in achieving the SDGs, many of the goals and targets cannot be fulfilled by the private sector alone and require either direct or indirect intervention by the government (e.g., public services around poverty alleviation, health, and education).

Governments and municipalities can tap into the bond market to finance these public or public-private programs by issuing sovereign and municipal bonds that are tied to Government programs for the SDGs and follow a strict governance process to ensure the credibility of impact, including monitoring and reporting.

Sovereign states and municipalities often use the bond market to finance their activities and programs at a low cost of capital, based on their ability to collect taxes and their general creditworthiness. These are respectively known as sovereign and municipal bonds and represent a sizeable part of the global bond market.

For investors, sovereign or municipal SDG bonds can be compelling investment vehicles to achieve SDG impacts. Investing in these bonds can support Governments at all levels in implementing country- and region-specific SDG plans. Investors can also benefit from diversifying their portfolios of SDG investments, focusing on different types of issuers and activities.

However, the market for sovereign bonds in emerging markets is relatively small in comparison with developed markets. According to the IMF, the total market capitalization of emerging market sovereign debt stood just over US$7.3 trillion in 2016,[5] while the global market for sovereign debt is expected to reach

4 *Blossoming green-bond market growing toward $250 billion year,* Bloomberg Intelligence, March 08, 2018.
5 *Working Paper On International Integration of Emerging Sovereign Bond Markets*, IMF, 2018.

US$44 trillion in 2018. This includes US$2.2 trillion for the United States and US$1.8 trillion for Japan, the two largest markets.[6]

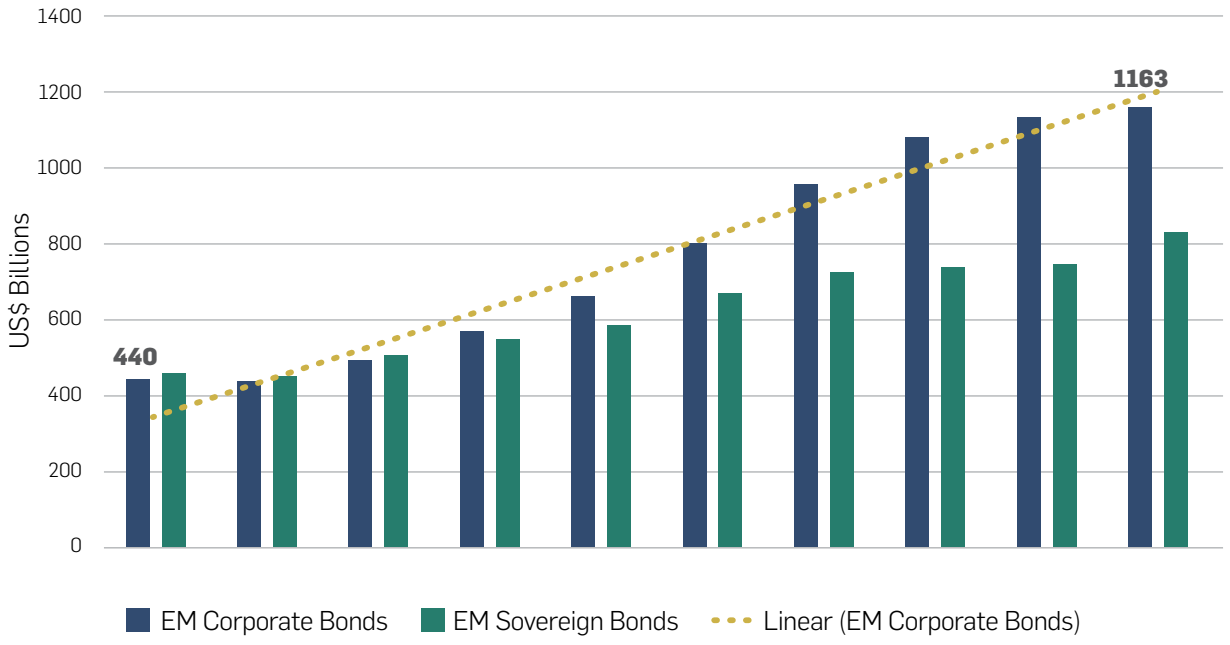
Similarly, the municipal bond market outside the U.S. and Japan is tiny, especially in emerging markets. However, these markets are growing, based on interest from both issuers and investors, and successful efforts by many countries to improve their investment climate, including through sustainable development. (See later in this section how country-level implementation of the SDG can lower market risks.) Table 1 below shows the growth of sovereign and corporate bonds in emerging markets from 2007 to 2Q 2016.

B. ADDRESSING A GAP IN THE MARKET FOR CORPORATE SDG INVESTMENTS

At a broad level, the shortfall in private capital to finance the SDGs can be understood through an inverse relationship between the size of asset classes and their SDG impact.[7] Currently, traditional investment vehicles that have the potential to attract the largest institutional investors, such as corporate equity or bonds, have only limited measurable impact on the SDGs. While the private sector plays a crucial role in achieving the SDGs, companies have only recently begun to map and report their contribution to the SDGs. Few firms have adopted active strategies to maximize those contributions.

The market for corporate Green, Social and Sustainability (GSS) Bonds, based on a use-of-proceed model and following ICMA's Green and Social Bonds Principles, is a real exception to that limitation, which is likely the reason for its success. Overall, the green bond market

Table 1. The Growth of Emerging Market Bonds



Source: MV Index Solutions, Bank for International Settlements, 2017

6 *Global sovereign debt to hit new all-time high*, S&P, February 2017.
7 See Appendix C.

grew 78% in 2017, reaching US$155.5 billion, and some estimate that it will rise to US$250 billion in 2018.[8] Corporations represented half of the overall market with US$77.9 billion of issuance. Non-financial companies made up the fastest-growing segment. Further growth is expected from ICMA's introduction of the Social Bond Principles to expand the scope of activities that can be financed through a thematic use-of-proceed bond, as well as a linkage document illustrating the relationship between eligible categories for Green and Social Bonds and the SDGs.[9] . While still very small, the social bond market is also growing fast, rising from US$2.2 billion in 2016 to US$8.8 billion in 2017.[10]

Green bonds (and later social bonds) were initially modeled after project-based investments in clean energy or infrastructure by development banks. Strict rules were applied on how the funds would be used to finance the building and operation of pre-defined assets (use-of-proceeds). In addition, procedures were introduced to track and report such uses. Given these roots, the GSS bond market has proven to be successful in a pocket of the market that finances targeted corporate and public investments in energy and infrastructure assets, as well as banks providing loans and other financial services to support green activities.

However, despite industry efforts to expand the taxonomy of eligible projects, the market has yet to meaningfully expand to support the broader set of environmental, social and economic solutions for the SDGs, especially by real economy companies.

In 2017, the vast majority of corporate issuers of green bonds were concentrated in a few industry sectors: Financials (43%), Utilities and Energy (35%), and Industrials (11%).[11] Also, private sector issuers of social bonds represented only 15% of the market in 2017, with US$1.3 billion of issuance.

Given its strict use-of-proceed structure, the GSS bond market does not easily accommodate the financing needs for corporate SDG strategies and activities that are less capital intensive and more dispersed. This creates a white space to address the financing needs of these companies as they develop SDG solutions that neither fit in the current taxonomy of green or social bonds nor are associated directly with specific assets or projects, as expected in the Green Bond Principles.

To address this white space, we suggest a dual approach:

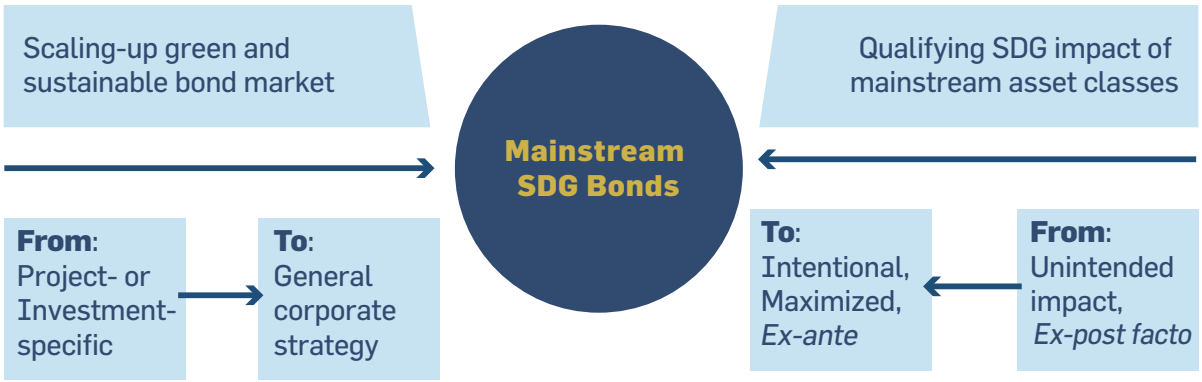
- Support the expansion of the market for ***asset- and project- SDG bonds*** based on a ***use-of-proceed model***, whereby companies and other issuers identify specific SDG-related assets or projects. They can be financed under a strict use-of-proceeds framework, as contemplated by ICMA's Green and Social Bond Principles.

- Introduce an ***Integrated Model for Corporate SDG Finance*** whereby companies define their unique theory of SDG impact and integrate it into their strategic and governance procedures, including board oversight, internal and external audit and public reporting. This would provide a path toward issuing general-purpose bonds (and eventually equity) that support a corporate-level SDG contribution.

This dual approach provides a path for the creation of a market for mainstream SDG investment that supports a broad range of companies in providing solutions for the SDGs (see Figure 1).

8 *Green & Social Bond Market Update, Bond Market Contact Group, European Central Bank*, ICMA, February 2018.
9 *Green and Social Bonds: A High-Level Mapping to the Sustainable Development Goals*, ICMA. 2018.
10 *Blossoming green-bond market growing toward $250 billion year*, Bloomberg Intelligence, March 08, 2018.
11 *Green & Social Bond Market Update, Bond Market Contact Group, European Central Bank*, ICMA, February 2018.

Figure 1. A Path Towards Mainstream SDG Investments: Scaling the Green Bonds and Qualifying Mainstream Asset Classes



Expanding the Market for Asset- and Project-Based SDG Bonds Related to the SDGs

As discussed in the previous sections, green, social, and sustainability (GSS) bonds are very popular in a pocket of the market represented by financial and energy companies, as well as industrial companies with a large energy footprint.

The use-of-proceed model could also be a very effective vehicle to finance a broader range of activities contributing to the SDGs when they can be identified as separate assets and projects, including infrastructure and financial assets.

In fact, it is now common practice for green, social, and sustainability bond issuers to explain how their use-of-proceeds align with the SDGs. According to Environmental Finance, 40% of GSS bonds issued to date are explicitly aligned with SDGs.

ICMA has recently introduced a linkage document illustrating the relationship between eligible categories for Green and Social Bonds and the SDGs.[12] Table 2 shows an excerpt of the mapping for SDGs 3-6.

Further growth in this part of the SDG bond market will come from expanding the categories of eligible assets and projects that contribute to the SDGs. Many market participants, including the EU High-level Expert Group on Sustainable Finance, are advocating for the creation of taxonomy of investments that constitute green, social and sustainable investments.

As a response, several initiatives, such as those spearheaded by the European Commission, are looking into creating taxonomy of eligible assets for sustainable financing. Generally, these taxonomies seek to identify and define eligible assets within the broad categories outlined by ICMA's green and social bond principles. This gives issuers clarity and confidence in aligning their capital expenditure (CapEx) plans and designing their GSS bond frameworks.

These taxonomies and mappings are essential elements in the growth of the SDG bond market because they provide an initial and illustrative set of assets and activities that qualify as sustainable investments. They can also provide an organizational tool — like an industry classification system — to compare, analyze, and bundle together investments in similar areas of focus related to the SDGs.

12 *Green and Social Bonds: A High-Level Mapping to the Sustainable Development Goals*, ICMA. 2018.

Table 2. Mapping Green and Social bonds Eligible Projects to the SDGs

SDG	SBP Project Categories[14]	GBP Project Categories[15]	Example indicators
3 GOOD HEALTH AND WELL-BEING	Access to Essential Services (3.1, 3.2,3.3,3.4, 3.5, 3.7, 3.8, 3B, 3C) Affordable Basic Infrastructure (3.6)	Pollution Prevention and Control (3.9) Renewable Energy (3.9)	3.1 Number of people reached with improved health care 3.2 Cost reduction for standard treatments and medicines 3.3 Amount of waste water treated, reused or avoided before and after the project 3.4 Amount of raw/untreated sewage sludge that is treated and disposed of
4 QUALITY EDUCATION	Access to Essential Services (4.1, 4.2, 4.3, 4.4, 4.5, 4.6, 4.7, 4a, 4c) Socioeconomic Advancement And Empowerment (4.4, 4.5)		4.1 Number of people receiving education services 4.2 Number of students attaining standard for education level 4.3 Education facilities for inclusive and effective learning environments
5 GENDER EQUALITY	Access to Essential Services (5.4) Socio Economic Advancement and Empowerment (5.1, 5.4, 5.5, 5b)		5.1 Number of equal paying jobs created for women another under-represented gender groups 5b. Number of women using technology products
6 CLEAN WATER AND SANITATION	Affordable Basic Infrastructure	Sustainable water and wastewater management (6.1, 6.2, 6.3, 6.4, 6.5, 6a, 6b) Terrestrial and aquatic biodiversity conservation (6.6)	6.1 Number of people provided was safe and affordable drinking water 6.2 Number of people provided with adequate an equitable sanitation 6.3 Volume of water saved 6.4 Volume of waste water treated for reuse 6.6 Area covered by sustainable land of water resources management practices

Source: The International Capital Market Association (ICMA).

Introducing an Integrated Model for Corporate SDG Finance

Green bonds were modeled after either project-based investments in clean energy or infrastructure by development banks. Such project-based investments require extra layers of management and oversight since they lack the governance systems of corporations, which have their own legal personality. These layers include pre-approved use of funds, investment committee approval of the use of funds, and independent verification of the use of funds. Similarly, financial institutions typically require additional oversight of investment activities through investment committees, given fiduciary duties and the importance of risk management.

However, this structure is not as relevant for other industry sectors where SDG contribution is not necessarily tied to a specific asset (real or financial) or managed as a separate project. Also, it can be cumbersome for companies to create additional and separate management to account for and report on the process for SDG-themed financing. While this is less of an issue for smaller dedicated financing, it can become problematic if the market grows and issuers must manage two different types of internal funds, with separate governance and reporting processes.

Therefore, we suggest a ***model for Integrated Corporate SDG Finance t***hat can support the issuance of general-purpose SDG bonds. This will complement the asset- and project-based model prevalent in most green and social bonds and accommodate for a more diverse range of corporate contributions to the SDGs. The model is based on four main characteristics:

- It allows companies to develop their ***unique theory of impact***, describing how they contribute to the SDGs based on their specific capability, footprint and operating context. It provides them with an opportunity to expand the scope of SDG activities that can be financed through SDG bonds, beyond the current taxonomy of eligible assets. It also empowers companies to sell their impact strategy to capital markets, alongside their investment thesis, and compete for impact capital with the most effective solutions for the SDGs.

- It provides investors with an understanding of the impact of SDG bonds in the context of a ***company's overall strategy and activities***, beyond isolated assets or projects. This is particularly important as the market expands from green- and social-only bonds to SDG bonds. As the scope of impact of the SDGs is broad and the goals are interconnected, SDG bonds will require a more comprehensive and integrated impact thesis. The model also provides an opportunity for companies to address both the positive and negative aspects of their contribution to the SDGs.

- It ***leverages existing corporate governance mechanisms*** in place at most publicly listed companies to provide assurance for investors on the proper use of funds towards impactful activities. In this model, a specific SDG impact theory is defined and implemented as part of the company's primary strategy and monitored through its existing corporate governance procedures, including board oversight, internal and external audits, and public reporting. The model builds on ICMA's guidance and transposes the typical structure and governance mechanisms of a green bond to a corporate environment, integrating them into existing management and governance structure.

- While the model is initially proposed to expand the scale and diversity of corporate SDG bonds, it can also be used to develop a market for ***SDG-themed equity investments***.

The second part of this Roadmap provides more detailed guidance on the Model for Integrated Corporate SDG Finance.

Figure 2. Current Paradigm

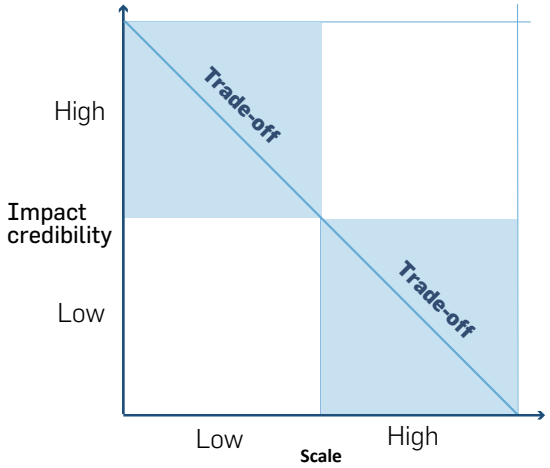
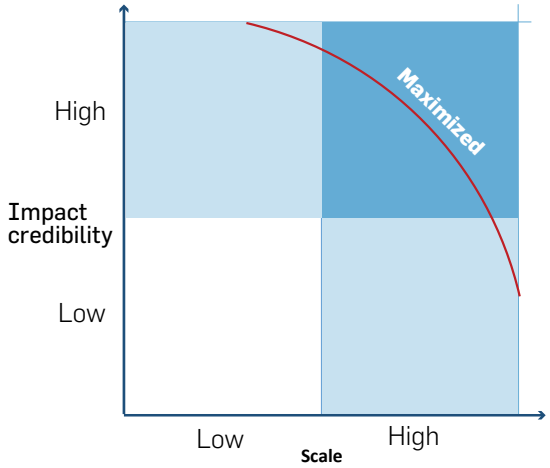


Figure 3. New Paradigm



C. LEVERAGING MARKET EFFICIENCY TO MAXIMIZE IMPACT AND SCALE

As stated in the introduction, the goal is to inspire the creation of a large liquid asset class that credibly contributes to the SDGs. However, the goals of scale and credibility can sometimes be at odds. This is because structuring considerations that help strengthen credibility can also restrict the size of the market by making financial products less standardized, and harder and more expensive to issue (see Figure 2).

A market for mainstream SDG investment would create a new paradigm where the relationship between scale and credibility can be optimized through the ***discipline and efficiency of broad capital markets*** and specific risk mitigation factors related to sustainable development (see Figure 3).

Leveraging the Scale, Discipline, and Efficiency of Broad Capital Markets

We envision a broad market for mainstream SDG investments including mainstream (or "plain vanilla") bonds — senior unsecured debt, backed by the general creditworthiness of the issuer. These include corporate bonds, sovereign bonds, and municipal bonds. These bonds usually carry a fixed interest rate, with interests payable in installments or at the end of the borrowing period, along with the principal. Unlike general loans, bonds are "securities", that they can be traded on financial exchanges or over-the-counter.

To ***ensure scale and liquidity*** of the market, we seek to replicate the traditional bond market's quasi-standardized documentation and issuance process, as well as its reliance upon high standards of accountability and transparency.

The bond market, given its size, benefits from the ***self-disciplining effect*** of large and efficient capital markets, where millions of independent agents compete for price discovery, while ensuring a high level of transparency and accountability. The promise of a 'mainstream' SDG bond market is that it can reach a critical mass of investors and market participants and benefit from the market infrastructure of mainstream bonds, including high standards of accountability and transparency.

Another advantage of a broad, standardized market for SDG investments is that investors can apply ***modern portfolio management technique***s such as diversification, pooling and securitization to lower risk and increase the flow of capital.

Mainstream capital markets can also play an essential role in ***promoting competition and price discovery*** for the most effective

solutions for sustainable development. This will spur a race to the top among companies and investees to maximize the impact investments.

When applying the ***efficient market hypothesis*** to sustainable investments, we envision that a critical mass of independent market participants could contribute to the identification and pricing of the most effective private-sector solutions to SDGs. Ultimately, an SDG investment market with enough scale, liquidity, and transparency could act as a market clearing mechanism for investments with the highest impact per unit of risk-adjusted return.

In this new paradigm, it is the role and responsibilities of investors — directly or through market intermediaries — to assess the ultimate impact of each SDG investment. Independent auditors play a key role as intermediaries in helping issuers and investors gain mutual confidence. ICMA recently released Guidelines for GSS Bond External Reviews, which outline the different types of external reviews.[13]

As with traditional financial markets, the critical element is to ensure that investors have enough information to make an informed decision. According to Sompo Japan Nipponkoa Asset Management:

> *"Sufficient disclosure through prospectus and CSR reports will enable investors to get to know issuers' activities towards SDGs. If investors are not convinced of the SDGs bond's contributions, then it will be challenging for them to invest in the issuer's SDGs bond going forward. This is how the market mechanism would work, in our view. "*

Leveraging Sustainable Development as a Risk-Mitigating Factor

All else being equal, investments that maximize opportunities to further sustainable development can benefit from better risk-adjusted returns in the long term. This is achieved by mitigating environmental, social, and governance (ESG) risks and aligning with country plans to implement the SDGs, including regulations, incentives and investment programs.

Country-level implementation of the SDGs can lower market risks

At a macro level, successful implementation of the SDGs can lead to a lower country risk premium in emerging and frontier markets.

One of the main barriers to a larger allocation of capital to the SDGs is the additional cost of capital resulting from higher risk associated with weaker country governance and lower economic development. (See Table 3 on page 13 for the yields on 10-year treasury bonds for countries in different income groups.) This not only raises the cost of capital for local Governments and companies, but it can also exclude the participation of many institutional investors whose investment mandate and fiduciary duties restrict them to investment-grade options.

However, country risk premium in emerging markets often reflects the same development and institutional gaps that the SDGs aim to address. Therefore, investors in developing countries and least developed countries with a strong commitment and successful implementation of the SDGs could expect a lower country risk premium.

Aligning SDG investments with SDG country plans can strengthen financial results

At the country level, SDG investments can benefit from the momentum created by Governments' commitments to Agenda 2030, as well as their concrete strategies and actions to meet the SDGs, as detailed in their Voluntary National Reviews (VNRs) for implementation of the SDGs and the nationally determined contribution (NDCs) to the Paris Agreement on climate change. As discussed in Section 2, aligning SDG investments to country plans for the SDG can help reinforce the credibility of the impact thesis. As a

13 *Guidelines for Green, Social and Sustainability Bonds External Reviews*, ICMA. June 2018.

corollary, alignment with SDG country plans can also lead to financial benefits such as co-investments or incentives by the public sector, potentially improving the risk-return profile of specific SDG investments. For example, businesses that implement the SDGs could attract support from key players, including the government, and receive direct or indirect support in the form of incentives, subsidies, or favorable policies and regulatory regimes. Some Government incentives have started to emerge in the green bond market, for example, to cover the additional cost of issuance.[14]

Managing and disclosing ESG risks can lower investment-specific risks

As discussed in Section 2, managing the downside risk of SDG investments helps reinforce the credibility of the impact thesis. As a corollary, managing ESG downside can also lead to better risk-adjusted returns, especially in emerging and frontier markets, by somewhat insulating the company from country-level risks and reducing the country risk premium for specific investments.

Similarly, part of the risk premium for emerging companies can be attributed to a lack of transparency on environmental, social, and governance factors. Strong disclosure and transparency practices can alleviate uncertainty, contributing to better pricing of the risk.

D. MATCHING SDG INVESTMENTS WITH MAINSTREAM INVESTORS

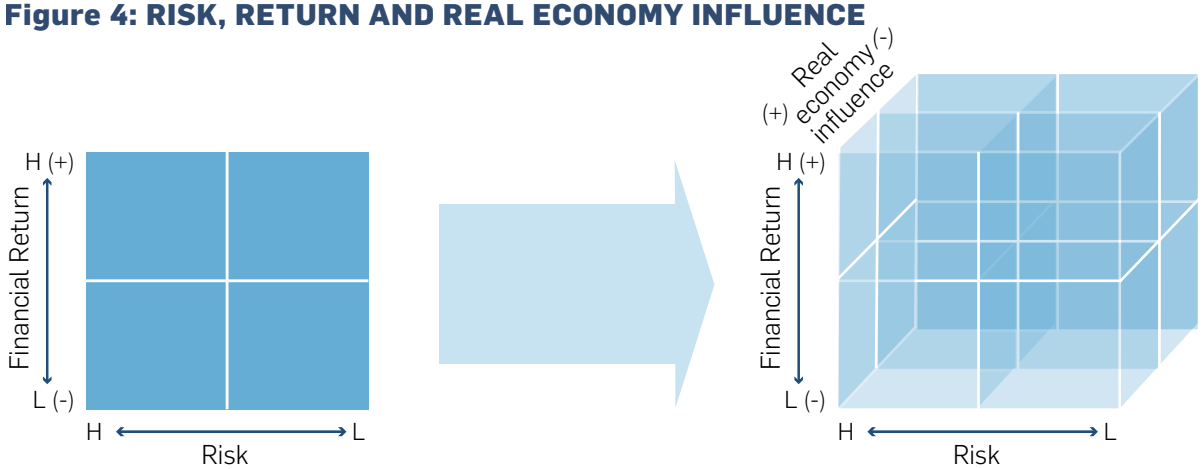
The promise of a broad market for SDG investments is that it provides a wide range of investment opportunities with different financial and sustainability characteristics. This is critical to match the equally wide range of investment goals of the millions of participants in capital markets, from individual to institutional investors.

To meet the rising demand for SDG Investments and to allocate this capital in support of SDG-related activities, new tools are needed to characterize the demand for SDG investments and to assess the risk-return profile of SDG investors. At the same time, the financial and sustainability profiles of SDG investments must be analyzed, including by rating agencies.

Assessing the Risk, Return and Impact Profile of Investors

One promising innovation is the concept of ***risk, return and impact profile***, which helps gauge investors' appetite for impact and how it competes with the traditional dimensions of investor profiles -- risk and return.[15] The concept, illustrated in Figure 4 below, can be used to match different types of investors with the right SDG investments.

Figure 4: RISK, RETURN AND REAL ECONOMY INFLUENCE



Source: *Principles for Responsible Investment*

14 In 2017, the Monetary Authority of Singapore launched a Green Bond Grant scheme to cover the costs of external reviews for green bond issuance.
15 The concept of risk-return-impact profile was introduced in 2012 in a JPMorgan research report: A Portfolio Approach to Impact Investment, Global Social Finance, 2012.

For impact investors, the model can be used to understand the trade-offs that investors are willing to make between impact and risk-adjusted returns. For institutional investors with a more restrictive fiduciary duty, it can be used to choose investments with the highest impact, given similar risk-adjusted returns.

The model could also be useful to understand the risk, return and impact profile of a certain category of institutional investors whose underlying beneficiaries have a 'natural' interest in the environmental, social, and economic impact of their investment, including:

- **Corporate pensions:** employees of sustainable companies may want their pension plans to reflect their employer's commitment to sustainability.
- **Public pension funds in emerging markets** may have a political mandate to support economic, and social development locally or regionally (e.g., the Government Employee Pensions Fund of South Africa).
- **Sovereign wealth funds** often have investment mandates that include the promotion of economic and social development of the country.
- **Philanthropic foundations** have a moral interest to invest their endowment alongside the foundations' mission.

Assessing the Risk, Return and Impact Profile of Investments

Mainstream SDG investments have unique risk-return characteristics. Some aspects -- including a focus on emerging markets and technologies--contribute to higher risks that needs to be compensated through higher returns.

At the same time, as highlighted in Section 1, investments that maximize opportunities to further sustainable development can benefit from better risk-adjusted returns in the long term. This can be achieved by mitigating environmental, social, and governance (ESG) risks and aligning with country plans to implement the SDGs.

To efficiently match investors with the relevant SDG investments, the risk, return and impact profile of SDG investments should be systematically analyzed. This information should be presented to ratings agencies and should be integrated into the rating of publicly-listed SDG investments.

E. SDG INVESTMENTS IN EMERGING MARKETS: A FOCUS ON SOVEREIGN BONDS, FOREIGN DIRECT INVESTMENT, AND BANK LOANS

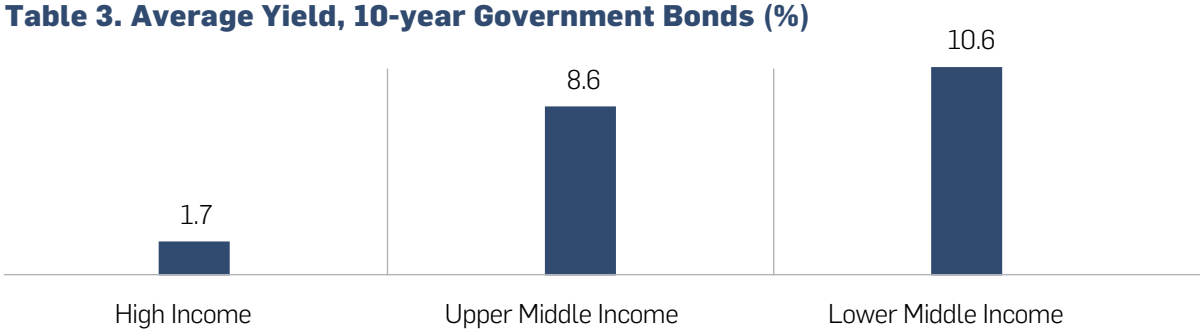
Many of the investments needed for the realization of the SDGs are in emerging markets where access to finance and capital markets is more limited than in developed countries. One key barrier to financing the SDG in emerging markets is the higher cost of capital, reflecting the actual or perceived risk of investing in these countries (risk premium). Table 3 shows that the yield (interest rate) on 10-year treasury bonds (sovereign bonds) averages 1.7% for high-income countries, versus 8.6% for upper middle-income countries and 10.6% for lower middle-income countries. Low-income countries (those with Gross National Income (GNI) per person of US$996 and under) have virtually no access to international capital markets.

In this context of limited access to capital markets and heightened investment risks, public bonds backed by the credit worthiness of Governments, direct investment by foreign companies, and bank loans constitute the main channels of private finance for the SDGs in emerging markets.

According to World Bank data, public bonds and foreign direct investment[16] (FDI) represented a large share of private capital for emerging markets, at 5.5% and 4.0% of GDP respectively, compared with private bonds at 1.0% and equity portfolio investments at 0.2% (see Table 4).

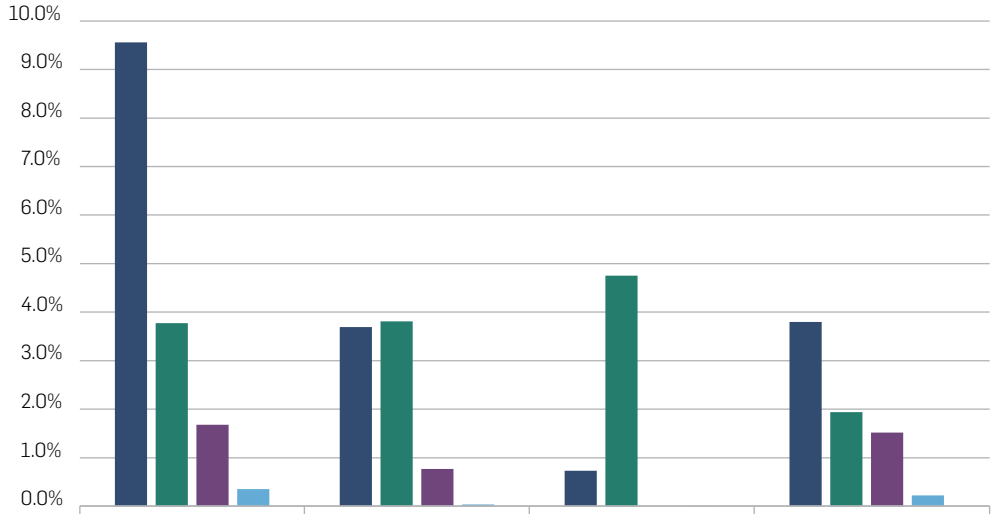
16 Foreign direct investment is a category of cross-border investment associated with a resident in one economy having control or a significant degree of influence on the management of an enterprise that is resident in another economy. Ownership of 10 percent or more of the ordinary shares of voting stock is the criterion for determining the existence of a direct investment relationship. World Bank.

Table 3. Average Yield, 10-year Government Bonds (%)



Source: UN Global Compact analysis; Trading Economics data. Average of 10-year yield on sovereign bonds as of August 2018, using World Bank country income classification. Income level based on 2017 GNI per capita: Lower middle-income between $996 and $3,895, upper middle income between $3,896 and $12,055 and High Income above $12,055.

Table 4. Source of Capital in Emerging Markets (% of GDP)



	Upper middle income	Lower middle income	Low income	All Emerging Markets
Public Bonds	9.6%	3.7%	0.7%	3.8%
FDI	3.8%	3.8%	4.8%	1.9%
Private Bonds	1.7%	0.8%	0.0%	1.5%
Portfolio Equity Flow	0.4%	0.0%	0.0%	0.2%

Source: UN Global Compact analysis; World Bank data.

Public Bonds. Public and publicly guaranteed debt from bonds that are either publicly issued or privately placed. Total outstanding.

Private Bonds. Private nonguaranteed long-term debt of a private debtor not guaranteed for repayment by a public entity. Total outstanding

FDI (foreign direct investment) rcapital. efers to direct investment equity flows from a resident in one economy owning 10% of ordinary shares of voting stock of an enterprise resident in another economy. It includes equity capital, reinvestment of earnings, and other capital.

Portfolio equity flows include net inflows from equity securities other than those recorded as direct investment and including shares, stocks, depository receipts (American or global), and direct purchases of shares in local stock markets by foreign investors.

Income levels. Countries' income level calculated based on 2017 GNI per capita, as follows: Low income: $995 or less; lower middle-income between $996 and $3,895 and upper middle-income between $3,896 and $12,055.

The situation is exacerbated in upper middle-income countries, where sovereign bonds reached 10.2% of GDP and FDI 4.1%, versus 1.7% for private bonds and 0.4% for equity portfolio investments. In low-income countries, the share of all capital market instruments drops and FDI becomes the primary source of capital.

According to UNCTAD[17], FDI constituted the most significant external source of financing for developing economies in 2017 (39%), followed by portfolio investments (18%) and bank loans (9%). In the least developed countries (LDCs), the primary sources of external finance are Official Development Assistance (ODA) and remittances. However, FDI remains a substantial source of external financing at 21% and the contribution of bank loans reaches 14%.

For developing economies, FDI is also a stable source of financing compared with portfolio investments and bank loans, which experience dramatic fluctuations over business cycles (see Table 5).

Foreign companies that make direct investments in emerging markets are often multinational enterprises (MNEs) based either in developed or developing markets with access to broad, global capital markets. These companies can be a source of SDG-related investments in emerging markets in several ways:

- A developed market company making direct investments in emerging markets
- An emerging market company making direct investments in a different emerging market
- An emerging market company raising capital abroad and repatriating the funds home

To the extent that these investments contribute to the SDGs, they can fill a significant part of the SDG funding gap in emerging markets. This is acknowledged in the Addis Ababa Action Agenda on Financing for Development, which recognizes the critical importance of FDI for sustainable development.[18]

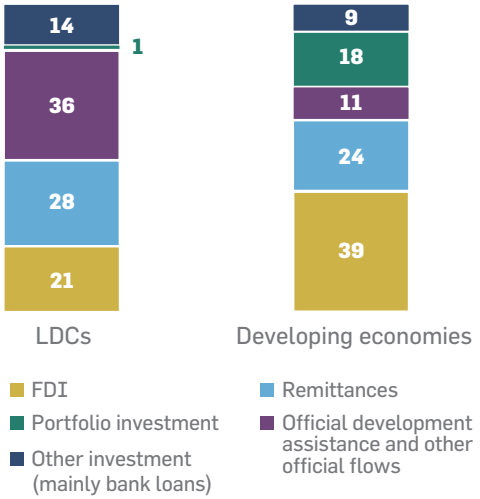
By extension, multinational enterprises raising capital through mainstream corporate finance instruments, such as general-purpose corporate bonds and equity can represent a critical source of SDG finance in emerging markets.

Similarly, banks making private loans in emerging markets and least developed countries can raise funds on the capital markets and channel a substantial amount of private capital towards SDG investments in emerging markets. (See the concept of financial intermediation for the SDGs in Section I.A. and in Section II, Step 1.)

17 *World Investment Report 2018*, UNCTAD.
18 *World Investment Report 2018*, UNCTAD.

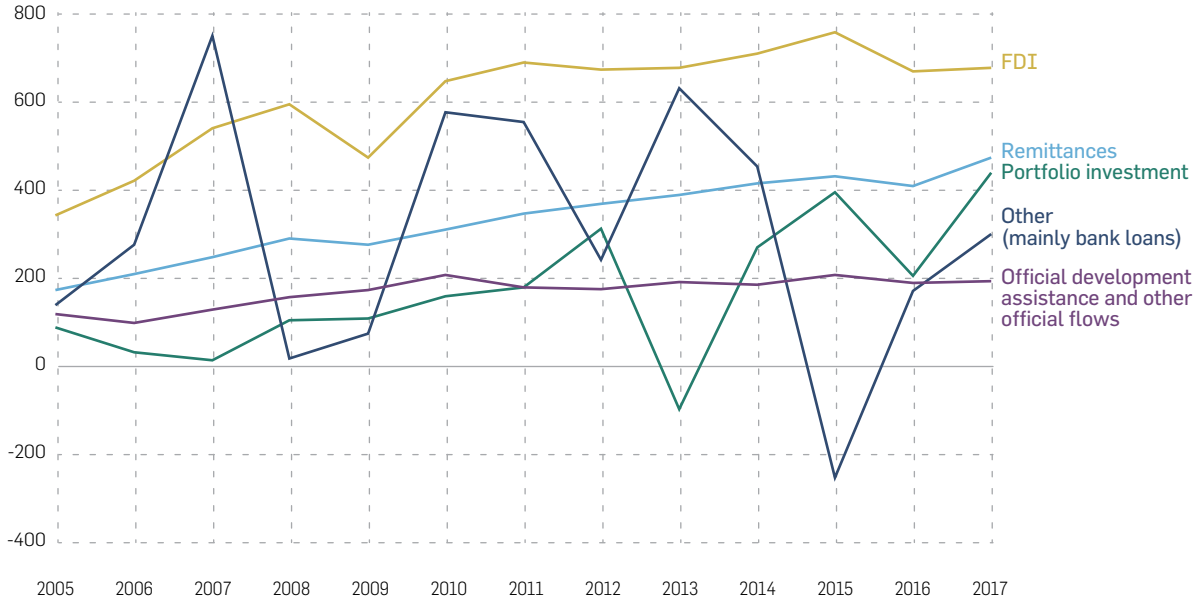
Table 5. The Importance of Foreign Direct Investments

Sources of external finance, developing economies and LCDs, 2013-2017 (Per cent)



	Growth rates (%)		
	2017	2013-2017 average	Volatility index
Developing economies			
FDI	0	0	20
Remittances	95	27	
ODA and other official flows	-1	2	19
Portfolio investment	110	-80	88
Other investment (mainly bank loans)	70	-25	90
Least developed countries			
FDI	-17	6	23
REmittances	4	3	35
ODA and other official flows	-1	2	17
Portfolio investment	21	-13	237
Other investment (mainly bank loans)	-58	6	113

Sources of external finance, developing economies, 2005-2017 (Billions of dollars)



Source: UNCTAD, World Investment Report 2018

SECTION II: AN INTEGRATED MODEL FOR CORPORATE SDG FINANCE

The goal of an integrated model for corporate SDG finance is to address the market for companies that contribute to the SDGs at the corporate level but cannot always isolate their contribution through a specific investment or a stand-alone asset. This includes companies that are entirely focused on SDG solutions, and those that are partially focused on SDG solutions, through one or several of their main activities. It also includes companies adopting sustainable business models or transitioning from potentially stranded assets due to sustainability trends.
Financing SDG activities at the corporate level has several implications:

- Rather than relying on a 'pre-qualified' set of SDG-related assets or projects, companies should create a unique impact thesis and strategy. The theory of impact should be explained in the context of the overall impact of the company, including the management of negative impacts.
- Companies should also introduce specific measurements for their theory of impact because the impact of the investment is not assumed or implicit, as it is with specific assets or projects included in taxonomies for green, social, and sustainability bonds.
- Companies should integrate their impact theory in the strategy, through goals, targets, and KPIs and monitor and report on impact through the company's main governance mechanisms (board oversight, internal controls and audit, and public reporting).
- Companies can use a variety of financial instruments to finance their SDG strategy, including use-of-proceed bonds, general-purpose bonds, and equity.

In the rest of the section, we introduce the details of a model for corporate SDG finance. We start with guidance on how to create a credible impact theory (Step 1) and how to measure and monitor the impact of SDG investments (Step 2). We also provide guidance on how the theory of impact and its measurement can be integrated in the company's main strategy, including financing, and its governance mechanisms (Step 3). Lastly, we suggest structuring considerations for general-purpose SDG bonds and how to transpose best practices in the green, social, and sustainability bond market at the corporate level (Step 4).

This approach is consistent with UNEP-FI's Principles for Positive Impact Finance, which call for a holistic consideration of impacts:

> *Positive Impact Finance is that which serves to finance Positive Impact Business. It is that which serves to deliver a positive contribution to one or more of the three pillars of sustainable development (economic, environmental and social), once any potential negative impacts to any of the pillars have been duly identified and mitigated.*[19]

The model for integrated SDG finance also fills a growing interest among investors to invest in the SDGs through general-purpose bonds and equity of companies with a positive contribution to the SDG.[20]

Describing a new fund invested only in bonds of companies with a positive, or at least neutral SDG rating, the Head of Sustainability Investing Research at RobecoSAM describes the approach as helping to "define impact in the context of publicly traded securities … providing the scale and financial returns required by the world's largest investors."[21]

19 *Principles for Positive Impact Finance*, UNEP FI, 2017. Excerpt from Principle 1, Definition.
20 For example, BlueOrchard SDB Impact Bond Fund, launched in August 2018, is a diversified portfolio of impact bonds that advance the SDGs in emerging markets, issued by development banks, commercial banks and real economy companies.
21 Robeco Global SDG Credits Strategy. See https://www.robeco.com/en/media/press-releases/2018/robeco-and-robecosam-launch-global-sdg-credits-strategy.html.

STEP 1. DEVELOPING A CREDIBLE IMPACT THEORY

A credible theory of impact[22] is a necessary starting point for issuing a general-purpose SDG bond as it substantiates how companies contribute to the SDGs outside of a pre-defined category of eligible assets and projects. It is also the basis for developing effective impact measurements and a pro-active strategy for impact based on goals, targets, and KPIs.[23]

In the following sections, we introduce important characteristics that should be considered when developing a theory of impact. We also provide guidance on how companies can develop a credible theory of impact based on (i) sustainable business models that can deliver both profits and impact, (ii) benchmarking of impact at the industry level to demonstrate competitiveness and address potential downside impact, and (iii) contribution to specific SDGs gaps and solutions identified by Governments as part of their SDG national review and country plan.

Characteristics of a Credible SDG Impact Theory

Companies should take into consideration the following characteristics when creating a credible SDG impact theory:

- **Intentional.** A credible impact thesis should be based on a proactive and deterministic view of how and to what degree a company can contribute to the SDGs. This should be defined at the onset of the investment (*ex-ante*).
- **Specific.** The impact thesis should be specific to the company, describing the unique way in which an asset or activity contributes to the SDG. This should be in addition to the impact typically associated with the assets or activities.
- **Relevant.** Impact should be relevant, based on a gap and opportunity analysis of where investments are most needed and where they can be most effective in providing solutions for the SDGs. Impact is of higher magnitude if companies are making changes where the regulatory environment is less supportive.[24]
- **Intensity.** The intensity of impact refers to the effectiveness of the proposed solution and whether it is the best way to contribute to the specific SDG gap. It should consider the level of efforts spent to make the same change in different markets. This can be assessed using a ratio of impact per dollar invested.
- **Comparable.** The impact thesis should be comparable, considering the impacts — positive or negative — that are generally associated with similar types of assets or activities.
- **Balanced.** An SDG impact theory should address not only the positive contribution of an SDG investment, but also potential downsides in terms of environmental and social impacts.
- **Measurable.** Impact should be measurable, using targets and indicators that can be measured and tracked over time.
- **Integrated**. The SDG impact theory should be integrated into the company's strategic management and governance procedures.

This approach is consistent with several emerging frameworks for impact measurement of investments, including IFC's new AIMM framework (see Box 1).

22 The terms "impact theory" and "impact thesis" are used interchangeably.

23 Guidance on developing an impact theory (Step 1) and measuring and monitoring impact (Step 2) was developed for general-purpose SDG bonds. However, it can also be used to add credibility to corporate use-of-proceed bonds.

24 For example, the relevance of providing low-income access to medicine is based on the incidence of a certain disease among under-privileged population in the specific country targeted.

Box 1. IFC's Anticipated Impact Measurement and Monitoring (AIMM) Framework.

AIMM is IFC's new framework for impact measurement. It is designed to estimate, monitor, and measure the expected — or "ex-ante" — development impact of projects. The measurement framework is also based on a combined assessment of (i) the development gap that investment is designed to fill and (ii) the intensity of impact (or impact per dollar invested). It builds upon DOTS, IFC's previous impact measurement system.

Suggested Elements of a Theory of Impact

In this section, we provide practical suggestions on how to develop an impact theory that is unique, comparable, and relevant. This is based on sustainable business models, industry benchmarks and alignment with country plans.

Business Models for the SDGs

As outlined in the previous section, a credible impact theory should be unique and describe the specific way in which the company plans to contribute to the SDGs. For a company, an SDG impact thesis should be developed at the business level, describing new sustainable business models or market opportunities that are aligned with the SDGs and can deliver both impact and profits.

New Business Models

New sustainable business models, such as "circular economy", "sharing economy", or "inclusive economy", are scalable solutions to make business less resource intensive and more inclusive, keeping in line with many of the SDGs. These models maximize the resource efficiency of production, consumption, and the usability of products or assets. They include:

- Renewable energy, and energy resilience and efficiency
- Closed-loop manufacturing
- Extending the lifetime of products
- Product-as-a-service
- Leasing vs. owning
- Sharing products and assets with a low-use rate

For example, with the product-as-a-service and leasing models, the incentive for lifecycle efficiency of products shifts from the consumer to the producer, providing strong economic incentives for energy efficiency and product longevity, safety, and maintenance. The model also reduces upfront financing costs for buyers, which can ease access for low-income populations for products deemed as necessities.

In its upcoming position paper on *Rethinking Impact to Finance the SDGs*[25], UNEP FI suggests that an inclusive and holistic approach for impacts could become the drivers of a "complete disruption in business models", where positive impacts become the drivers of long-term value creation, rather than externalities of product/service centric business models. This would include companies integrating impact-value chains (e.g. around impact themes such as mobility, energy access and efficiency) and providing multi-impact solutions. These approaches, in isolation or combined would result in a significant reduction of cost-to-impact ratios, making the SDGs more "affordable" and therefore more achievable.

New Markets and Consumers

Ending poverty, reducing inequality, and ensuring universal access to necessities — all key pillars of the SDGs — can lead to the creation of new markets or the growth of existing markets. These new markets and consumers include:

- Bottom-of-the-pyramid (BoP) models for affordable products and services
- Emerging middle class resulting from

25 *Rethinking Impact to Finance the SDGs, A Position paper and Call to Action*, UNEP FI's Positive Impact Initiative (November 2018).

poverty eradication, creating potential new paying consumers for essential needs, including healthcare and energy

- Rising income from reducing inequality

Transitioning (Stranded) Assets

While achieving the SDGs is expected to open opportunities for new technologies and markets in many sectors, it may also render certain assets and solutions less relevant, or even undesirable. For example, the clean energy transition may cause some incumbent assets in the power industry to become obsolete. These are sometimes described as 'stranded assets'.[26]

While it is understandable for investors to want to identify 'stranded assets' and reduce their exposure, there may be a societal loss when these assets, which represent substantial economic investments and significant source of employment, are abandoned.[27] Therefore, there is an opportunity to create positive social impact by financing new assets and technology, as well as the transition process that companies must put in place to change their business model or adopt new technologies. This could include re-purposing or retiring older assets, and retraining workforces.

The goal is to enable an orderly transition of stranded assets while minimizing economic and social impacts.

Financial Intermediation

Financial intermediation plays a critical role in providing private capital for the SDGs when capital markets are not available, and it can be the basis for a compelling SDG impact theory. In fact, many social bonds and sustainability bonds (including all those designated as SDG bonds) were issued by financial institutions (e.g., ANZ, HSBC, Société Générale and the World Bank). Some of the benefits of financial intermediation include:

- **Financial access**. Banks and other financial institutions can raise funds in the public capital markets to back SDG-related activities that cannot be financed through the public capital markets.

Table 6. Example of SDG Bonds for Financial Intermediation — ANZ

Excerpt from Bond Prospectus, Eligible Categories Detail

3 GOOD HEALTH AND WELL-BEING	**Elegibility Criteria:** Activities that provide access to essential health-care services, promote mental health and wellbeing and achieve universal health coverage **Examples:** Public hospitals, private hospitals that are non-for-profit or provide social benefit programs to disadvantaged communities, aged care services
4 QUALITY EDUCATION	**Elegibility Criteria:** Activities that promote equal access for all men and women to affordable and quality education **Examples:** Technical, vocational and tertiary education providers, construction of facilities such as tertiary campuses, universities, student housing or training infrastructure
6 CLEAN WATER AND SANITATION	**Eligibility Criteria:** Activities that provide access to safe and affordable drinking water, improve water quality and/or increase water use efficiency **Examples:** Water treatment facilities, water supply and distribution, water recycling facilities
7 AFFORDABLE AND CLEAN ENERGY	**Eligibility Criteria:** Activities that increase the share of renewable energy in the global mix, and expand infrastructure and upgrade technology for supplying modern, reliable and sustainable energy services for all **Examples:** Wind, solar, hydro power, biomass, or geothermal generation, as well as energy efficient technologies in new and refurbished buildings, energy storage, district heating or smart grids

Source: ANZ

26 'Stranded assets' are assets that have suffered from unanticipated or premature write-downs, devaluations or conversion to liabilities. Source: Stranded Assets Programme, They can be caused by a range of environment-related risks and these risks are poorly understood and regularly mispriced, which has resulted in a significant over-exposure to environmentally unsustainable assets throughout our financial and economic systems. University of Oxford's Smith School of Enterprise and the Environment.

27 See research on this topic by the Climate Policy Initiative. See for example: Moving to a Low-Carbon Economy: The Impact of Policy Pathways on Fossil Fuel Asset Values. October 2014.

- **Multiplier effect.** Financial intermediation leverages the original investment into many more investments or financing at the local level, with high potential for SDG impact. It can also trigger the multiplication effect of money creation typical in well-functioning economies.
- **Local ownership.** If done at the local level, financial intermediation can result in a local transfer of ownership of real and financial assets, driving further economic and social development.
- **Leverage for impact.** Banks and other financial institutions have more leverage than public investors when negotiating financing terms and can more easily require commitments from clients to maximize the SDG impact of their activities.

See Table 6 for excerpt from ANZ's SDG Bond prospectus that details various banking-related activities that will be financed by the bond.

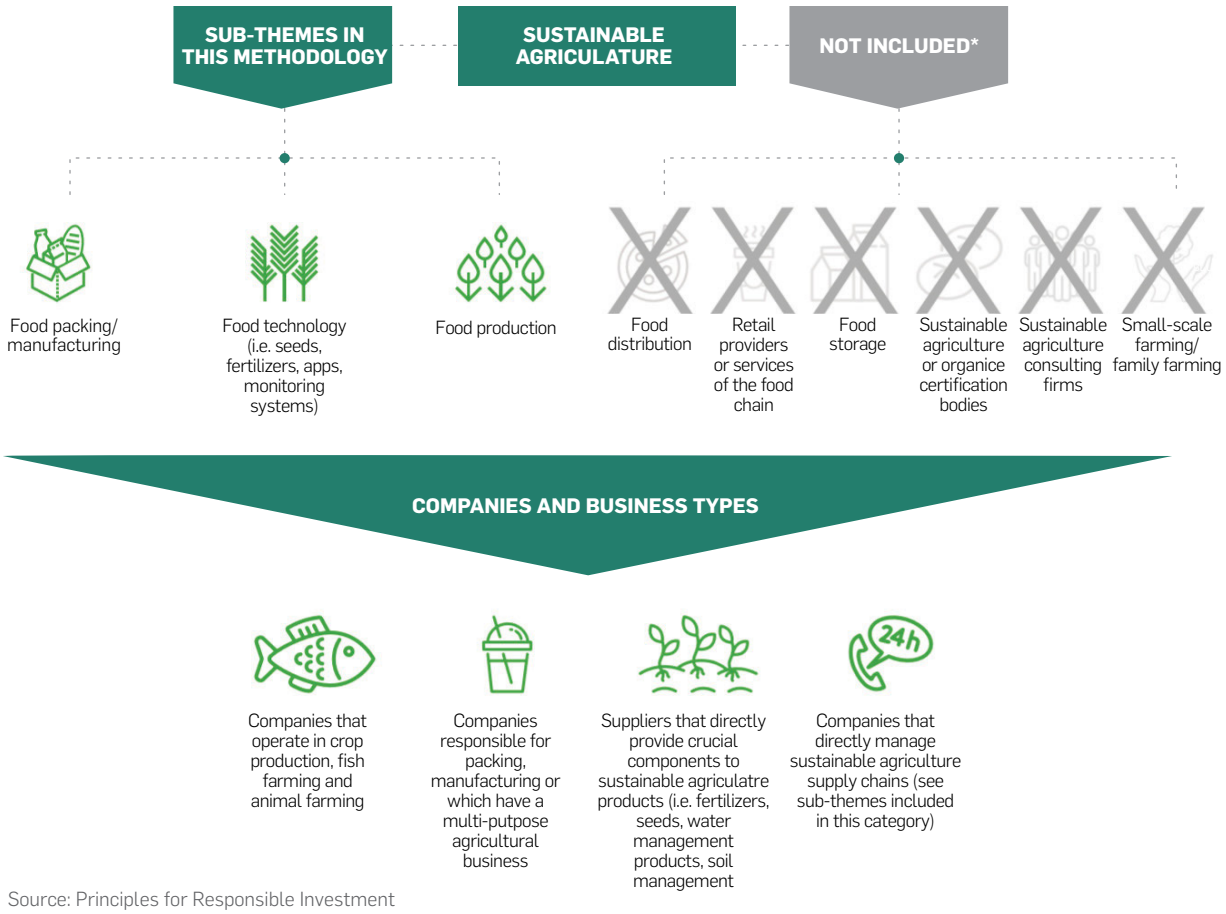
Industry-Level Contribution

An industry analysis of the most relevant SDGs can help companies prioritize and align their efforts with industry peers to leverage the power of collective action. It can also establish benchmarks to compare companies and their positive and negative contributions to the SDGs.

Prioritizing and Aligning Sector Contribution to the SDGs

A sector approach to SDG contribution is an opportunity to prioritize and maximize the SDG contribution of companies in a specific sector. Maps of SDG contribution by industry, such as the UN Global Compact-KPMG SDG Industry Matrix,[28] can guide companies when selecting the SDGs that are most relevant.

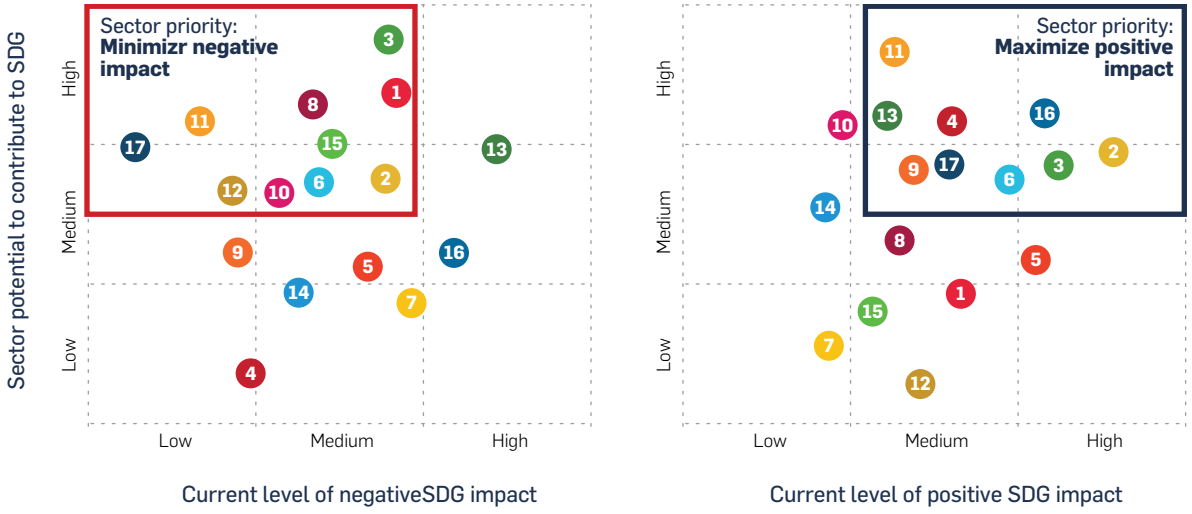
Figure 6. PRI Impact Investing Market Map (Excerpt)



Source: Principles for Responsible Investment

28 *SDG Industry Matrix*, UN Global Compact, KPMG, 2015. https://www.unglobalcompact.org/library/3111

Figure 7. Sectoral SDG Matrices



Source: WBCSD

When constructing their theory of SDG impact, companies can refer to a recent PRI publication on Impact Investing Market Map[29] (see Figure 6). The Map provides a practical link between the SDGs and real-world impact investment opportunities around ten environmental and social investment and business themes which, by their nature, are intended to contribute to sustainability and the SDGs.

The areas include:

- Energy efficiency
- Green Buildings
- Renewable energy
- Sustainable agriculture
- Sustainable forestry
- Water
- Affordable housing
- Education
- Health
- Inclusive finance

A sector approach can also help companies align their SDG contribution with peers, to maximize impact. In its SDG Sector Roadmaps, the WBCSD articulates how industry sectors can contribute to the achievement of the SDG agenda and establish a common pathway for companies in an industry to accelerate and optimize their contribution (see Figure 7).

Lastly, a sector approach can be helpful in assessing companies' competitiveness in delivering positive impact while addressing the potential downsides of activities, based on the negative impacts generally associated with the industry. The SDG Sector Roadmaps also feature a sectoral SDG materiality matrix that highlights areas (a) where companies can make the most difference and (b) where the need is greatest in terms of (i) mitigating negative impact and (ii) maximizing positive impact.

Benchmarking

As discussed in the previous section, the impact thesis should be ***comparable*** and consider the positive or negative impacts that are generally associated with similar types of assets or activities. This can be done through a comparison of the company's SDG contribution with industry peers. This is the mission of the World Benchmarking Initiative, to provide free, publicly available corporate sustainability benchmarks based on sector-level contribution to the SDGs.

The previous section also suggests that the impact theory should be ***balanced*** and address both positive and negative contributions to the SDGs. Industry benchmarking can provide a comparable set of key areas where companies in a specific industry can maximize positive

29 *Impact Investing Market Map*, Principles for Responsible Investments, 2018.

Resources: SDG Compass

The SDG Compass guides companies on how they can align their strategies as well as measure and manage their contribution to the realization of the SDGs. It presents five steps that assist companies in maximizing their contribution to the SDGs: understanding the SDGs, defining priorities, goal setting, integrating sustainability and reporting. The Compass was developed by GRI, the UN Global Compact, and the World Business Council for Sustainable Development (WBCSD).

Resources: Examples of SDG Impact Theories and Strategies

In Appendix B, we present a few examples of impact theories and strategies by large publicly listed companies in the energy, food, and manufacturing sectors:

- **Danone** (Food and Beverage)
- **Iberdrola** (Energy Production)
- **Terna** (Energy Transmission and Distribution)
- **Enel** (Integrated Energy)
- **Pirelli** (Auto Parts)

impacts while minimizing negative impacts (see Figure 7, left quadrant).

Implementation Processes and Quality (Managing the 'How')

While the visible and measurable achievements play a major role in assessing the SDG contribution of companies, implementation processes and quality of deliverables should also be taken into consideration. Typical elements include:

- Safety, reliability, resilience, and economic efficiency given life-cycle cost and sustainability. This is most relevant for social services and infrastructure.
- Social and environmental considerations, including protection measures and stakeholder participation in preparation and implementation.
- Local job creation and transfer of expertise and know-how to contribute to sustainable growth.

Location-Specific and Alignment with SDG Country Plans

In the previous section, we suggesn t that the impact thesis should be ***relevant*** based on a gap and opportunity analysis of where investments can be most effective in providing SDG solutions. This can be done by considering the specific challenges that countries face in implementing the SDGs and aligning with their economic, social, and environmental policies and strategies.

As part of their implementation of Agenda 2030, countries develop a series of national, regional, and local strategies and programs that are documented in their VNRs (Voluntary National Reviews) and NDCs (Nationally Determined Contribution) and translated in national development plans.

These national plans can provide roadmaps for the private sector to invest in the SDGs, focusing on the unique needs and challenges in their country. They provide a baseline indication of where countries stand in their implementation of the SDGs and the gap that can be filled by private sector solutions and private capital. They also provide a sense of how Governments prioritize among the different SDGs based on the situation in the country. Instead of having to make a judgment where investments are most needed, investors can use these SDG country plans to prioritize their investments and maximize impact at the local level.

Alignment with SDG country plans can also increase the overall scale and intensity of impact by contributing to a collective effort. For example, if a country has committed to climate mitigation through a meaningful deployment of solar energy capacity, there is additional impact effectiveness when businesses invest in building solar energy capacity in the country.

Lastly, as described in Section 1, investing alongside countries' SDG plans can also lead to better financial returns since these activities will likely receive direct or indirect support from the Government in the form of incentives, subsidies, or favorable policies and regulatory regimes. In turn, this can lead to more stable and longer-term private-sector solutions to the SDGs.

STEP 2. MEASURING AND MONITORING THE IMPACT OF SDG INVESTMENTS

In this section, we provide guidance on how the impact of SDG investments can be credibly measured and tracked.

The method for measuring and monitoring the impact of SDG investments should be directly related to the impact thesis (Step 1) and the structuring considerations for general-purpose corporate SDG bonds (Step 4). There are two critical considerations when measuring and tracking the impact of SDG investments:

- Reflecting the uniqueness, intentionality, and relevance of companies' theory of impact
- Comparability with peers to ensure benchmarking and accountability

Reflecting a Company's Unique Theory of Impact

As described in the previous section, a credible impact thesis should be **unique**, **intentional, and relevant.** Similarly, measuring and monitoring the impact of corporate SDG investments should be based on pre-defined goals, targets, and indicators that reflect the unique impact theory of the company and its relevance, and allow investors to monitor progress in its implementation. This includes measures that reflect the input and output of activities or assets. It can also include a measurement of the actual impact generated in the context of specific gaps in the realization of the SDGs.

At a broad level, we can distinguish two methods to measure proactive and intentional impact theories: effort-based methods (input) and result-based methods (output and outcome). See Figure 8.

Effort-Based Method (Input)

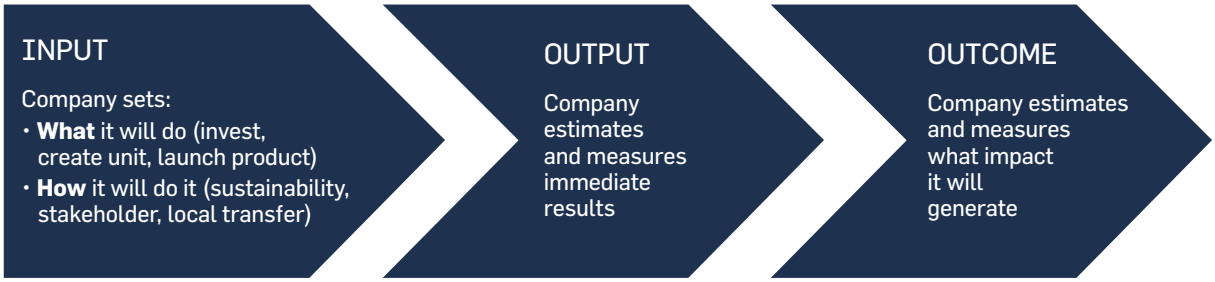
Effort-based methods consist in tracking the resources and efforts required to achieve impact (the "input"). It is ideal when there is a high correlation between efforts and results (e.g., investments in a solar power plant and reduction in GHG emissions). Effort-based measures of impact take two forms: monitoring investments, either external or internal, and monitoring strategic initiatives.

Monitoring Investments

Monitoring investments — internal or external — is the most straightforward form of impact measurement. For example, a company could invest internally in R&D for new products and services or a new production technology (e.g., clean energy and supply chain monitoring). It could also make an external investment to enter new markets. Similarly, a bank can invest internally in data security technology or it can invest externally, providing financing to access essential services, energy efficiency technology or renewable energy capacity.

In this case, impact can be measured through

Figure 8. Comprehensive Model for Impact Measurement



the amount and quality of investments in impactful areas. In other words, the focus is on the strategic deployment of capital toward impactful activities. This is the primary method for measuring the impact of green and social bonds, where the use of proceeds is restricted for eligible assets and projects that are 'pre-qualified' for impact.

For banks and financial institutions, an essential part of this strategic deployment of capital is to conduct the necessary due diligence and include contractual conditions in to ensure downstream impacts of loans and other financial services. For example, a bank could include strong covenants for energy efficiency or other responsible business practices in its corporate loans.

Monitoring Strategic Initiatives

Effort-based measurement can also take the form of **internal strategic efforts or initiatives**. For example, to launch SDG-related products and services, improve the energy efficiency of internal operations, train employees to transition to new technology, or improve working conditions in supply chains. This type of measurement is ideal for companies that contribute to the SDGs through their overall organization and capabilities rather than through a specific financial investment or an asset that can be separately managed.

In this case, impact measurement can be done by establishing strategic goals and targets, followed by reporting on performance against these targets using key performance indicators (KPIs). For example, if a strategic goal were to improve working conditions in the supply chain, targets could be developed around the implementation of safety procedures and training. KPIs could then measure the stage of application of safety procedures and the number of employees allocated to safety training.

Result-Based Method (Output and Outcome)

Result-based methods can be grounded either on direct outputs (first-degree impact) or the ultimate outcome (second-degree impact) of SDG investments or strategic initiatives.

Output-Based Measures

Output-based measures focus on the amount or quantity produced by an investment or strategic effort to promote the SDGs. For example, if the purpose of an SDG investment were to finance the construction of a solar power plant, the output could be the amount of solar-powered electricity produced. If the goals were to build capacity to provide basic goods or services to underserved populations, the output could be the number of goods sold and services provided. If funds were targeted for financial intermediation to empower certain communities or provide access to basic needs, the output could be the number of loans and financial services to targeted communities.

Outcome-Based Measures

Outcome-based measures of impact focus on the consequences of investments or strategic initiatives, beyond their direct output. Staying with the examples above, the outcome from investments in clean energy could be the total reduction in GHG emissions and the outcome of providing financial access could be increased economic opportunities and a rise in income and standard of living. Other examples include impact on education (SDG 4) and reduction in inequalities (SDG 10).

The benefit of outcome-based indicators is that they can relate the company's contribution to the official goals and targets of the SDGs and provide insight into how the company is addressing a specific SDG gap, at the country, regional or global levels. In other words, it speaks to the relevance of impact, a critical element of the impact theory (see previous section).

As a result, outcome-based indicators can be considered the ***highest form of impact measurement***.

However, they can also be the ***most challenging*** and often require assumptions on causality and the exact role of the issuer in bringing about the impact. Outcome-based measurements are particularly challenging in the following situations:

- When outcomes sought are not necessarily within the company's control, for example,

Resources: Impact Management Project

Impact Management Framework:

WHAT	HOW MUCH	WHO	CONTRIBUTION	RISK
What outcomes(s) does the effect relate to, and how important are they to the people (or planet) experiencing it?	How significant is the effect that occurs in the time period?	Who experiences the effec and how underserved are they in relation to the outcome(s)?	How does the effect compare and contribute to what is likely to occur anyway?	Which risk factors are material and how likely is the effect different from the expectation?
1	2	3	4	5

efforts to improve working conditions or the environmental footprint of supply chains.

- When outcomes are less correlated to investments or efforts, for example, the impact of financial access on economic development.

Another challenge is the lack of impact data. While empirical measurement remains a reference point, it is necessary to complement these tools with predictive models and the use of proxies, including taxonomies.

In developing an outcome-based measurement of impact, companies should consider the impact measurement framework developed by the Impact Management Project, a collaborative effort to build consensus on how to measure and manage impact — and therefore goals and performance.

Allowing for Comparability

While measurements of SDG impact should reflect the company's unique theory and strategy for impact, it should also be **comparable** to allow investors to benchmark the company's impact against peers in similar industries, locations, and operating contexts and assess the effectiveness of the proposed solution. It should also help investors ensure that the company is accountable for the negative impact typically associated with its activities.

Measuring and monitoring of SDG impact should include comparable indicators for similar investments. This means business-level indicators the SDG impacts that are typically associated with the company's industry.

Guidance on this topic can be found in a series of recent publications and guidance by the

Resources: Corporate Reporting on the SDGs

Business Reporting on the SDGs: An Analysis of Goals and Targets
This joint publication from the UN Global Compact and GRI contains a list of existing and established disclosures that businesses can use to report, and identifies gaps when disclosure is not available. It also lists illustrative actions that companies can take to make progress towards the SDG targets.

Integrating the SDGs into Corporate Reporting: A Practical Guide
This joint publication by the UN Global Compact and GRI helps companies of all sizes prioritize SDG targets so they can set related business objectives, measure them, and report on progress.

In Focus: Addressing Investor Needs in Business Reporting on the SDGs
This joint publication by the UN Global Compact and GRI provides additional information about investor-relevant aspects of corporate SDG reporting.

Table 7. Relevant SDGs, Targets and Indicators for Companies (Excerpt from Appendix A)

Goal 7. Ensure access to affordable, reliable, sustainable, and modern energy for all	
7.1.1	Proportion of population with access to electricity
7.1.2	Proportion of population with primary reliance on clean fuels and technology
7.2.1	Renewable energy share in the total final energy consumption
7.3.1	Energy intensity measured in terms of primary energy and GDP
7.2.1	Renewable energy share in the total final energy consumption
7.3.1	Energy intensity measured in terms of primary energy and GDP
Goal 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment, and decent work for all	
8.10.1	(a) Number of commercial bank branches per 100,000 adults and (b) number of automated teller machines (ATMs) per 100,000 adults
8.10.2	Proportion of adults (15 years and older) with an account at a bank or other financial institution or with a mobile-money-service provider
8.4	Improve progressively, through 2030, global resource efficiency in consumption and production and endeavour to decouple economic growth from environmental degradation, in accordance with the 10-Year Framework of Programmes on Sustainable Consumption and Production, with developed countries taking the lead
8.5.1	Average hourly earnings of female and male employees, by occupation, age, and persons with disabilities
8.5.2	Unemployment rate by sex, age, and persons with disabilities
8.7.1	Proportion and number of children aged 5—17 years engaged in child labour, by sex and age
8.8.1	Frequency rates of fatal and non-fatal occupational injuries, by sex and migrant status
8.8.2	Level of national compliance with labour rights (freedom of association and collective bargaining) based on International Labour Organization (ILO) textual sources and national legislation, by sex and migrant status

Legend: **writing in blue for positive contribution**; **writing in black for mitigation of negative impact**.

Source: United Nations

UN Global Compact and GRI on Corporate Reporting on the SDGs (see Resources box "Corporate Reporting on the SDGs").

Leveraging the SDGs' Targets and Indicators

Companies can directly use many of the targets and indicators behind the SDGs to measure their contribution. Table 7 provides an excerpt of relevant SDGs, targets, and indicators for companies, including those measuring a positive contribution towards the SDGs (in blue) and those measuring efforts to mitigate the potentially negative impact (in black). A full list of goals, targets, and indicators relevant for business is included in Appendix A.

STEP 3. INTEGRATING SDG IMPACT IN CORPORATE STRATEGY AND GOVERNANCE

Our model for corporate SDG finance is premised upon the integration of SDG impact in the company's core strategy, governance, and financing. It also reflects a company's gradual transition toward the SDGs.

Strategy

The company's unique theory of impact and its measurement (Steps 1 and 2) should be translated into a pro-active 'SDG strategy' and integrated into the core company strategy with specific goals, targets, and KPIs.

A key aspect of this integration is to demonstrate impact in the context of the company's overall activities, including not only positive contributions to the SDGs, but also an assessment and mitigation of negative impacts.

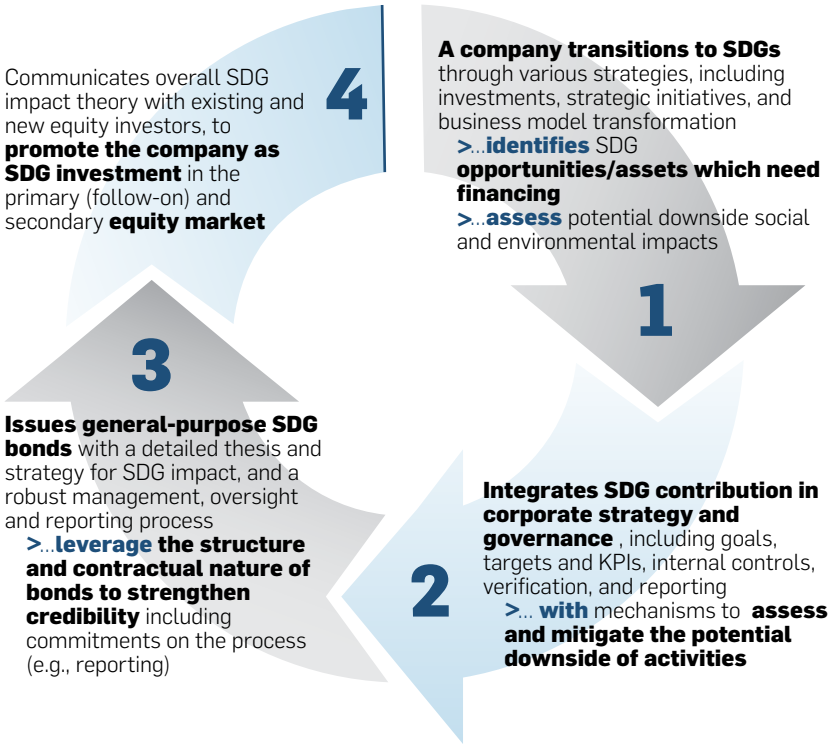
The SDG strategy should also be translated into funding needs and specific investment plans (e.g., R&D, capital expenditures, and other internal investments).

Governance

Monitoring of the SDG strategy should be integrated into the company's existing corporate governance mechanisms, including oversight by the board of directors (or a specialized committee), internal control and audit, and reporting through the main communication channels for financial and sustainability information.

A key element of this integration is to use governance mechanisms to assess and mitigate the potential downside of activities.

Box 2. CORPORATE SDG FINANCE: REFLECTING A COMPANY'S GRADUAL TRANSITION TOWARDS THE SDGS



Source: UN Global Compact. This model is also consistent with UNEP-FI's upcoming Positive Impact Framework for Corporates.

Financing

The SDG strategy should be financed as part of the overall corporate finance program using a variety of financial instruments, including loans, bonds, and equity.

Initially, companies can leverage specific SDG assets or activities with more impact-oriented investors by issuing use-of-proceed bonds with strict monitoring of how the funds are used.

As the market matures and companies fully integrate their SDG contribution in strategy and governance, companies can start issuing general-purpose SDG bonds, leveraging internal corporate governance mechanisms, and the bond markets' credibility mechanisms (see Step 4 for additional guidance).

Eventually, the SDG impact theory can be communicated to a broader set of investors who typically invest in the general bonds and equity of the company, promoting the overall company as an SDG investment.

STEP 4. STRUCTURING CONSIDERATIONS FOR GENERAL-PURPOSE CORPORATE SDG BONDS

In this step, we provide guidance on how companies can issue general-purpose SDG bonds that maximize both scale and impact. We also introduce a progression matrix to maximize credibility and scale, as well as considerations for different types of issuer and market conditions.

Introducing a Model for General-Purpose SDG Bonds

The goal of general-purpose SDG bonds is to maximize both scale and credibility by leveraging traditional bond structure and corporate governance mechanisms and transferring some of the best practices from the green, social and sustainability (GSS) bond market.

Below are some examples of how corporate governance mechanisms and the bond documentation can be used to issue general-purpose SDG bonds:

(1) **Bond Prospectus.** The prospectus (or offering memorandum) is a document that is legally required when advertising a bond to investors. It can be used to describe the company's SDG strategy and its theory of impact, including the mitigation of downside impacts.

(2) **Use-of-proceeds.** Bond indentures typically include a description of the use-of-proceeds, although these are generally non-binding. A use-of-proceed clause in SDG bonds can be used to describe specific investments that the company is contemplating as part of its SDG strategy.

(3) **Corporate governance.** Traditional corporate governance mechanisms such as board oversight, internal controls and audits can be used to ensure a transparent process for monitoring and reporting the implementation of the company's SDG strategy.

(4) **Independent verification.** Existing processes for an external audit of

Table 8. Progression Matrix for Structuring SDG Bonds

	Less <<<		**Credibility** >>>		More
Scope of Activities	Isolated positive activities inside a company (with account of negative impact)	+	Positive and negative impact of other corporate activities	→	Overall & strategic business contribution to the SDGs
Impact Thesis	Unintentional Existing activities	→	Intentional New activities	+	Impact defined ex-ante with targets and KPIs
Impact Measurement	Use of proceeds or strategic goals (effort-based)	+	Output (result-based)	+	Outcome (result-based)
Governance Mechanisms	Definition of, and disclosure on, use-of-proceed and/or strategic goals	+	Internal controls (board oversight, risk management, internal audit)	+	External audit / verification
Contractual obligations	Commitment to disclosure	+	Commitment to internal controls	+	Commitment to external audit / verification

Notes: - "+" denotes that items are additional to those in the left column. "→" denotes a new approach.
This matrix is not meant to provide a threshold as to what qualifies as an SDG bond. Rather, it indicates a direction of travel for improving credibility in key areas for structuring these bonds.

Source: United Nations

financial information and assurance of sustainability information can be used for an independent verification of financial and non-financial information related to the implementation and results of the SDG strategy.

(5) **Disclosure and Transparency.** Existing investor communication channels can be used to report on the implementation of the SDG strategy and measurement of impact, including the annual, sustainability, or integrated reports.

The model also introduces some of the best practices in the GSS bond market to a corporate-wide context. For example, one of the key sources of credibility of green bonds is the strict definition and monitoring of use-of-proceeds, assuring investors that the funds are used for a set of pre-determined eligible assets or activities.

By contrast, general-purpose bonds do not allow investors to track the exact allocation of funds. However, other mechanisms can be used to ensure that the company is accountable for using the funds on activities that contribute to the SDGs. For example, the functional equivalent of defining the use-of-proceeds for a green bond would be to define a credible theory of impact and translating it into an SDG strategy with specific goals and KPIs that can be monitored and reported. Also, tracking the use of green bond proceeds for eligible activities can be replicated through board oversight to ensure that the company delivers on its strategy and makes effective use of its financial and other resources.

Progression Matrix to Maximize Credibility and Scale

The matrix below (Table 8) shows different internal processes, structure and contractual conditions that can strengthen the credibility of general-purpose SDG bonds with levels of progression within each. It shows a hierarchy of how potentially restrictive the process, structure and contractual conditions are on the liquidity and scale of investments. The matrix can be used to choose different permutations of elements and select the structure that maximizes both impact and scale in the context of a specific company or investment.

The matrix allows for experimentation and progress as market participants build a new class of SDG investments. Companies and other issuers can use it to continuously improve the credibility of their SDG bonds as they compete for SDG-related capital. Investors can use it to calibrate the trade-off between credibility-related restrictions and the risk-return profile they are willing to accept.

Adapt the Bond Structure to the Type of Issuer and Market Conditions

In large part, the right structure will depend on the type of company and the theory of impact:

- **The type of issuer --** whether the issuer is a multinational company with some of its activities focused on the SDGs or a small company entirely focused on SDG solutions (pure-play)
- **The role of an issuer in contributing to the SDGs** whether it is through internal operations, products, and services or investments
- **The type of impact measurement** – its measurement difficulty and credibility.

The right structure for SDG bonds also depends on the sophistication of the underlying capital market and market conditions:

- **Sophistication of the underlying capital market**. This may change in different countries, based on the level of corporate governance, transparency, and disclosure (including on ESG) and market efficiency, and would drive the desirability of specific governance structures, contractual obligations, etc.
- **Market conditions**. Depending on supply and demand for SDG-related capital, competition among issuers (an investor's market) may lead to a race to the top in terms of quality of structuring considerations, including contractual obligations. Conversely, competition among investors for SDG-related investments (an issuer's market) could mean that issuers only need a minimal framework that is sufficiently credible for investors given the market infrastructure and other outside considerations. ***Ultimately, the 'right' level of contractual conditions and structuring considerations will depend on investors' willingness to pay for it.***

APPENDIX A:
RELEVANT SDGS, TARGETS AND INDICATORS FOR COMPANIES

(*Legend*: **writing in blue for positive contribution**; **writing in black for mitigation of negative impact**)

Goal 1. End poverty in all its forms everywhere	
1.4.1	Proportion of population living in households with access to basic services
Goal 2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture	
2.1.1	Prevalence of undernourishment
2.1.2	Prevalence of moderate or severe food insecurity in the population, based on the Food Insecurity Experience Scale (FIES)
2.3.1	Volume of production per labour unit by classes of farming/pastoral/forestry enterprise size
2.3.2	Average income of small-scale food producers, by sex, and indigenous status
Goal 3. Ensure healthy lives and promote well-being for all at all ages	
3.3.1	Number of new HIV infections per 1,000 uninfected population, by sex, age, and key populations
3.3.2	Tuberculosis incidence per 100,000 population
3.3.3	Malaria incidence per 1,000 population
3.3.4	Hepatitis B incidence per 100,000 population
3.3.5	Number of people requiring interventions against neglected tropical diseases
3.4.1	Mortality rate attributed to cardiovascular disease, cancer, diabetes or chronic respiratory disease
3.6.1	Death rate due to road traffic injuries
3.7.1	Proportion of women of reproductive age (aged 15—49 years) who have their need for family planning satisfied with modern methods
3.8.1	Coverage of essential health services (defined as the average coverage of essential services based on tracer interventions that include reproductive, maternal, newborn and child health, infectious diseases, non-communicable diseases and service capacity and access, among the general and the most disadvantaged population)
3.8.2	Proportion of population with large household expenditures on health as a share of total household expenditure or income
3.9	By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water, and soil pollution and contamination
Goal 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all	
4.2.1	Proportion of children under 5 years of age who are developmentally on track in health, learning and psychosocial well-being, by sex
4.2.2	Participation rate in organized learning (one year before the official primary entry age), by sex
4.3.1	Participation rate of youth and adults in formal and non-formal education and training in the previous 12 months, by sex
4.4.1	Proportion of youth and adults with information and communications technology (ICT) skills, by type of skill
4.6.1	Proportion of population in a given age group achieving at least a fixed level of proficiency in functional (a) literacy and (b) numeracy skills, by sex
4.5	By 2030, eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples, and children in vulnerable situations
Goal 5. Achieve gender equality and empower all women and girls	
5.1	End all forms of discrimination against all women and girls everywhere
5.5.2	Proportion of women in managerial positions
4.5	By 2030, eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples, and children in vulnerable situations

Source: United Nations

RELEVANT SDGS, TARGETS AND INDICATORS FOR COMPANIES (CONT.)

(*Legend*: **writing in blue for positive contribution**; **writing in black for mitigation of negative impact**)

Goal 6. Ensure availability and sustainable management of water and sanitation for all	
6.1.1	Proportion of population using safely managed drinking water services
6.3.1	Proportion of wastewater safely treated
6.4.1	Change in water-use efficiency over time
6.4.2	Level of water stress: freshwater withdrawal as a proportion of available freshwater resources
6.6.1	Change in the extent of water-related ecosystems over time
6.b	Support and strengthen the participation of local communities in improving water and sanitation management
Goal 7. Ensure access to affordable, reliable, sustainable and modern energy for all	
7.1.1	Proportion of population with access to electricity
7.1.2	Proportion of population with primary reliance on clean fuels and technology
7.2.1	Renewable energy share in the total final energy consumption
7.3.1	Energy intensity measured in terms of primary energy and GDP
7.2.1	Renewable energy share in the total final energy consumption
7.3.1	Energy intensity measured in terms of primary energy and GDP
Goal 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	
8.10.1	(a) Number of commercial bank branches per 100,000 adults and (b) number of automated teller machines (ATMs) per 100,000 adults
8.10.2	Proportion of adults (15 years and older) with an account at a bank or other financial institution or with a mobile-money-service provider
8.4	Improve progressively through 2030, global resource efficiency in consumption and production and endeavour to decouple economic growth from environmental degradation, in accordance with the 10-Year Framework of Programmes on Sustainable Consumption and Production, with developed countries taking the lead
8.5.1	Average hourly earnings of female and male employees, by occupation, age and persons with disabilities
8.5.2	Unemployment rate, by sex, age, and persons with disabilities
8.7.1	Proportion and number of children aged 5—17 years engaged in child labour, by sex and age
8.8.1	Frequency rates of fatal and non-fatal occupational injuries, by sex and migrant status
8.8.2	Level of national compliance with labour rights (freedom of association and collective bargaining) based on International Labour Organization (ILO) textual sources and national legislation, by sex and migrant status
Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation	
9.1.2	Passenger and freight volumes, by mode of transport
9.3.2	Proportion of small-scale industries with a loan or line of credit
9.c.1	Proportion of population covered by a mobile network, by technology
9.4.1	CO2 emission per unit of value added
Goal 10. Reduce inequality within and among countries	
10.2	By 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status

Source: United Nations

RELEVANT SDGS, TARGETS AND INDICATORS FOR COMPANIES (CONT.)

(*Legend*: **writing in blue for positive contribution**; **writing in black for mitigation of negative impact**)

Goal 11. Make cities and human settlements inclusive, safe, resilient, and sustainable	
11.1.1	Proportion of urban population living in slums, informal settlements or inadequate housing
11.2.1	Proportion of population that has convenient access to public transport, by sex, age and persons with disabilities
11.4	Strengthen efforts to protect and safeguard the world's cultural and natural heritage
11.6.2	Annual mean levels of fine particulate matter (e.g. PM2.5 and PM10) in cities (population weighted)
Goal 12. Ensure sustainable consumption and production patterns	
12.2.1	Material footprint, material footprint per capita, and material footprint per GDP
12.2.2	Domestic material consumption, domestic material consumption per capita, and domestic material consumption per GDP
12.3.1	Global food loss index
12.4.2	Hazardous waste generated per capita and proportion of hazardous waste treated, by type of treatment
12.5.1	National recycling rate, tons of material recycled
Goal 14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development	
14.1	By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution
14.2	By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans
14.4	By 2020, effectively regulate harvesting and end overfishing, illegal, unreported and unregulated fishing and destructive fishing practices and implement science-based management plans, in order to restore fish stocks in the shortest time feasible, at least to levels that can produce maximum sustainable yield as determined by their biological characteristics
14.7.1	Sustainable fisheries as a proportion of GDP in small island developing states, least developed countries and all countries
Goal 15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss	
15.1	By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements
15.2.1	Progress towards sustainable forest management
15.3.1	Proportion of land that is degraded over total land area
15.4	By 2030, ensure the conservation of mountain ecosystems, including their biodiversity, in order to enhance their capacity to provide benefits that are essential for sustainable development
15.5	Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species
Goal 16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels	
16.5.1	Proportion of persons who had at least one contact with a public official and who paid a bribe to a public official, or were asked for a bribe by those public officials, during the previous 12 months

Source: United Nations

APPENDIX B: EXAMPLES OF SDG IMPACT THEORIES AND STRATEGIES

Danone

Company profile

Dedicated to bringing health through food to as many people as possible, Danone is a leading global food and beverage company built on four businesses: Essential Dairy and Plant-Based Products, Waters, Early Life Nutrition and Medical Nutrition. We aim to inspire healthier and more sustainable eating and drinking practices, in line with our vision – Danone. One Planet. One Health - which reflects a strong belief that the health of people and the health of the planet are interconnected.

Company Strategy

In line with our 'One Planet. One Health' vision and to adequately respond to the challenges and opportunities of the ongoing food revolution, we have defined our Danone 2030 Goals in line with the SDGs:

- OUR BUSINESS MODEL: We will grow as a B CorpTM, innovating to offer superior food experiences.
  - Offer superior food experiences and innovate, always
  - Deliver superior sustainable profitable growth
  - Be certified as a B CorpTM
- OUR BRAND MODEL: We will grow what we call Manifesto brands to protect and nourish both the health of the people and the health of the planet.
  - Impact people's health locally
  - Grow Manifesto brands
  - Preserve and renew the planet's resources
- OUR TRUST MODEL: We will grow in an inclusive way, empowering our people and working with partners to create and share sustainable value.
  - Entrust Danone's people to create new futures
  - Foster inclusive growth
  - Serve the food revolution with partners

Impacts of Company Strategy on SDGs

Danone is therefore fully committed to the SDGs and our contribution is structured as follows.

MAJOR FOCUS. As Danone's mission is to "Bring Health Through Food to as Many People as Possible", we logically focused our efforts on:

- SDG 2 "Zero Hunger" through ensuring access to safe and nutritious food, and ensuring a sustainable food production system;
- SDG 3 "Good Health and Well-Being" through ensuring the best nutrition for infants, young children and mothers, as well as through the overall range of our product categories over the lifespan;
- SDG 6 "Clean Water and Sanitation" through participating in access to drinking water for as many as possible, improving water quality and efficiency as well as protecting water-related ecosystems.

Secondly, we also want to contribute to the SDGs that are material to our industry and the way we source, produce, operate, and sell our food and beverages:

- SDG 12 "Responsible Consumption and Production", stood out as it focuses on better management of waste and natural resources and is in line with our commitments toward the development of a circular economy;
- SDG 8 "Decent Work and Economic Growth" promotes inclusive growth as well as a safe and secure work environment for all, which fits with our ambition to foster an inclusive growth;
- SDG 13 "Climate Action": since agriculture is responsible for about 31% of global greenhouse gas emissions, Danone has committed to contribute to the fight against climate change by becoming carbon neutral by 2050.

These SDGs embody the strategic mission of Danone. Nevertheless, Danone also makes significant contributions to the other SDGs, as explained below.

COMMITMENTS. To select the SDGs to which Danone will make a commitment, we considered our latest materiality matrix which highlights our most significant sustainability topics for our stakeholders and our business performance. The material aspects identified emphasize the way Danone will significantly contribute to:

- SDG 1 "No Poverty" by focusing on the reduction of the poor and those living in vulnerable situations namely through our investments in the following four funds: Danone Communities, the Danone Ecosystem fund, the Livelihood Fund and the Livelihood Funds for Family Farming;
- SDG 14 "Life Below Water" by preventing and significantly reducing marine pollution, notably through our commitments to circular economy and our partnership with the Ellen MacArthur Foundation;
- SDG 15 "Life On Land" by combating deforestation and degraded land and soil;
- SDG 16 "Peace, Justice and Strong Institutions" by fighting against corruption and bribery in all their forms.

We also took into consideration the major initiatives the company supported, such as the HeForShe and the RE100 Initiatives. They respectively show how Danone intends to contribute further to:

- SDG 5 "Gender Equality";
- SDG 7 "Affordable and Clean Energy".

CONTRIBUTIONS. Finally, Danone also contributes to:

- SDG 4 "Quality Education" through providing access to affordable and quality training for our employees;
- SDG 9 "Industry, Innovation and Infrastructure" by developing our capital expenditure in developing markets and our innovations for sustainable development;
- SDG 10 "Reduced Inequalities" namely through increasing the number of employees benefiting from healthcare coverage through our Dan'Cares program and by increasing the number of women executives representing emerging markets;
- SDG 11 "Sustainable Cities and Communities" by reducing our impact on air quality and enhancing our waste management.

COLLABORATION. Contributing to the SDGs requires strong collaboration between industries and beyond, therefore Danone is committed to engaging in global partnerships to contribute to the SDG 17 "Partnerships for the Goals".

Measurement and Indicators

Danone's commitment to SDGs can only be tangible if we keenly report on them. To do so, the specific targets that have been selected within each SDG were chosen according to our present reporting practices, such as communicating for several years on sustainable development key performance indicators and on sustainability projects.

In line with our SDGs reporting, Danone launched a €300 million bond to finance and refinance projects that include positive social impacts. Proceeds will be allocated to projects promoting positive social impact on Danone's stakeholders, including suppliers and agricultural partners, communities, people with specific nutritional needs, health food entrepreneurs, and our employees with enhanced employee health care coverage and extended maternity, parental leave and post-natal care.

EXAMPLE OF CORPORATE-LEVEL SDG IMPACT THESES (CONT.)

Enel

Company profile

Enel is a multinational energy company and one of the world's leading integrated electricity and gas operators. The Company works in 34 countries across 5 continents, generating energy with a managed capacity of more than 88 GW, selling gas and distributing electricity across a network spanning approximately 2.2 million km. With almost 72 million end users around the world, Enel is one of Europe's leading energy companies by installed capacity and reported EBITDA.

Company Strategy

In defining and implementing its strategic vision, Enel carefully integrates and combines all relevant factors: economic-financial, environmental, social, and governance-related. Value creation in the long term is therefore closely linked to the Group's robust financial management, as well as to the way in which we interact with the environment, cooperate with communities, ensure an open culture based on listening and inclusion, and promote an increasingly integrated corporate governance system. It is thanks to our sustainable business model that we can meet the new challenges of the energy transition, not only by reacting to risks, but by seizing all opportunities without overlooking their social implications.

Enel's strategy is based on the following strategic pillars:

- Operational efficiency
- Industrial growth
- Group simplification and active portfolio management

Human capital supplements the purely industrial pillars by fostering the economic and social growth of local communities and enhancing the roles and skills of people within the organisation, empowering them to manage the energy transition.

Digitalization and Customer Focus are the two major enablers of Enel's strategy to deliver attractive shareholder remuneration and sustainable long-term value creation.

The Enel 2018-2020 strategic plan includes a total capital expenditure (capex) plan of €24.6 billion of which €14.6 billion growth capex are mainly driven by:

- Networks: growth capex expected to reach around €4.7 billion cumulatively over the 3 years, mostly on asset digitalization
- Renewables: total growth capex of €8.3 billion planned, which is expected to deliver 7.8 GW of total additional capacity over the 3 years
- e-Solutions: 800 million euros of cumulative growth capex over the 3 years, mainly in the installation of charging stations, software platforms, and public lighting.

Impacts of Company Strategy on SDGs

The Company's strategic plan shows the deployment, across the board of the 17 United Nations Sustainable Development Goals, of the Group's sustainable business model throughout the value chain. In terms of targets, the Group confirms and accelerates its specific commitment, undertaken in September 2015, on the following Sustainable Development Goals:

- SDG 4 - Inclusive and equitable quality education: 800 thousand beneficiaries by 2020, doubling the previous target of 400 thousand beneficiaries
- SDG 7 - Access to affordable, reliable, sustainable, and modern energy: 3 million beneficiaries by 2020, mainly in Africa, Asia, and Latin America
- SDG 8 - Sustained, inclusive and sustainable economic growth: 3 million beneficiaries by 2020
- SDG 13 - Climate action: reduction of CO_2 emissions by 2020 (< 350 g CO_2/kWheq)

SDGs become business as usual for our company, rather than being classified in separate ESG targets and measures. Enel sets its SDG goals on a three-year basis, consistently with its strategic plan timespan, and reviews them annually as all the other business goals. Such regular review allows the company to make adjustment where necessary. For example, Enel's original target for socio-economic development projects (SDG 8) was 500,000 beneficiaries and it was reached ahead of time. It was therefore decided to increase the target to 3 million beneficiaries by 2020. Enel points out that its SDG activity and related targets are not set in stone but will continue to evolve in line with its changing business priorities. The rapidly evolving scenario offers the energy sectors new challenges and opportunities. For example, working on SDG 9: Industry, Innovation and Infrastructure Innovation and SDG 11 Sustainable cities and communities became more important for Enel. Therefore, the strategic plan and the sustainability plan clearly show the deployment, across the board of the SDGs, of Enel's sustainable business model throughout its value chain.

Measurement and Indicators

Enel's SDG targets and measurements are integrated in existing processes and they are managed as part of the day-to-day business of the company. The relative methodology was developed taking into consideration the guidelines of international standards, including the Global Reporting Initiative (GRI), the Ten Principles of the UN Global Compact and the SDG Compass, which supports companies in aligning their strategies with the Sustainable Development Goals.

Moreover, in line with the above process, the Company identifies the eligible project categories for the Use of Proceeds in the Enel Green Bond Framework and Second Party Opinion. They are presented with expected environmental and social benefits (as highlighted in the Green Bond Report).

Managing the Downside: ESG Risks

Due to the nature of its business, the Group is exposed to various types of risk and puts in place activities aimed at mitigating their effects and ensuring their correct management.

In the risk-identification process, the results of the materiality assessment were also considered, as well as the data reported in the global risks reports. A key element to this approach is the adoption of ESG sustainability indicators within the whole value chain, to ensure that not only the positive impacts are reported but also the potential environmental, social, and governance risks associated with our activities.

For more information see "Seeding Energies — Sustainability Report 2017".

EXAMPLE OF CORPORATE-LEVEL SDG IMPACT THESES (CONT.)

Iberdrola

Company Profile

Iberdrola is a major player in the power industry on both sides of the Atlantic, serving more than 32 million customers in Europe and the Americas. The Company owns renewables power generation facilities, hydroelectric, fossil-fueled, and nuclear with a total capacity of 48,447 MW. The company is putting a major focus in developing renewable energy capacity, focusing on wind power (60% of generation capacity is from wind power, hydroelectric, and other clean energy sources). Iberdrola is the first investor worldwide in renewable energies with an investment of 32,500 million euros until 2017, and an additional investment of 11,500 million euros planned to 2022. Iberdrola is publicly traded with a market cap of US$48 billion.

SDG Strategy

Iberdrola recognises that the SDGs offer a new vision to translate global needs and desires into solutions. They are a viable model for long-term growth and will contribute to the Company's developing more solid strategies. Iberdrola is adopting measures to combat climate change and its effects including increasing the percentage of renewable energy in the mix and improving the rate of energy efficiency. The Company also works toward providing access to electricity in emerging and developing countries through its "Energy for All" program. Iberdrola SDG strategy focuses on:

- Renewable energies
- More efficient distribution and transmission networks (smart grids)
- Distributed generation
- New business models as electric mobility with client focus

SDG Investments

Iberdrola has planned an investment in renewables of 11,500 million euros until 2022.

SDGs Targeted

Iberdrola´s KPIs associated with their objectives and commitments:

- SDG16: To reduce its CO_2 emissions intensity by 30% in 2020, 50% in 2030, and be carbon-neutral by 2050.
- SDG 5: Portion of female directors continue to account for at least 30% of the Board by 2020.
- SDG 9: Zero accidents and the prevention of unsafe situations
- SDG 7: By 2030 aim to reach 16,000,000 beneficiaries.
- SDG 12: 94% of Iberdrola production is currently using local sources of energy, available in the country. The goal is to maintain this indicator above 80% during the next five years.

Measurement and Indicators:

Iberdrola has developed individual indicators that reflect its SDG strategy:

- Renewable Energy: MW installed capacity, CO2 intensity emissions, CO2 avoided.
- Transmission, Distribution and Smart Grid: # smart meters installed, # MW of renewable generation capacity connected by the T&D asset, MW produced by the capacity connected by the T&D asset, GHG emissions avoided by the renewable generation capacity connected.

Management Downside: ESG Risks

The Board of Directors oversees the management of a risk/opportunity to identify, measure, manage, and control significant risks to all the activities and businesses of the company.

The integration of the SDGs into the business plan strengthens the identification and management of material risks and costs, the creation of and access to new markets, and innovation in the business models -- making them more efficient and thus aligning the strategy and expectations of the company with its employees, customers, and investors and the communities in which it operates.

EXAMPLE OF CORPORATE-LEVEL SDG IMPACT THESES (CONT.)

Pirelli

Company Profile

Pirelli & C. is a major player in the tyre industry and the only global player focused solely on the Consumer tyre market, which includes tyres for cars, motorcycles, and bicycles.
The Company primarily offers its products to the high-end consumer segment around the world. Pirelli operates 19 plants located in 13 countries and has a market presence in six regions and 160 countries. Its market capitalization is US$7.2 billion.

SDG Strategy

The 2020 targets of the Pirelli Sustainability Plan are strongly integrated with the Sustainable Development Goals (SDGs). Three strategic initiatives that represent Pirelli's commitment to the SDGs are:

- Sustainable Production: Energy and Greenhouse Gas Management, Water Management, Waste Management;
- Safe and Innovative Ways of Moving People: Mobility Projects and Road Safety;
- Commitment to a more Sustainable Natural Rubber Supply Chain: Pirelli Policy on Sustainable Natural Rubber and Policy Implementation Manual.

SDGs Targeted

The targets of Pirelli's Sustainability Plan have impact across 12 SDGs; the three activities mentioned above have a focus on:

- SDG 3, 11: Investments in innovative solutions and products for a safer and smarter mobility (CYBERTM and Velo technologies); Pirelli also partners with different organisations for promoting road safety (FIA's Action for Road Safety Campaign, European Road Safety Charter);
- SDG 6: efficient and responsible use of water in production processes and at workplaces;
- SDG 7, 12, 13: Energy and greenhouse gas management through the Energy Efficiency and Carbon Action plans was already initiated in recent years. Actions and investments for energy efficiency are consistent with the assessment of environmental impacts and economic sustainability criteria normally applied to all Pirelli projects. In addition to the above, the improvement of environmental performance also derives from the management of waste;
  SDG 8, 15: The economic, social and environmental sustainability of the natural rubber supply chain is among the priorities of Pirelli, with the full awareness that the origins of its rubber supply chain impact on forests and the local communities involved in natural rubber farming.

Measurements and Indicators:

The Pirelli Group considers environmental protection as a fundamental value in the exercise and development of its activities. For this reason, Pirelli has developed specific reference targets:

- Energy and Greenhouse Gas Management: Energy Specific Consumption -19% by 2020 compared to 2009 and CO2 Specific Emissions: -17% in 2020 compared to 2009;
- Water Management: Water Specific Withdrawal -66% by 2020 compared to 2009;
- Waste Management: Waste Recovery: >95% by 2020.

Management Downside: ESG Risks

Pirelli adopts a structured risk management model that allows the Group to promptly and completely identify ESG-related risks as well as uncertainty in a proactive way, rather than simply taking a reactive stance. Such a structured and proactive approach is based on:

- A regular assessment of the Group's main environmental KPIs (i.e., energy consumption, CO2 emissions, water withdrawal, and waste recovery) with mitigation plans ready to kick in should the group envisage any material changes from agreed targets as well as a dedicated steering committee to discuss an improvement plan;
- A dedicated department to assess major social and technological trends that might potentially have a material impact in the medium-long term on the automotive sector and indirectly on the tyre market (i.e., urbanization, sharing economy, new engine technologies, as well as values and behaviour of younger generations). This department constantly monitors the evolutionary changes in automotive sector demand by actively participating in working groups at the international level. The principal aim of such projects is to study the possible long-term evolution of urban mobility and to promote solutions that might improve the social, environmental, and financial well-being of the urban population;
- An ad hoc risk assessment throughout the natural rubber supply chain to highlight any potential risk in terms of non-compliance with local and international legislation, as well as non-compliance with the values expressed in Pirelli's Sustainable Natural Rubber Policy aimed at ensuring decent working conditions and protecting the environment.

EXAMPLE OF CORPORATE-LEVEL SDG IMPACT THESES (CONT.)

Terna

Company Profile
Terna SpA is one of the largest independent Transmission System Operators (TSO) in Europe and a world leader in terms of kilometers of lines managed (more than 72,000 km). Terna's objective is to provide secure, reliable and open transmission system for all operators. The company is publicly traded and ranks among Italy's leading companies by market cap (US$9.5 billion).

SDG Strategy
Terna plays a key role in enabling energy transition to an affordable, resilient, sustainable and decarbonized system. The company's strategy is to modernize the electricity transmission grid to integrate renewable energy and improve energy efficiency, while creating a more resilient grid. Terna's SDG strategy is focused on:

- Increasing the transmission capacity of energy generated from renewable sources
- Connecting renewable energy to the grid More efficient energy transmission system
- Enabling distributed energy models

SDG Investments
More than 90% of Terna's 5.3B euro 2018-2022 CAPEX will be targeted to SDG-related activities, supporting resiliency, digitization and development of the grid for a decarbonized system (see 2018-2022 Strategic Plan).

SDGs Targeted
Terna's activities directly impact the following SDGs:

- SDG 7: Ensure affordable and reliable energy services. Increase the share of renewable energy. The share of energy produced from renewable sources more than doubled in Italy in the last decade (from 15% to 32% between 2007-2017) with a peak in 2014 (39%) due to high hydropower production. Wind and PV installed power capacity rose from 2.8 GW in 2007 to 29.3 GW in 2017. Such results would not have been possible without Terna's investments in grid development, increased connections to renewable plants, and in grid management capacity. Investments in Terna's 2018 Grid Development Plan will help achieve EU and domestic carbon reduction targets.
- SDG 9: Develop sustainable and resilient infrastructure.
- SDG 13: Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries.

Terna's 2018 Grid Development Plan provides for a circa 12-billion-euro investment over a 10-year horizon. The drivers are decarbonization, electricity market efficiency to guarantee economic affordability, service quality and grid resilience. Full implementation will allow a reduction of CO_2 emissions by up to approximately 16 million tonnes per year, among other results.

Terna also contributes to SDGs 8, Goal 12, Goal 15, Goal 16 and Goal 17 through efficient use of natural resources, emissions and waste reduction, recycling, respect for human rights, efforts to foster innovation and partnerships, combat corruption, and transparent reporting. Terna has a management system - ISO14001, ISO 50001, OHSAS 18001 and ISO 27001 certified - which provides for ever improving targets, both company specific — such as safety at work - and contributing to more general objectives — such as energy efficiency and CO_2 emission reduction programs.

Measurement and Indicators:
Terna adopted the GRI Reporting Guidelines in its 2006 Sustainability Report and is now relying on GRI Standards. GRI indicators are also taken as targets for sustainability performance, as for training hours per capita.

Environmental impact measurement relies mainly on the following KPIs, which are part of the financial and environmental analysis for every new investment project and were used as well in the Green Bond issued by Terna in July 2018:

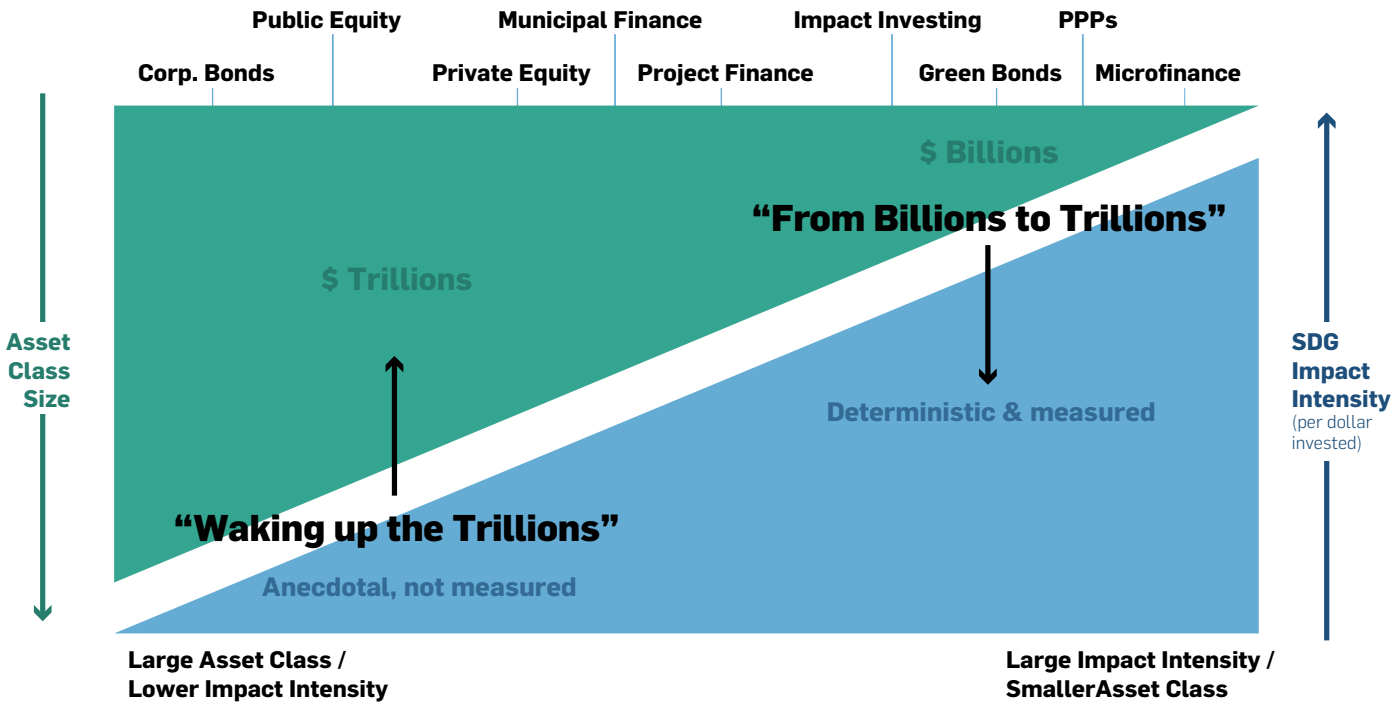
- Increase in generation from renewable sources (expected MWh at system level)
- Reduction of grid losses (expected MWh)
- Direct connection of power plants from renewable sources (MW)
- Removal of overhead lines or laying underground cables to optimize soil use (Km).

An overall measure of sustainability performances — taken from the RobecoSAM yearly assessment — is part of the variable remuneration of the CEO and top managers.

Managing the Downside: ESG Risks

Terna has a rigorous review of climate change risks based on the recommendations of the Task Force on Climate-Related Financial Disclosures (TCFD). Also, the company mitigates ESG risks by means of a Sustainability Plan approved by the Board of Directors. Stakeholder engagement is the basis for identifying risks and prioritizing actions. The Sustainability Plan has two drivers — risk mitigation and development of the intangible capital necessary to reach strategic targets — and is organized around 4 key areas: integrity, responsibility and transparency; environment; human resources; stakeholders and local communities.

APPENDIX C. QUALIFYING MAINSTREAM ASSET CLASSES AND SCALING GREEN AND SUSTAINABLE INVESTMENTS



THE TEN PRINCIPLES OF THE UNITED NATIONS GLOBAL COMPACT

HUMAN RIGHTS

1 Businesses should support and respect the protection of internationally proclaimed human rights; and

2 make sure that they are not complicit in human rights abuses.

LABOUR

3 Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;

4 the elimination of all forms of forced and compulsory labour;

5 the effective abolition of child labour; and

6 the elimination of discrimination in respect of employment and occupation.

ENVIRONMENT

7 Businesses should support a precautionary approach to environmental challenges;

8 undertake initiatives to promote greater environmental responsibility; and

9 encourage the development and diffusion of environmentally friendly technologies.

ANTI-CORRUPTION

10 Businesses should work against corruption in all its forms, including extortion and bribery.

The Ten Principles of the United Nations Global Compact are derived from: the Universal Declaration of Human Rights, the International Labour Organization's Declaration on Fundamental Principles and Rights at Work, the Rio Declaration on Environment and Development, and the United Nations Convention Against Corruption.

ABOUT THE UNITED NATIONS GLOBAL COMPACT

As a special initiative of the UN Secretary-General, the United Nations Global Compact is a call to companies everywhere to align their operations and strategies with ten universal principles in the areas of human rights, labour, environment and anti-corruption. Launched in 2000, the mandate of the UN Global Compact is to guide and support the global business community in advancing UN goals and values through responsible corporate practices. With more than 9,500 companies and 3,000 non-business signatories based in over 160 countries, and more than 70 Local Networks, it is the largest corporate sustainability initiative in the world.

For more information, follow @globalcompact on social media and visit our website at www.unglobalcompact.org.

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