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Global Environmental, Social and Governance (ESG) Capital Allocation Strategies Between Impact Ambitions and Measurement Challenges

by Sara Lovisolo

ABSTRACT

Responsible investment as a capital allocation strategy has evolved from its ethical and political origins to embrace science-based considerations and outcome-based approaches in the context of the urgent action required in response to climate change and the Sustainable Development Goals. This shift can pose both threats and opportunities to companies seeking to get access to a diversified investor base. The investment environment companies are faced with varies depending on the geographical context and the investment style of investors. In particular, the rise of passive investment – that is the replication of financial indices in the construction of fund portfolios – is an important tool for the integration of sophisticated environmental, social and governance (ESG) factors in investment strategies. The US, Europe, Asia-Pacific and Africa present different levels of maturity and strengths in the space of responsible investment, calling for ad-hoc responses from investee companies. Across all jurisdictions the challenge of effectively measuring the impact of responsible investment is one investors and policymakers alike are still grappling with.

keywords

Investments | Sustainable development | Climate change

Global Environmental, Social and Governance (ESG) Capital Allocation Strategies Between Impact Ambitions and Measurement Challenges

by Sara Lovisolo*

1. Evolving definitions of sustainable investment in the asset management and banking industry: Looking for outcomes?

1.1 The Paris Agreement and the quest for an alignment on greenhouse gas emission reduction

Responsible investment was born political, whether its origins are traced to the Quakers' refusal to fund any enterprise that would support a slave-holding economy in the 17th century or to the anti-apartheid embargo of the 1980s.[1] The notion that finance could be mobilised to obtain political outcomes, gradually promoted by financial market participants, was officially endorsed by the 2015 Paris Agreement, whose Article 2.1(c) states that achieving the objectives of the Agreement requires the redirection of global financial flows in a way that is "consistent with a pathway towards low greenhouse gas [GHG] emissions and climate-resilient development".[2]

The Paris Agreement, adopted within the United Nations Framework Convention on Climate Change, is a binding legal tool that enshrines a commitment to achieving a specific environmental outcome in international law. The outcome is that of limiting the global average temperature increase to "well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels" (Article 2.1(a)). This has become the benchmark for measuring environmental impact in public policy and finance. The fact that the

[1] Siew Hong Teoh, Ivo Welch and C. Paul Wazzan, "The Effect of Socially Activist Investment Policies on the Financial Markets: Evidence from the South African Boycott", in *The Journal of Business*, Vol. 72, No. 1 (January 1999), p. 35-89, https://doi.org/10.1086/209602.

[2] The official text is available online: https://unfccc.int/sites/default/files/english_paris_agreement.pdf. For a discussion of the legal implications, see Daniel Klein et al. (eds), *The Paris Agreement on Climate Change. Analysis and Commentary*, Oxford, Oxford University Press, 2017.

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focus is on an outcome and not on specific actions or inputs from governments makes the Agreement particularly powerful.

The objectives of the Paris Agreement have been translated into Nationally Determined Contributions by signatories. The pressure to achieve a very measurable objective has led governments – and coalitions of investors – to question how investment portfolios can be aligned with the objectives of the Paris Agreement.

For example, the European Parliament has required the Commission to create a methodology for a financial index, the EU Paris-aligned Benchmark (EU PAB),[3] whose objective is explicitly to drive investment towards assets whose GHG emissions are in line with a trajectory that will lead to carbon neutrality by 2050.

One of the leading investor-led initiatives that aim "to ensure the world's largest corporate greenhouse gas emitters take necessary action on climate change" is Climate Action 100+, representing 50 per cent of all global assets under management across 33 markets (see Figure 1). The investor signatories of Climate Action 100+ believe that "engaging and working with the companies in which they invest, to secure greater disclosure of climate change risks and robust company emissions reduction strategies, is consistent with their fiduciary duty and essential to achieve the goals of the Paris Agreement".[4]

Figure 1 | Initiative snapshot

Source: Climate Action 100+ website, https://www.climateaction100.org.

The problem of how to determine whether investment portfolios align with a temperature scenario – i.e., whether they are on an emission trajectory consistent with a temperature increase of 1.5 degrees, 2 degrees or more – has not been

[3] European Parliament and Council of the European Union, *Regulation (EU) 2019/2089 of 27 November 2019 amending Regulation (EU) 2016/1011 as regards EU Climate Transition Benchmarks, EU Paris-aligned Benchmarks and sustainability-related disclosures for benchmarks*, http://data.europa.eu/eli/reg/2019/2089/oj.

[4] See the initiative's website: *About Climate Action 100+*, https://www.climateaction100.org/about.

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resolved yet. The Intergovernmental Panel on Climate Change (IPCC) – the climate science body of the United Nations – has been developing many alternative scenarios compatible with a 1.5 degrees outcome.[5] But methodologies that can ensure that an investment portfolio is actually aligned with any of those scenarios have only been put forward for discussion and testing.[6]

1.2 The Sustainable Development Goals: How to measure impact

Another UN-led global political framework was agreed in 2015. The 2030 Agenda for Sustainable Development was adopted on 25 September 2015 at the United Nations Sustainable Development Summit. The resulting Sustainable Development Goals (SDGs) established a globally accepted set of 17 overarching goals (underpinned by 169 specific targets, and 232 indicators by which they will be measured) for real-world outcomes in areas such as water management, energy, public health, poverty reduction, gender equality and biodiversity.[7] The framework was immediately saluted by the global investment community as *the* framework for measuring impact and as the premier tool for ensuring convergence of international efforts in the space of responsible investment. As the UN-led Principles for Responsible Investment (PRI) highlights,

> the United Nations Conference on Trade and Development (UNCTAD) estimates that meeting the SDGs by 2030 will require US$5 trillion to US$7 trillion per year from the private sector.[8] The financial system's role in shaping outcomes in line with the SDGs cannot only involve new capital, it will require investors to redirect existing capital and be good stewards of the entities they invest in.[9]

In addition to contributing to achieving specific outcomes,

> focusing on SDG-aligned outcomes, including through collective action,

[5] See for example Intergovernmental Panel on Climate Change (IPCC), *Global Warming of 1.5 °C. An IPCC Special Report...*, 2018, https://www.ipcc.ch/sr15.

[6] In March 2021, the Institutional Investors Group on Climate Changes (IIGCC) launched its Net Zero Investment Framework Implementation Guide. See IIGCC, *Net Zero Investment Framework Implementation Guide*, March 2021, https://www.iigcc.org/?p=4426. In November 2020, the Portfolio Alignment Team published its "Measuring Portfolio Alignment" methodology: *Measuring Portfolio Alignment. Assessing the Position of Companies and Portfolios on the Path to Net Zero*, November 2020, https://www.tcfdhub.org/?p=4903.

[7] For an overview of the history of the Sustainable Development Agenda, see Sachin Chaturvedi et al. (eds), *The Palgrave Handbook of Development Cooperation for Achieving the 2030 Agenda*, Cham, Palgrave Macmillan, 2021.

[8] The Sustainable Development Goals Report 2020 by the United Nations highlights how – also due to the impacts of the covid-19 pandemic – the global community is not on track to achieve the 2030 objectives. An assessment of the distance to target is provided by SDG. United Nations, *The Sustainable Development Goals Report 2020*, July 2020, https://unstats.un.org/sdgs/report/2020.

[9] Marcel Jeucken, Shelagh Whitley and Nathan Fabian, *Investing with SDG Outcomes: A Five-Part Framework*, Principles for Responsible Investment (PRI), 2020, p. 8, https://www.unpri.org/download?ac=10795.

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can also feed back into portfolio performance, and into the resilience of the financial system itself. There is a continuous feedback cycle between (ESG) risks and opportunities and (SDG-aligned) outcomes: ESG issues create risks and opportunities for investors, whose actions shape outcomes on the world, which feed back into portfolios in the form of ESG risks and opportunities.[10]

Investors are however still struggling to create a connection between their actions and the SDGs, as shown in the discussion below (taken from the PRIs).

Box 1 | Investor roles in outcomes

It is important to distinguish between the different roles that investors can have in relation to outcomes.

There are outcomes that an investor:
- has *caused* – through its own business activities (e.g. outcomes on its own employees);
- has *contributed* to – through a business relationship or investment activity (actions or omissions) that induces or facilitates an outcome from an investee company or project;
- is *directly linked* to – through the activities, products or services of an investee company or project.

While the investee company or project causing the outcome has responsibility, the investor – through its investments, and acting alone or in collaboration with others where appropriate – is in a position to use its leverage to influence the entity, with the aim of decreasing negative and increasing positive outcomes.

In practice the distinction between outcomes caused, outcomes contributed to and outcomes directly linked to is not always clear – there is a continuum between them.

Source: Marcel Jeucken, Shelagh Whitley and Nathan Fabian, *Investing with SDG Outcomes: A Five-Part Framework*, cit., p. 12.

Certain investors have gone as far as to develop "taxonomies" – i.e., lists of economic activities that create a correspondence between the products and services provided by commercial companies and the objectives and targets of the SDGs. An example is provided by the taxonomy developed by Dutch asset managers APG and PGGM.[11] To operationalise their model, the two investors have joined forces

[10] Ibid.

[11] PGGM and APG, *Sustainable Development Investments (SDIs) Taxonomies*, May 2017, https://

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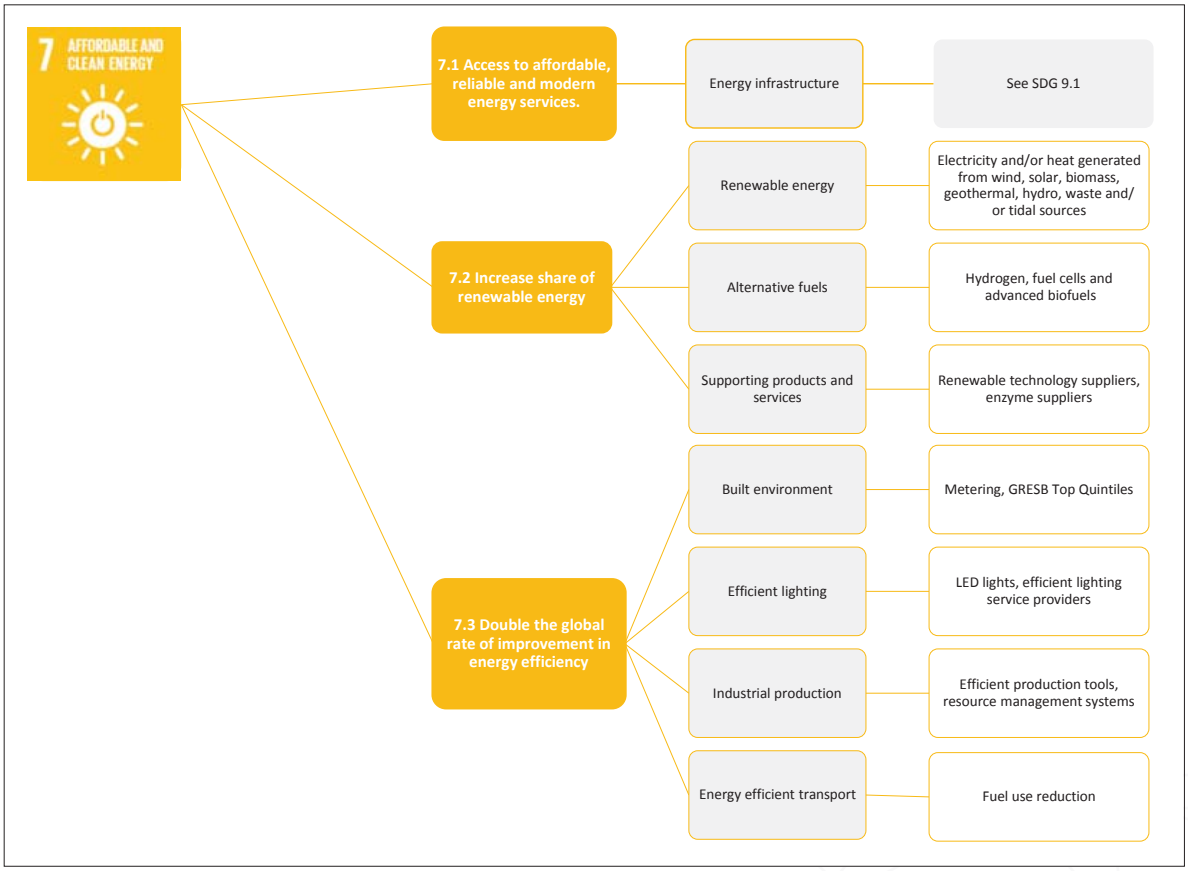
to create a platform, open to asset owners from across the globe and powered by artificial intelligence, that aims to analyse the SDG alignment of over ten thousand companies globally.[12] An illustration of economic activities matched to a specific SDG is provided in Figure 2, with regard to SDG 7 on affordable and clean energy.

Figure 2 | Example taken from APG and PGGM's SDG Taxonomy



Despite many attempts to measure impact and SDG-alignment of investments, investors have only reached consensus around the fact that investment in SDGs should be characterised by additionality, intentionality and measurability.[13]

The SDG framework remains however an important achievement insofar as it is the best attempt to bridge value differences and political biases across jurisdictions. It represents the global consensus as to what counts as desirable impact. Still, investor beliefs – many of them political in nature as mentioned earlier – will continue

www.pggm.nl/media/jzypkdmv/sdi-taxonomies-apg-pggm-mei_2017.pdf.

[12] For more details see: PGGM, *APG and PGGM Develop AI-Powered Platform for Investing in the UN Sustainable Development Goals*, 19 September 2019, https://www.pggm.nl/en/press/apg-and-pggm-develop-ai-powered-platform-for-investing-in-the-un-sustainable-development-goals.

[13] Abhilash Mudaliar, Rachel Bass and Hannah Dithrich, *Annual Impact Investor Survey 2018*, 8th ed., Global Impact Investing Network (GIIN), June 2018, https://thegiin.org/research/publication/annualsurvey2018.

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playing an important role, for example in prioritising one SDG over another.

1.3 The risk approach to ESG integration

An alternative approach to sustainable investment – as opposed to the focus on impact described in the previous sections – postulates that sustainable outcomes can be achieved by mitigating sustainability risks in an investment portfolio, by limiting for example an investor's exposure to certain sectors or to single-investee companies.

This approach drives investment strategies such as negative/exclusionary screening, norm-based screening, ESG integration and best-in-class screening.[14]

While apparently not intentionally pursuing an impact outcome, these investment strategies also respond to sustainable finance logics. As clarified by the High-level Expert Group on Sustainable Finance (HLEG), sustainable finance is concerned with "two urgent imperatives": (1) improving "the contribution of finance to sustainable and inclusive growth" by funding the long-term needs of society; (2) strengthening "financial stability by incorporating environmental, social and governance (ESG) factors into investment decision-making".[15]

The "financial stability" imperative – or the protection of savings from risks posed by sustainability-related risks – has been captured by another global framework associated with responsible investment: the Recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) established by the Financial Stability Board of the G20 in 2015, on the occasion of the Paris conference on climate. The aim of the framework is to ensure that climate-related risks and opportunities are correctly factored into investment decisions to avoid any knock-on effect on the financial system from the implementation of the Paris Agreement, either through a regulatory push or technological innovation.

By correctly pricing sustainability-related risks and opportunities, financial market participants will gradually orient capital toward sustainable assets, thus making capital more convenient for sustainable assets and more expensive for riskier assets. Efforts to protect investment and loan portfolios from sustainability risks will ultimately – and indirectly – contribute to the achievement of impact outcomes.

[14] For a description of these strategies, see Global Sustainable Investment Alliance (GSIA), *Global Sustainable Investment Review 2018*, June 2019, http://www.gsi-alliance.org/trends-report-2018. In the context of the EU regulation on responsible investment – the so-called Sustainable Finance Disclosure Regulation (SFDR) – also discussed in section 2, products following these strategies would be categorised as products "promoting ESG characteristics" rather than sustainable investment products.

[15] High-Level Expert Group on Sustainable Finance (HLEG), *Financing a Sustainable European Economy. Final Report 2018*, January 2018, p. 6, https://ec.europa.eu/info/files/180131-sustainable-finance-final-report_en.

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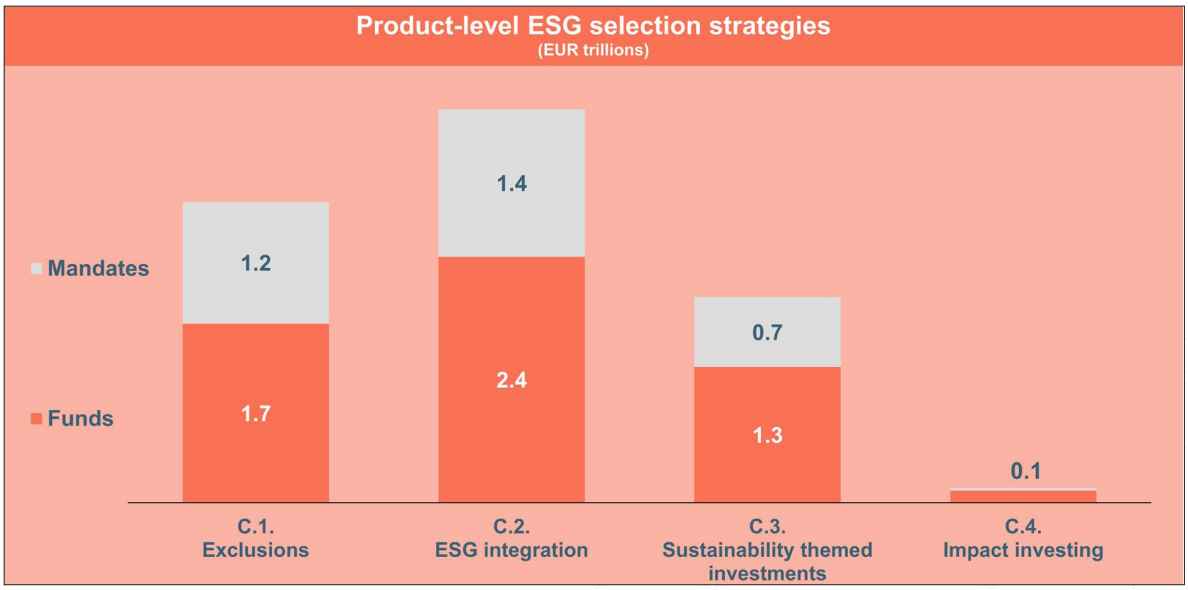
2. Opportunities and threats from the ESG investing movement for the energy industry in Europe, US, APAC and MEA

2.1 Europe: Closing the loop on sustainable finance, from EU Taxonomy to retail investment

The European Union has been at the forefront of the sustainable investment movement over the past twenty years, as testified by the fact that asset managers in Europe are comfortable with declaring that they apply sustainable investment strategies both at the firm and at the product level for a significant percentage of the assets under management (AUMs). According to a recent research paper by the European Asset Management Association (EFAMA), 10.7 trillion euro worth of assets out of 23 trillion euro AUMs (i.e., 45 per cent of the total) take some sort of ESG consideration into account, with strategies broadly divided into two types: exclusions[16] or systematic integration of ESG risks and opportunities (Figure 3).[17]

Figure 3 | Product-level ESG selection strategies



Note: "Mandates" refers to allocation of funds to an investment manager to be managed for a specific purpose or style.
Source: EFAMA, "Sustainable Investment in the European Asset Management Industry", cit., p. 4.

[16] Exclusionary strategies are negative screening approaches that target companies belonging to certain economic sectors based on specific preferences or guidelines. Typically, blacklisted sectors include gambling, tobacco, controversial weapons, firearms or atomic energy.

[17] European Asset Management Association (EFAMA), "Sustainable Investment in the European Asset Management Industry: Defining and Sizing ESG Strategies", in *EFAMA Market Insights*, No. 3 (November 2020), p. 2, https://www.efama.org/node/191.

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Research by Morningstar says that, in the last quarter of 2020, ESG funds reached a record AUMs of 1.65 trillion US dollars, with over 80 per cent of the assets coming from Europe (Table 1).[18]

Table 1 | Assets invested in ESG funds

Region	Q4 2020 flows		Assets		Funds	
	USD bn	% total	USD bn	% total	#	% total
Europe	120.8	79.3	1,342.8	81.3	3,196	77.0
United States	20.5	13.4	236.4	14.3	392	9.4
Asia ex-Japan	5.0	3.3	25.4	1.5	208	5.0
Australia/New Zealand	1.2	0.8	19.8	1.2	126	3.0
Japan	3.7	2.4	17.7	1.1	138	3.3
Canada	1.2	0.8	10.2	0.6	93	2.2
Total	**152.3**		**1,652.3**		**4,153**	

Source: Morningstar, *Global Sustainable Fund Flows: Q4 2020 in Review*, cit., p. 2.

The landscape however is going to change dramatically between 2021 and 2022, when new rules come into force. Since March 2021 a new regulation on sustainable investment[19] – the first of its kind globally – has required all large investors in the EU to integrate sustainability considerations into their investment policies, governance and risk management, while allowing smaller ones to explain why they opt not to do so. The same regulation will set stricter rules for the categorisation of ESG products and for the information that has to accompany them. On the one hand, at an entity level, most investors will have to apply ESG strategies for compliance reasons. On the other hand, there is a risk that fewer products will be categorised as ESG.

Another important regulation, the EU Taxonomy, will require asset managers to disclose the percentage of assets included in environmental investment products that are aligned with economic sectors that contribute to the transition to an environmentally sustainable economy, as defined by the EU Taxonomy itself.

Applications of the EU Taxonomy – on a voluntary basis – can also be found in the banking sector. In particular, extensive efforts have been made to implement

[18] Morningstar, *Global Sustainable Fund Flows: Q4 2020 in Review*, 28 January 2021, https://www.morningstar.com/content/dam/marketing/shared/pdfs/Research/Global_ESG_Q4_2020_Flows.pdf. ESG funds are defined based on the following criteria: "the global sustainable fund universe encompasses open-end funds and exchange-traded funds globally that, by prospectus, factsheet, or other available resources, claim to have a sustainability objective and/or use binding ESG criteria for their investment selection".

[19] The so-called Sustainable Finance Disclosure Regulation (SFDR). European Parliament and Council of the European Union, *Regulation (EU) 2019/2088 of 27 November 2019 on sustainability-related disclosures in the financial services sector*, http://data.europa.eu/eli/reg/2019/2088/oj.

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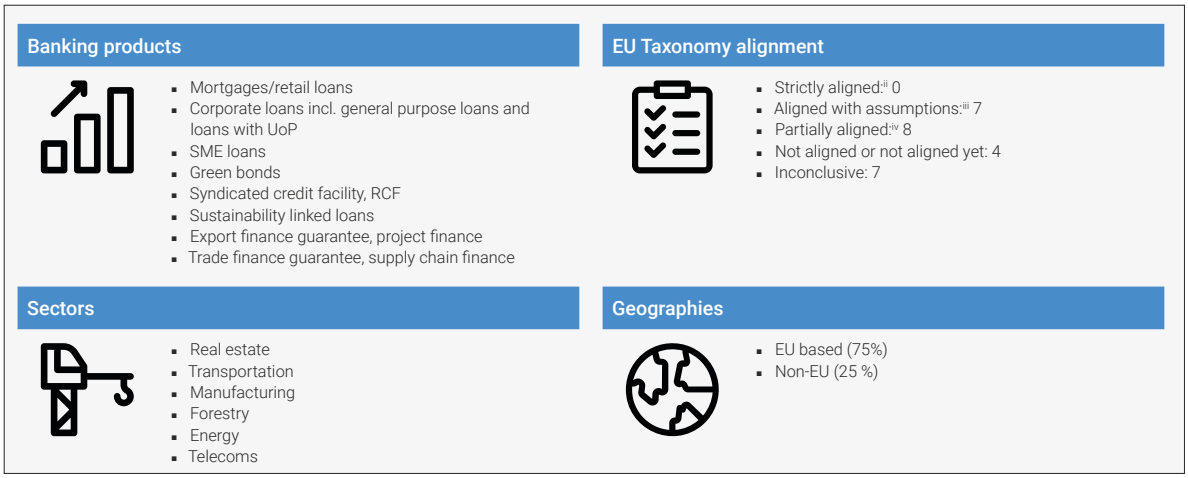
the TCFD and the EU Taxonomy. For example, the United Nations Environmental Programme Finance Initiative (UNEP FI) and the European Banking Federation have run an initiative aimed at assessing the extent to which the EU Taxonomy on Sustainable Activities could be applied to core banking products for labelling or disclosure purposes. The project involved 26 major banks, seven banking associations and five observing organisations working together to test, pilot and assess the complexities of applying the EU Taxonomy, which is aimed mainly at investors, to core banking products (Figure 4).[20]

Figure 4 | Banking products and EU taxonomy



Note: i) The total number of case studies used to inform the report is larger and based on over 40 live or recently closed transactions and existing client relationships. ii) No assumptions made, all relevant data available. iii) Aligned with Assumption: SC TSC could be ascertained through available data, compliance with MSS and DNSH could not be ascertained through available data but was assumed, in alignment with relevant regulatory obligations that the company / asset has to follow. iv) Partially aligned: Only some of the TSC for SC and/or DNSH and/or MSS could be ascertained, and the use of assumption was not possible, for a variety of reasons. See details for each case study outcome.
Source: Corinne Raux and Séverin Fischer, *Testing the Application of the EU Taxonomy to Core Banking Products*, cit., p. 9.

This regulatory push is justified by the EU Green Deal, an encompassing vision that includes a commitment to reach climate neutrality by 2050. The investment necessary for achieving this planned transformation of the European economy requires the shift of private investment to sustainable infrastructure and other assets, complementing funding from government budgets.

A question often raised by the introduction of the EU Taxonomy, in conjunction with the other EU sustainable finance regulatory measures, is whether the focus on green assets will create on the one hand a green bubble for the activities that fall

[20] Corinne Raux and Séverin Fischer, *Testing the Application of the EU Taxonomy to Core Banking Products: High Level Recommendations*, January 2021, https://www.unepfi.org/wordpress/wp-content/uploads/2021/01/Testing-the-application-of-the-EU-Taxonomy-to-core-banking-products-Final-v2.pdf.

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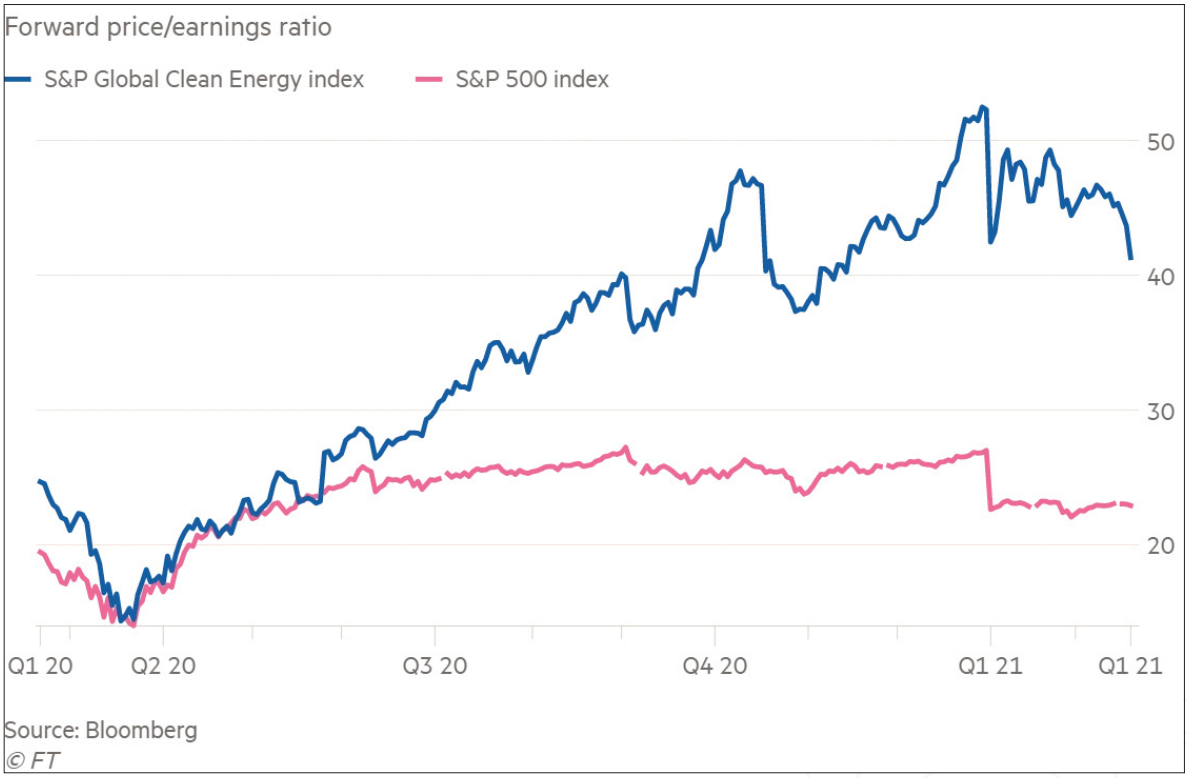
in the scope of the Taxonomy or are included for example in an EU Paris-aligned Benchmark, and on the other hand – as the flip side of the same coin – whether high-carbon assets will be stranded faster as a result.

Regarding the issue of a green bubble, concerns so far have involved renewable energy shares, which have recently recorded a significant growth (Figure 5).[21]

Figure 5 | Valuations on clean energy stocks, 2020–2021



Source: Billy Nauman, "'Green Bubble' Warnings Grow as Money Pours into Renewable Stocks", cit.

It could be argued, however, that by expanding the definition of sustainable assets beyond climate change mitigation (to embrace five other objectives, including biodiversity protection, the promotion of a circular economy and pollution prevention and control), the Taxonomy is actually helping to avoid the concentration of green capital on renewable energy.

The notion of stranded assets was brought to the attention of the financial industry in 2015 by the then Governor of the Bank of England Mark Carney. In his now famous "Tragedy of the Horizon" speech,[22] he pointed out that if the global economy

[21] See for example Billy Nauman, "'Green Bubble' Warnings Grow as Money Pours into Renewable Stocks", in *Financial Times*, 21 February 2021, https://www.ft.com/content/0a3d0af8-7092-44c3-9c98-a513a22629be.

[22] Mark Carney, *Breaking the Tragedy of the Horizon: Climate Change and Financial Stability*, Speech

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were to stay within the greenhouse gas budget compatible with the objectives of the Paris Agreement, then the vast majority of fossil fuel reserves would be unburnable, and therefore the corresponding assets, whose valuation is based on those reserves, would be "stranded". Carney therefore identified the cause of the stranding of the assets in the Paris Agreement itself, and in the associated action of governments who aim to achieve their commitments under that framework.[23] The EU Taxonomy, as it currently stands, seems essentially directed at protecting investors and banks' portfolios from the risk of being exposed to assets likely to be affected by governmental policies that aim to reduce GHG emissions in the real economy. It was created as a solution for investors to identify assets at no risk of stranding, rather than being a cause of the stranding phenomenon per se.

A separate discussion is needed on the so-called transition energy carriers such as natural gas or nuclear. In the 2021 version of the EU green list for the objective of climate mitigation,[24] neither technology was included. The Commission however announced the possibility of setting out specific legislation covering transition energy carriers, while keeping the focus of the EU Taxonomy on the end-goal of a carbon neutral 2050 economy.

2.2 US: Catching up to de-risk the financial system

Although the origins of responsible investment are commonly traced to the investment policies of American Quakers who refused to make slavery-related investments, along with the Methodists, who were against war-related investments, and although the movement for sustainable investment was given a boost in the 1960s as a result of the anti-apartheid embargo, in more recent years the US has been lagging behind Europe in terms of total AUM and in share of assets.

As a practitioner has noted,

> You need three legs on a stool to bring about broad-based support for ESG. [...] There needs to be general government support, a favourable regulatory environment and leadership at the fund level. [...] In the United States, we basically have one out of three. Organisations have to be pretty brave to pursue ESG investing.[25]

given at Lloyd's of London, 29 September 2015, https://www.bankofengland.co.uk/speech/2015/breaking-the-tragedy-of-the-horizon-climate-change-and-financial-stability.

[23] An example of a government policy leading to the stranding of assets related to fossil fuels is Italy's National Energy and Climate Plan 2020 that includes a provision ending the production of energy from coal in 2025.

[24] See European Commission, *Questions and Answers: Taxonomy Climate Delegated Act and Amendments to Delegated Acts on Fiduciary Duties, Investment and Insurance Advice*, 21 April 2021, https://ec.europa.eu/commission/presscorner/detail/en/qanda_21_1805.

[25] Scott Kalb, quoted in Ellen Sheng, "US Continues to Lag Behind on ESG", in *Raconteur*, 9 August 2020, https://www.raconteur.net/?p=132267.

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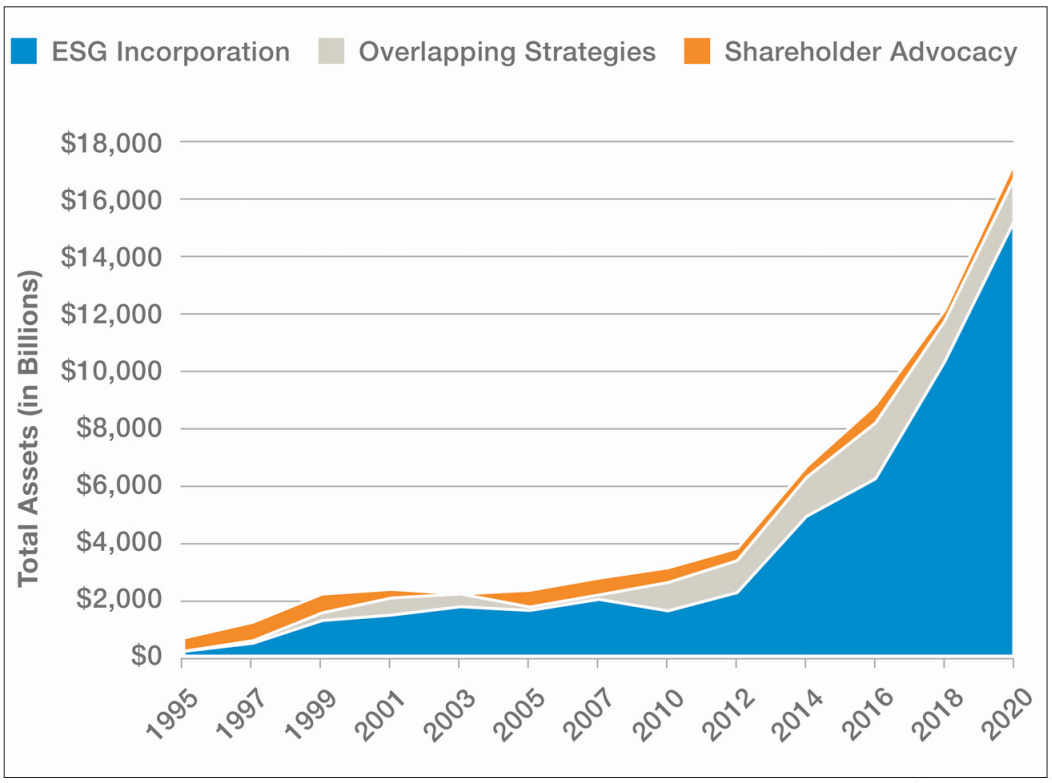
The missing legs are general government support and a consistent, ESG-friendly regulation. Over the course of 2020 and with the transition to the Joe Biden Administration, there are now clear signals that government support and a favourable regulatory environment may be coming into place.[26]

Figure 6 | Sustainable investing in the United States, 1995–2020



Source: US SIF, *Report on US Sustainable and Impact Investing Trends 2020. Executive Summary*, November 2020, p. 1, https://www.ussif.org/files/Trends%20Report%202020%20Executive%20Summary.pdf.

However, ESG investing has never stopped growing at a steady pace, picking up momentum during the Donald Trump Administration (Figure 6). Asset managers have reported an increased interest in responsible investment from asset owners as a reaction to Trump's hard line on ESG topics.[27] As per research by the US Sustainable Investment Forum, in 2020 the total US-domiciled AUM using sustainable investing strategies grew from 12.0 trillion US dollars at the start of 2018 to 17.1 trillion at the start of 2020, an increase of 42 per cent. This represents

[26] In December 2020, the US Federal Reserve Bank joined the Network for Greening the Financial System and in March 2021 it announced the creation of a committee to identify, assess and address climate-related financial stability risks. The SEC's newly appointed acting chair in 2021 announced a series of climate-related initiatives See SEC website: *SEC Response to Climate and ESG Risks and Opportunities*, https://www.sec.gov/node/303381.

[27] See, for example, Bernice Napach, "How Trump Presidency Is Boosting Demand for Impact Investing, ESG Funds", in *ThinkAdvisor*, 20 March 2017, https://www.thinkadvisor.com/2017/03/20/how-trump-presidency-is-boosting-demand-for-impact-investing-esg-funds.

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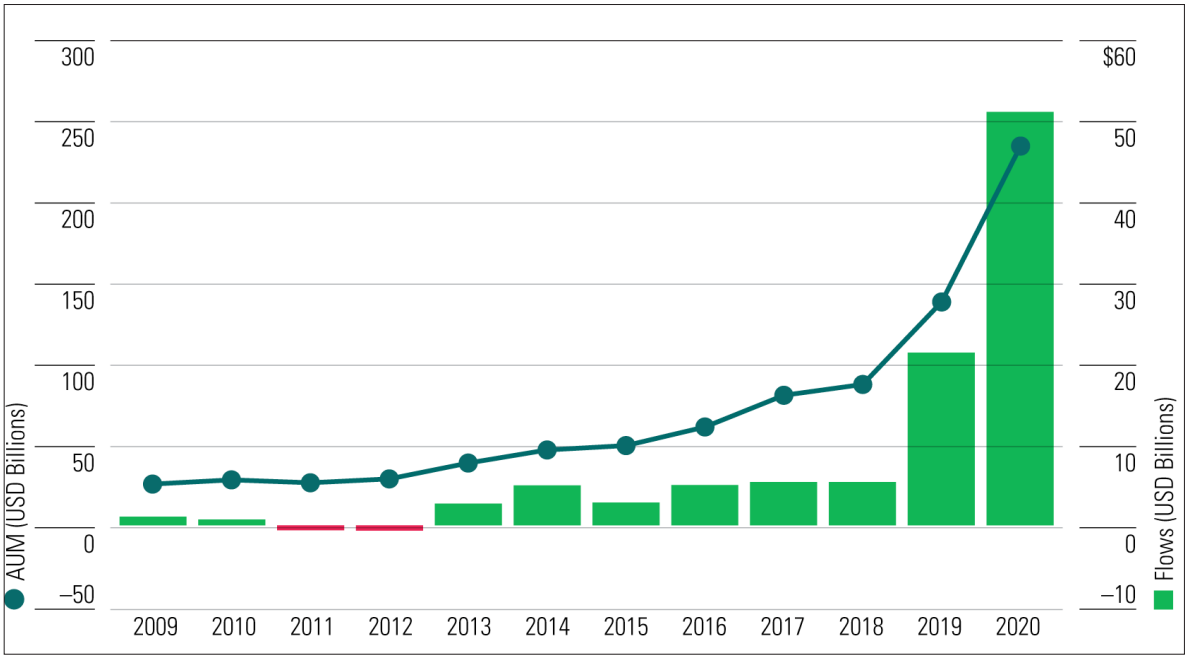
33 per cent, or one in three dollars, of the 51.4 trillion US dollars in total US assets under professional management.[28]

Flows towards sustainable mutual funds recorded an even steeper growth in 2020 (Figure 7), reaching a size 10 times larger than 2018 inflows (51 billion US dollars against 5.4 billion).[29]

Figure 7 | Sustainable funds annual flows and assets



Note: Include sustainable funds as defined in Sustainable Funds US Landscape Report, February 2020. Include funds that have been liquidated; does not include funds of funds.
Source: Jon Hale, "A Broken Record: Flows for US Sustainable Funds Again Reach New Heights", cit.

But what are the key themes sustainable investors care about? The latest survey by the US Sustainable Investment Forum shows that the most important theme for asset managers (who manage funds for both retail and institutional investors) is climate change, with a 39 per cent increase in assets affected since 2018. However, natural resources and governance (executive pay) are on the rise with an 81 per cent and 122 per cent growth rate respectively (see Figure 8).

Interestingly, climate change is only the second most important theme for institutional investors (asset owners such as pension funds and insurance companies), with natural resources being the theme that has recorded the highest growth rate (95 per cent, see Figure 9), very likely in response to concerns about

[28] US SIF, *Report on US Sustainable and Impact Investing Trends 2020*, cit.

[29] Jon Hale, "A Broken Record: Flows for US Sustainable Funds Again Reach New Heights", in *Morningstar Articles*, 28 January 2021, https://www.morningstar.com/articles/1019195.

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biodiversity protection spurred by the covid-19 pandemic.

Figure 8 | Top specific ESG criteria for money managers 2020

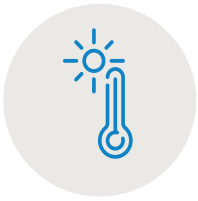
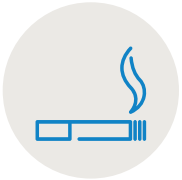
Climate Change/ Carbon	Anti-Corruption	Board Issues	Sustainable Natural Resources/ Agriculture	Executive Pay
				
$4.18 Trillion	$2.44 Trillion	$2.39 Trillion	$2.38 Trillion	$2.22 Trillion
Percent Increase in Assets Affected since 2018				
39%	10%	66%	81%	122%

Figure 9 | Top specific ESG criteria for institutional investors 2020

Conflict Risk (Terrorist or Repressive Regimes)	Climate Change/ Carbon	Tobacco	Board Issues	Sustainable Natural Resources/ Agriculture
				
$2.73 Trillion	$2.61 Trillion	$2.47 Trillion	$2.28 Trillion	$2.18 Trillion
Percent Increase in Assets Affected since 2018				
-8%	17%	-3%	32%	95%

Source: US SIF, *Report on US Sustainable and Impact Investing Trends 2020*, cit., p. 3, 5.

The themes prioritised are likely to represent the risk perceptions of the respondents, given the limited interest in impact in the US market.[30] Increasingly,

[30] Ellen Sheng, "US Continues to Lag Behind on ESG", cit.

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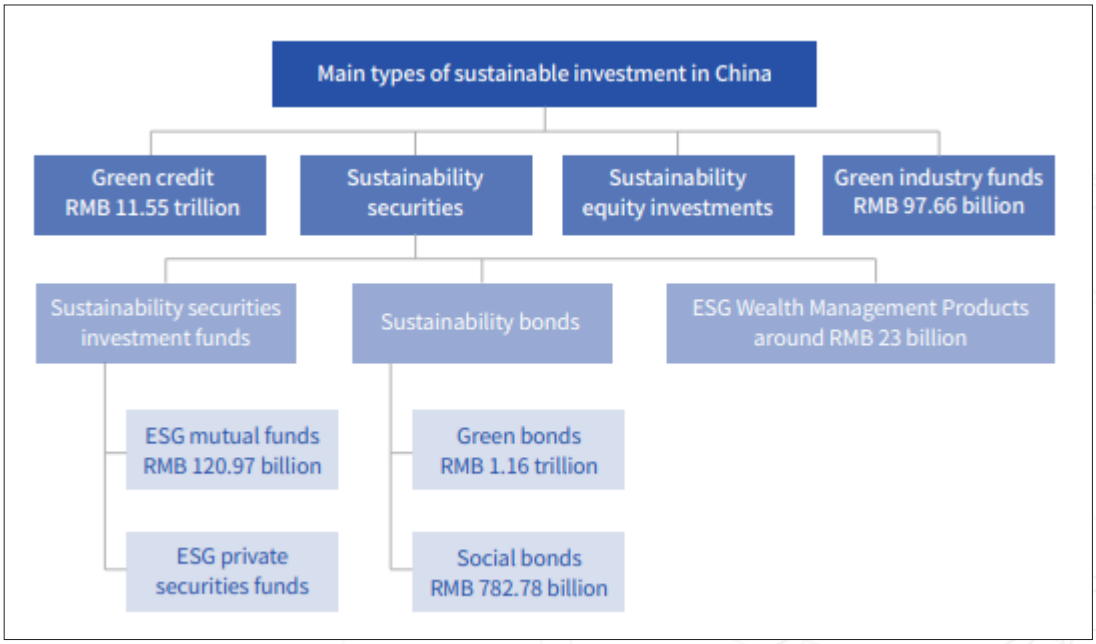
as also testified by recent regulatory initiatives involving the Federal Reserve and the US Securities and Exchange Commission (SEC) on climate-related risks (see above, footnote 26), the focus on sustainable investment is justified by the need to protect the financial system from emerging ESG risks, as posited by the TCFD recommendations, rather than by a need to achieve impact outcomes through portfolio management.

2.3 China's awakening to climate-related risks: Leapfrogging to mandatory climate disclosures and allocation

The first Chinese ESG mutual fund was launched in 2005. Since then, ESG mutual funds have witnessed drastic growth in number and AUM, with the year of 2015 alone adding 24 new funds to the market. More than 20 pan-ESG mutual funds were issued in 2020, for a total of 127 active funds. As the number increased, the size of pan-ESG mutual funds also grew significantly to more than twofold the number in 2019, the fastest growth on record.[31]

But the size of mutual funds – 121 billion renminbi – is just a fraction of the assets represented by sustainable bonds, both green and social: around 1.8 trillion renminbi (or 280 billion US dollars).

Figure 10 | Size of sustainable assets in China



Source: Valentina Wu et al., *China Sustainable Investment Review 2020*, cit., p. 3.

[31] Valentina Wu et al., *China Sustainable Investment Review 2020, China SIF and SynTao Green Finance*, December 2020, http://www.syntaogf.com/Uploads/files/China%20Sustainable%20Investment%20Review%202020.pdf.

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Green finance – more than sustainable investment broadly – has been the area where China has displayed leadership early on. In 2015 China was the first jurisdiction to develop an official green taxonomy of activities qualifying for the issuance of green bonds (the Green Bond Catalogue issued by the People's Bank of China[32]) and to introduce national and regional incentives for the promotion of green bonds in the financial sector.

In the report delivered at the 19th National Congress of the Communist Party of China in 2017, President XI Jinping emphasised that building an ecological civilisation would be a "millennium project for the sustainable development of the entire nation" and stressed the need to "construct a market-oriented system of innovation for green technology, develop green finance, as well as expand energy conservation and environmental protection industries, clean production industries, and clean energy industries".[33]

In early 2020, consultancy SynTao Green Finance published ten trends shaping sustainable investment in China in the coming months:[34] (1) Climate change becoming an important issue for the financial Industry; (2) ESG information disclosure becoming more material; (3) ESG investment products being more diversified with improving recognition among investors; (4) ESG factors incorporated into fixed income investments; (5) Further development of ESG investment in the primary market; (6) Appearance of SDG-themed financial products; (7) ESG promoting the two-way opening-up[35] of China's capital market; (8) Local green finance developing from pilots to new normal; (9) Further Improvement of environment and social risk management in banks' overseas operations; (10) Mutual promotion of fintech and green finance.

As highlighted by the chart in Figure 11 – and exemplified by the list of ESG fund strategies presented in Figure 12 – the focus of sustainable investment on energy and environmental protection seems to have indeed peaked in 2019, with other themes now driving the growth in assets, such as poverty alleviation, corporate governance and the blue economy.[36]

[32] In June 2020, the People's Bank of China (PBoC), China's central bank, the China Securities & Regulatory Commission and the National Development & Reform Commission released a draft Green Bond Endorsed Project Catalogue (2020 Edition) which unified green bond guidelines in China. Clean coal has been excluded from eligibility for green bonds.

[33] Ma Jun et al., "Green Bonds", in Alfred Schipke, Markus Rodlauer and Zhang Longmei (eds), *The Future of China's Bond Market*, Washington, International Monetary Fund, 2019, p. 155-168 at p. 155, https://www.elibrary.imf.org/view/books/071/25402-9781484372142-en/ch007.xml.

[34] SynTao Green Finance, *Top 10 Trends in Sustainable Investment in China*, 2020, http://www.syntaogf.com/Uploads/files/Top%2010%20Trends%20in%20Sustainable%20Investment%20in%20China%202020.pdf.

[35] Reference to the flow of foreign capital to China and of Chinese capital to foreign markets.

[36] In the second half of 2020, Bank of China and China Industrial Bank issued the first blue bonds, and China Industrial Bank and Bank of Qingdao became the first Chinese banks to sign Sustainable Blue Economy Finance Principles hosted by UNEP FI.

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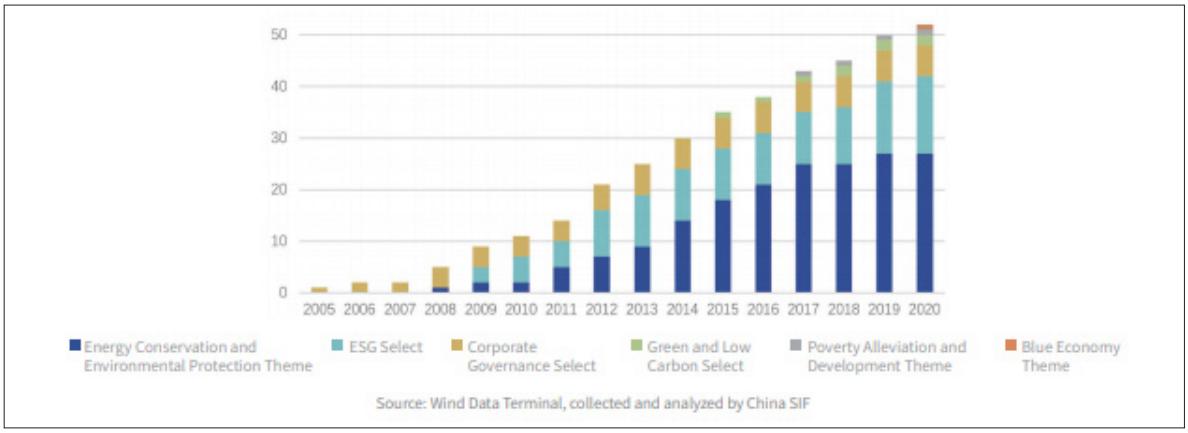
Figure 11 | ESG themes in China



Source: Valentina Wu et al., *China Sustainable Investment Review 2020*, cit., p. 21.

Figure 12 | Example of ESG strategies in China

Short Name	Code	Stock Selection Strategy
AIFMC Social Responsibility	340007	Companies are selected from industries with good earning and sustainability potentials, optimized further with AEGON-Industrial Two-Pass Industry Screening and AEGON-Industrial 4D Social Responsibility Stock Selection Model
CSI Caitong ECPI ESG China 100 Index	000042	Primarily invest based on the CSI Caitong ECPI ESG China 100 Index, complemented by some active investing
AIFMC Green Investment	163409	Seek investment opportunities among green tech industries and enterprises as well as traditional companies with active environmental responsibility programs. Selection is based on a green investment screening strategy, with further considerations given to external environment, financials, and other fundamental factors. Priority is given to companies with superior environmental performances
Great Wall Environmental Theme	000977	Invest in companies in all market segments of the environmental industry, as well as companies actively contributing to the environmental industry and ecological improvement, fulfilling environmental obligations, or committed to make the green transition, including but not limited to carbon trading
BOC Healthy Life	000591	Invest primarily in listed companies that guide and enable people to lead healthier lives
CCB Principal SSE Social Responsibility ETF-Linked Fund	530010	Invest primarily in the SSE Social Responsibility ETF Fund
SSE Social Responsibility ETF Fund	510090	Full replication of the SSE Social Responsibility Index
China Universal Social Responsibility	470028	Use a "hand-pick" strategy to select exemplary listed companies with active social responsibility programs
CCB Principal Social Responsibility	530019	Adhere to the value investing approach with a sharp focus on businesses' fulfillment of social responsibilities

Source: SynTao Green Finance, *Decennial Report on Responsible Investment in China*, 2018, http://www.syntaogf.com/Uploads/files/DECENNIAL%20REPORT%20ON%20THE%20RESPONSIBLE%20INVESTMENT%20IN%20CHINA(2).pdf.

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2.4 India: The race to renewables and nascent ESG investment approaches

In September 2019, India announced its target of reaching 450 GW of renewable energy generation capacity by 2030, one of the most ambitious commitments globally. It is estimated that achieving India's Nationally Determined Contribution will require 2.5 trillion US dollars from 2015 to 2030, or roughly 170 billion US dollars per year.[37]

However, India was only able to mobilise 18 billion US dollars in climate investments in 2018. Out of this, 32 per cent came from public sector investors and the remaining 68 per cent from the private sector, mainly in the form of debt finance. In other words, India needs to mobilise approximately nine times the current investments to meet its commitments. Public finance will not be able to bridge this large capital requirement, meaning that a significant share must come from the private sector.[38]

India's energy sector is one of the fastest growing in the world and has been attracting substantial investments. In 2018, the total rooftop solar capacity reached 4 GW as of December 2018 with approximately 1 GW added in Fiscal Year (FY) 2017 and over 1.5 GW added in FY 2018. In FY 2017, wind energy projects aggregating a record 5 GW were installed, according to the Ministry of New and Renewable Energy. In 2018, nearly 2 GW of new wind energy capacity was added, a decline of 68 per cent year on year.

India's sustainable investment industry is still at an early stage. Assets managed according to a sustainable investment strategy totalled 28 billion US dollars in 2019, having recorded a limited growth of 6 per cent over the previous two years compared to a compound annual growth rate of 16 per cent to 30.7 trillion US dollars over 2016–18.[39]

To strengthen the sustainable investment industry, in 2018 the Indian Pension Fund Regulatory and Development Authority introduced a Common Stewardship Code providing guidance on monitoring and engaging with investees on corporate governance as well as material ESG issues. Institutional investors are required to publicly disclose their stewardship policy, their voting policy and periodic reporting on their voting activities. A similar code was implemented for Mutual Funds and Alternative Investment Funds in 2020.

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[37] Mahua Acharya et al., *Landscape of Green Finance in India, Climate Policy Initiative*, September 2020, p. 12, https://www.climatepolicyinitiative.org/?p=31515.

[38] Labanya Prakash Jena and Dhruba Purkayastha, "Accelerating Green Finance in India: Definitions and Beyond", in *CPI Discussion Briefs*, June 2020, p. 6, https://www.climatepolicyinitiative.org/?p=23778.

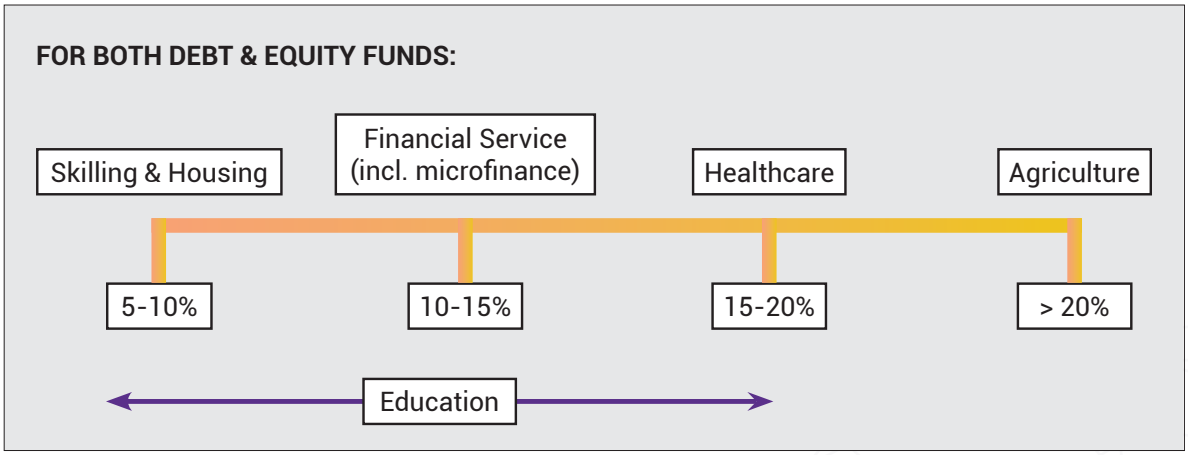
[39] Oxfam India and cKinetics, *Sustainable Investment Action in India*, 2020, p. 4, https://d1ns4ht6ytuzzo.cloudfront.net/oxfamdata/oxfamdatapublic/2020-06/SUSTAINABLE%20INVESTMENT_09-03-2020.pdf.

On the corporate side, the Companies Act of 2013 marked another pivotal moment in Indian sustainable finance, mandating corporates above a certain profit threshold to spend 2 per cent of their net profits on corporate social responsibility.[40]

> India has about two million social enterprises and at least 75 active impact investors. India's impact investors can be classified into three categories: fund managers (such as Aavishkaar, Acumen and Elevar); development finance institutions (such as National Bank for Agriculture and Rural Development and FMO Entrepreneurial Development Bank); and foundations, high-net-worth individuals and family offices (such as Omidyar Network, Michael and Susan Dell Foundation).[41]

As of 2016, the sectors that attracted the largest shares of impact investments were, in the order of preference, financial inclusion, clean energy, education, agriculture and healthcare.[42]

Figure 13 | Expected investment returns



Source: Shamika Ravi et al., "The Promise of Impact Investing in India", cit., p. 18.

2.5 Africa – Investing for impact

Impact investing can be defined as a "cause-based (targeted) [socially responsible investment] SRI strategy, which entails investing in enterprises that offer socially and environmentally useful products and services, rather than simply avoiding

[40] Shamika Ravi et al., "The Promise of Impact Investing in India", in *Brookings India Research Papers*, July 2019, https://brook.gs/2J1xFqX.

[41] Renita D'Souza, "Impact Investment in India: Towards Sustainable Development", in *ORF Occasional Papers*, No. 256 (June 2020), p. 17, https://www.orfonline.org/?p=68378.

[42] Ibid., p. 19.

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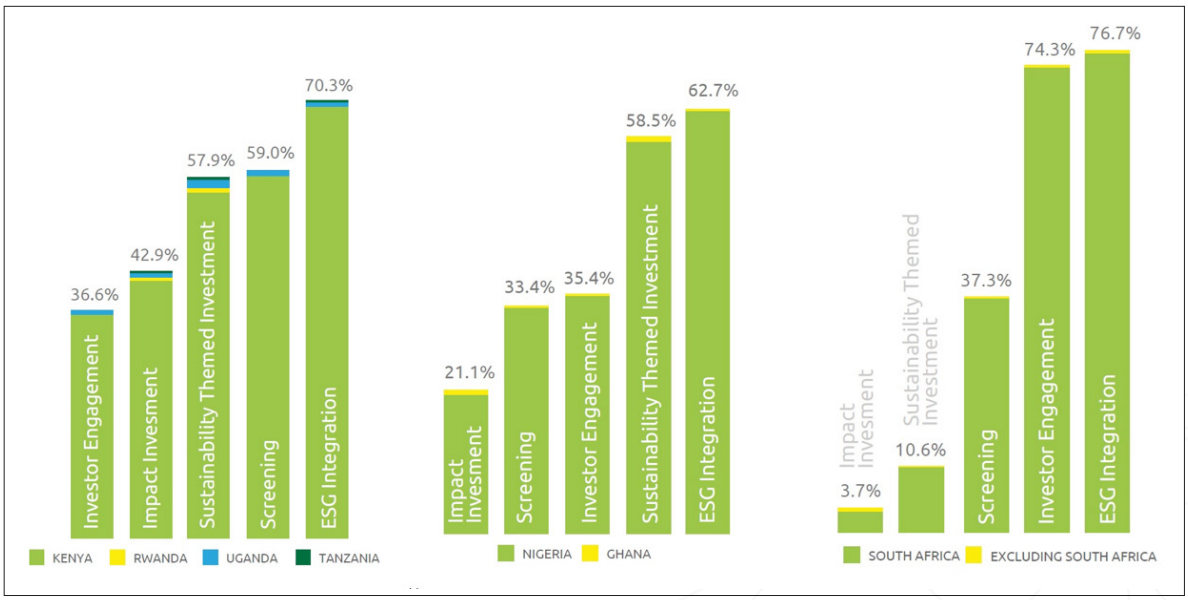
enterprises that do not (e.g. through negative screening)".[43]

As a Kenyan impact investment expert notes, this new way of solving social and environmental problems – as opposed to grant making – is "the way forward for the continent [...]. However, we are still in the early days. More financial flows as well as innovative financing mechanisms to help in resolving the continent challenges are expected as more and more impact investors and impact related entrepreneur thrive in the continent".[44]

Africa is indeed one of the global "hotbeds" of impact investing. The latest survey from the Global Impact Investing Network has found that of the 404 billion US dollars of impact investing assets held by the network respondents, the vast majority (59 per cent) is allocated to emerging markets, with sub-Saharan Africa attracting the most assets (21 per cent)[45] or 85 billion US dollars.

Figure 14 | Weight of IFI strategies as % of total assets



Source: Xolisa Dhlamini, Stephanie Giamporcaro and Teboho Makhabane, *The African Investing for Impact Barometer 2017*, Cape Town, Bertha Centre, April 2018, http://www.gsb.uct.ac.za/files/ImpactBarometer5.pdf.

[43] Michael Ngoasong, Alex Korda and Rob Paton, "Impact Investing and Inclusive Business Development in Africa: A Research Agenda", in *IKD Working Papers*, No 76 (January 2015), p. 5, http://oro.open.ac.uk/42157.

[44] Edward Mungai, *Impact Investing in Africa. A Guide to Sustainability for Investors, Institutions, and Entrepreneurs*, Cham, Palgrave Macmillan, 2018, p. 5.

[45] Dean Hand et al., *Annual Impact Investor Survey 2020*, Global Impact Investing Network (GIIN), June 2020, https://thegiin.org/research/publication/impinv-survey-2020.

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Conversely, the latest report from the African for Impact Investing Barometer[46] shows that 51 per cent of all the assets managed in Africa, or 248.29 billion US dollars, incorporate sustainability considerations, with almost 30 billion US dollars invested in impact strategies. The top five investment themes identified by the survey are agriculture, small- and medium-sized enterprises (SMEs), financial services, health and infrastructure.

These themes are confirmed as the leading ones by a qualitative review of impact investment funds focused on Africa (see Table 2), where the notion of "bottom of the pyramid" (BoP) impact cuts across the SMEs and healthcare themes. Another emerging theme is Gender Lens Investing.[47]

Table 2 | Example of Africa-focused impact funds

Development finance institutions	Impact fund	Target investee enterprises
International Finance Corporation (IFC)	West Africa Venture Fund	SMEs to ensure business growth, employment and wealth creation in postconflict Sierra Leone and Liberia
Overseas Private Investment Corporation (OPIC)	Investment Fund for Health in Africa II	SMEs to ensure improvements in the health of low- and middle-income Africans
	ManoCap	SMEs that provide employment and access to goods and services in BoP communities
UK Department for International Development	Novastar Ventures	SMEs that provide employment and access to goods and services in BoP communities
SWEDFUND, NORFUND	The Africa Health Fund	To support SMEs that provide access to health services to Africans, especially those at the bottom of the income pyramid
Dutch Development Bank (FMO), European Investment Bank	Investisseurs & Partenaires	To support sustainable private sector development in Africa through investing in SMEs
USAID, DFID, SIDA, Omidyar	Global Innovation Fund	Grants and risk capital to encourage social innovations in BoP markets

Source: Michael Ngoasong, Alex Korda and Rob Paton, "Impact Investing and Inclusive Business Development in Africa", cit., p. 5.

[46] See Xolisa Dhlamini, Stephanie Giamporcaro and Teboho Makhabane, *The African Investing for Impact Barometer 2017*, cit.

[47] An in-depth analysis of Gender Lens Investing drivers and barriers in Africa can be found in Michael Ngoasong and Richmond O. Lamptey, "Gender Lens Investing in the African Context", in Elsa De Morais Sarmento and Paul R. Herman (eds), *Global Handbook of Impact Investing*, Hoboken, John Wiley & Sons, 2021, p. 273-302.

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The case-study below is an illustration of how impact investment can work in the continent.

Box 2 | Case-study: Saving water in African agriculture

In March 2013, a young Kenyan graduate, Peter Chege, knocked on the door at Kenya Climate Innovation Center (KCIC) with an idea for how to help Kenyan dairy farmers make animal fodder that would increase their yields significantly as well as save more than 70 per cent in water usage. The technology behind Peter's innovation was the use of a hydroponic system for small-scale farmers in Kenyan Highlands. The system that he was proposing is less sophisticated compared with similar ones in the Western world. From first mention, the technology seemed mundane, but a closer look revealed an innovation that would aid the fight against climate change as well as increase the disposable income among the small-scale farmers. Peter was looking at how the Centre could help him to improve his business through the business advisory services provided by KCIC, help in prototyping and piloting his idea; fundraising for scaling the business as well as helping in the accessing to market for his products to farmers. Three years down the line, the business has come along in leaps and bounds, serving a total of over 2,500 farmers in East Africa. In addition, the business has expanded to include the development of hydroponic systems for vegetables, and Peter's company is now the proud employer of over 35 full-time staff and has indirectly created another 130 jobs. This case is a good illustration of how impact investing can contribute to development in Africa. The business above is currently in the market for impact investors to participate in its expansion. Kenya Climate Ventures, a fund that is 100 per cent owned by KCIC, has invested 300,000 US dollars in a convertible debt in the company and continues to provide technical assistance to the company.

Source: Edward Mungai, *Impact Investing in Africa*, cit., p. 25-26.

3. Passive investment focus: Smart ESG indexes and engagement strategies

3.1 Index design methodologies for gradually enhancing allocation towards sustainable assets

Passive investment strategies are those that replicate the composition of an index and keep tracking that index performance without the need for buying and selling shares once the initial fund portfolio has been established. It is the investment strategy pursued by the largest asset manager globally, BlackRock, which invests 85 per cent of the 8.7 trillion US dollars under management in funds tracking indexes.

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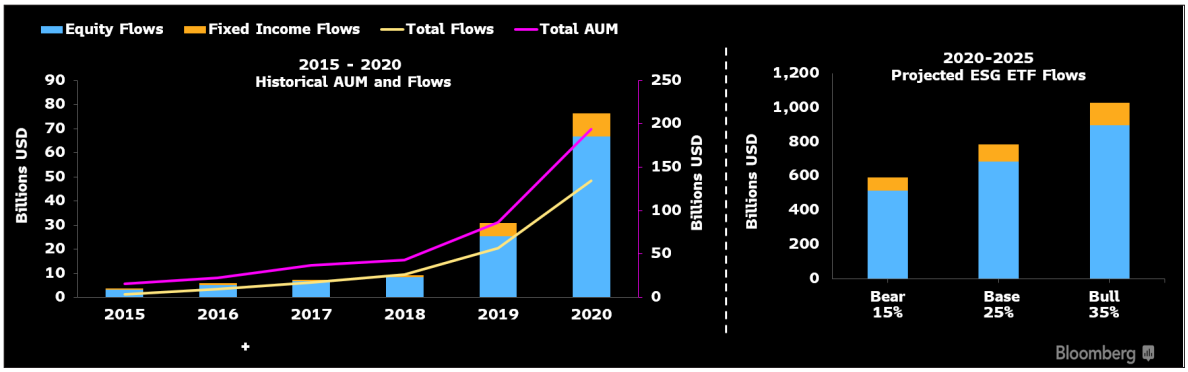
The recent global shift from active to passive investing has led to a significant increase in the number of funds tracking ESG indexes. In 2020, over 200 billion US dollars flowed into ESG ETFs – both equity and fixed income – with projections for further growth to 2025 between 600 and 1,000 billion US dollars based on research by Bloomberg.[48]

Figure 15 | Historical and projected growth of ESG ETFs



Source: Adeline Diab and Gina Martin Adams, "ESG Assets May Hit $53 Trillion by 2025, a Third of Global AUM", cit.

Apart from their popularity as an investment strategy, due to their better performance and lower fees compared to active funds, passive funds are interesting because through the index they incorporate sophisticated rule-based strategies for ESG investment, with high levels of transparency regarding the criteria used for overweighting or underweighting securities compared to a simple market capitalisation approach.

The importance of passive funds has been acknowledged by the EU, which has introduced two new methodologies for climate-related indexes: the EU Paris-aligned Benchmark or EU PAB (already mentioned in section 1.1) and the EU Climate Transition Benchmark (EU CTB).

These benchmark methodologies[49] require among other minimum criteria that the index portfolio self-decarbonise year-on-year by at least 7 per cent based on the trajectory for alignment with a 1.5 degrees scenario (with limited or no overshoot) as modelled by the IPCC. Exclusion criteria are also included for the EU PAB, alongside minimum decarbonisation criteria compared to the parent index or the investable universe (that is, the set of securities that constitute the starting point for the application of the screening criteria). The fact that carbon neutrality

[48] Adeline Diab and Gina Martin Adams, "ESG Assets May Hit $53 Trillion by 2025, a Third of Global AUM", in *Bloomberg Intelligence*, 23 February 2021, https://www.bloomberg.com/professional/blog/esg-assets-may-hit-53-trillion-by-2025-a-third-of-global-aum.

[49] See Technical Expert Group on Sustainable Finance, *Final Report on Climate Benchmarks and Benchmarks' ESG Disclosures*, September 2019, https://ec.europa.eu/info/files/190930-sustainable-finance-teg-final-report-climate-benchmarks-and-disclosures_en.

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has to be achieved gradually, by a precise and measurable progression, allows for technological advancements and industry adjustments to the transition to a low-carbon economy. Through the tracking of a trajectory, total divestment for high-carbon sectors is not immediately required.

The minimum criteria for the development of the two EU climate benchmarks are provided in Table 3. It can be noted that stricter requirements for the EU PAB include activity exclusions such as shares or bonds from companies that derive more than 1 per cent of their revenues from exploration, mining, extraction, distribution or refining of hard coal and lignite; companies that derive 10 per cent or more of their revenues from the exploration, extraction, distribution or refining of oil fuels; companies that derive 50 per cent or more of their revenues from the exploration, extraction, manufacturing or distribution of gaseous fuels; and companies that derive 50 per cent or more of their revenues from electricity generation with a GHG intensity of more than 100 g CO_2 e/kWh.

Table 3 | Minimum criteria of EU PAB and CTB

Minimum standards	EU CTB	EU PAB
Risk oriented minimum standards		
Minimum scope 1+2(+3)11 carbon intensity reduction compared to investable universe	30%	50%
Scope 3 phase-in	Up to 4 years, depending on sectors	Up to 4 years, depending on sectors
Baseline exclusions	Not initially	Yes Controversial weapons Tobacco Societal norms violators Significant harm to EU Taxonomy objectives
Activity exclusions	Not initially	Coal (1%+ revenues) Oil (10%+ revenues) Natural gas (50%+ revenues) Electricity producers with carbon intensity of lifecycle GHG emissions higher than 100gCO2e/kWh (50%+ revenues)
Opportunity oriented minimum standards		
Year-on-year self-decarbonisation of the benchmark	At least 7% on average per annum: in line with or beyond the decarbonisation trajectory from the IPCC's 1.5°C scenario (with no or limited overshoot)	
Exposure constraints	Minimum exposure to sectors highly exposed to climate change issues is at least equal to equity market benchmark value	
Corporate target setting	Weight increase shall be considered for companies which set evidence-based targets under strict conditions to avoid greenwashing	

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Table 4 | Disclosure by sector: 2019 reporting

Recommendation	Recommended Disclosure	Banking (236)	Insurance (138)	Energy (274)	Materials & Buildings (414)
Governance	a) Board Oversight	23%	24%	42%	26%
	b) Management's Role	24%	35%	45%	31%
Strategy	a) Risks and Opportunities	32%	49%	65%	39%
	b) Impact on Organization	27%	21%	54%	43%
	c) Resilience of Strategy	12%	8%	15%	4%
Risk Management	a) Risk ID and Assessment Processes	25%	36%	39%	26%
	b) Risk Management Processes	23%	28%	38%	26%
	c) Integration into Overall Risk Management	19%	26%	30%	14%
Metrics and Targets	a) Climate-Related Metrics	27%	26%	41%	43%
	b) Scope 1, 2, 3 GHG Emissions	21%	19%	27%	35%
	c) Climate-Related Targets	19%	22%	44%	41%

Recommendation	Recommended Disclosure	Trans-portation (162)	Ag., Food, & Forest (147)	Technology and Media (113)	Consumer Goods (167)
Governance	a) Board Oversight	16%	20%	6%	11%
	b) Management's Role	20%	21%	8%	17%
Strategy	a) Risks and Opportunities	38%	41%	27%	27%
	b) Impact on Organization	30%	35%	16%	25%
	c) Resilience of Strategy	2%	1%	0%	2%
Risk Management	a) Risk ID and Assessment Processes	15%	21%	7%	16%
	b) Risk Management Processes	18%	26%	11%	14%
	c) Integration into Overall Risk Management	10%	14%	4%	7%
Metrics and Targets	a) Climate-Related Metrics	37%	35%	23%	31%
	b) Scope 1, 2, 3 GHG Emissions	27%	28%	19%	24%
	c) Climate-Related Targets	35%	38%	19%	29%

The numbers in parentheses represent the size of the review population

Legend: Low to high percentage of disclosure

Source: TCFD, *2020 Status Report*, cit., p. 16.

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The criteria for both climate benchmarks are compatible with the implementation of the TCFD recommendations, in particular those associated with target setting and scenario analysis, given the reference of the EU methodologies to the IPCC 1.5 degrees scenario and the possibility to overweigh companies that set climate targets. In association with the constraint on continuing to invest in high-carbon sectors, these criteria confirm the relevance of this type of methodology for the energy sector, which is one of the most transparent vis-à-vis the TCFD recommendations, as noted by disclosure surveys[50] and highlighted in Table 4.

3.2 Stewardship in passive investment strategies: Which theory of change?

A sustainable investment approach that is often associated with passive investment is stewardship or engagement. Engagement can be defined as "active dialogue with a specific and targeted objective. It is intended to put the stewardship role into effect. The underlying aim of the engagement dialogue should always be to preserve and enhance the value of assets on behalf of beneficiaries and clients".[51]

Engagement implies active dialogue with investee companies on the part of investors, which can take place through voting and raising shareholder resolutions at annual general meetings, through meetings with a company's management, or through collective action in collaboration with other investors on a specific topic (see for example the case of the Climate Action 100+ initiative described in section 1.1).

For investors who cannot divest from companies because they are following a passive investment strategy, dialogue with companies is particularly crucial for achieving impact. In addition to ESG incorporation in the index design, discussed in the previous sections, active ownership is the other main tool for discharging responsible investment duties where the index being tracked is a standard – non-ESG – one.[52]

[50] See Mathew Nelson, "How the Energy Industry Is Leading on Climate-related Disclosures", in *EY Articles*, 1 June 2020, https://www.ey.com/en_gl/climate-change-sustainability-services/how-the-energy-industry-is-leading-on-climate-related-disclosures; Task Force on Climate-related Financial Disclosures (TCFD), *2020 Status Report*, October 2020, https://www.fsb.org/wp-content/uploads/P291020-1.pdf.

[51] Investor Forum, *Defining Stewardship and Engagement*, April 2019, p.1, https://www.investorforum.org.uk/wp-content/uploads/securepdfs/2019/04/Defining-Stewardship-Engagement-April-2019.pdf.

[52] For a discussion on all responsible investment options available to passive investors, see Toby Belsom et al., "How Can a Passive Investor Be a Responsible Investor?", in *PRI Discussion Papers*, 2020, https://www.unpri.org/download?ac=6729.

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Table 5 | Approaches to including ESG factors in passive investment strategies

ESG incorporation			**Active ownership**		**Policy engagement**
ESG issues can be incorporated into existing investment practices using a combination of three approaches: integration, screening and thematic.			ESG issues can be incorporated into discussions with companies. The objective might be to encourage better practices or disclosure or to improve ESG risk management.		ESG issues are discussed with regulators, government or quasi-government bodies with the objective of changing the regulation or guidance on how corporations or capital markets approach certain ESG issues.
Integration	**Screening**	**Thematic**	**Engaging with companies**	**Proxy voting**	
The overall exposure to a particular ESG factor is reduced or increased by adjusting the weights of constituents dependent on ESG factors. This may be reflected in a bespoke index.	Applying filters or screens to the investment universe based on an investor's preferences, values or ethics	Companies are selected based on their exposure to specific themes (e.g. clean technology).	ESG issues are discussed with companies to improve their handling of such issues. This can be done individually, or in collaboration with other investors.	Formally expressing approval or disapproval by voting on resolutions or proposing shareholder resolutions on specific ESG issues.	

Source: Toby Belsom et al., "How Can a Passive Investor Be a Responsible Investor?", cit., p. 10.

BlackRock defines its engagement priorities in a letter that is sent every year[53] to the CEOs of all its investee companies. The 2021 letter, announcing the asset manager's commitment to net zero, highlights the following themes: (1) the start of a "tectonic shift" toward net zero; (2) the inseparability of social and environmental issues; (3) the critical importance of data and disclosure; (4) the maturing connection between sustainability and financial performance.[54]

In sum, the letter flags to investee companies the expectation that they set out strategies for preparing their alignment with a net zero trajectory.

[53] Starting in 2012.

[54] Larry Fink's 2021 Letter to CEOs: https://www.blackrock.com/corporate/investor-relations/larry-fink-ceo-letter.

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4. The challenge for private ESG assets: High impact versus limited comparability

4.1 Impact strategies mostly target private (unlisted) assets

As exemplified by the case study presented in section 2.5, impact funds tend to invest mostly in the early stage, expansion and growth stages of small companies. Through private equity, impact investors can shape portfolio companies' strategies and work directly with companies to help them meet the intended impact.[55]

Investment in privately held companies, which are mostly SMEs, creates challenges for institutional investors, from governance concerns to issues about ESG data availability.[56]

To mitigate some of those challenges, fund managers that invest in emerging market SMEs are encouraged to consider the role of Technical Assistance Facilities in helping to grow such businesses. Capital alone is often not enough, particularly for SMEs in emerging and frontier markets, many of which need capacity-building support through technical assistance to ensure sustainable growth.[57] This testifies to the complexity of impact investment where it's more needed.

Further examples of strategies used to achieve impact across different geographies are provided below.

Box 3 | Examples of intentional and evidence-based impact investments

Rise Fund investment in Dodla Dairy: Dodla Dairy, the 4th largest private fresh dairy product company in India, is a premier "success" story investment by Rise in 2017. Dodla sources milk from 250,000+ smallholder farmers. Rise estimated that investments in Dodla would increase farm families' annual incomes by 73 per cent, from 425 to 735 US dollars.

Investment in D. Light (investors have included Acumen, Omidyar Network, and others): D. Light is an energy product company in East Africa, in which Acumen made an investment in 2008. D. Light provides a suite of low-cost solar energy solutions for millions without access to reliable energy in East Africa.

[55] Global Impact Investing Network (GIIN), *A Guide for Impact Investment Fund Managers*, 2017, https://thegiin.org/giin-financial-management-resources.

[56] For a discussion of the challenges that investment in private equity poses to responsible investors, see PRI, *Responsible Investment in Private Equity. A Guide for Limited Partners*, June 2011, https://www.unpri.org/download?ac=260.

[57] Aliana Pineiro and Rachel Bass, "Beyond Investment: The Power of Capacity-Building Support", in *GIIN Issue Briefs*, October 2017, https://thegiin.org/research/publication/capacity-building.

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More than 60 million people benefit from D. Light's solutions with an average monthly cost saving of 10 to 25 per cent for consumers, in addition to carbon emission offsets. The impact of the D. Light investments extends far beyond the individual company. The investments also validated the idea that there is an impact-rich market for home solar products.

Bridges Social Impact Bond Fund investment in West London Zone: Bridges invested in West London Zone (WLZ), a registered charity that runs a program in certain parts of London. WLZ works with schools to identify youth who are struggling in school and then buys/manages services for local organizations to provide personalized supports for these children. Bridges funded the organization through a social impact bond. In the pilot, there was a 28 per cent average increase in reading scores.

Source: Bridgespan, "What Is Impact Investing and Why Should You Care?", in *Bridgespan Insights*, 12 June 2018, https://www.bridgespan.org/insights/library/impact-investing/what-is-impact-investing.

4.2 The challenges of impact measurement

The question of how impact can be measured is still an open one in the responsible investment industry, which has been working collaboratively to converge on common definitions of impacts and the identification of associated processes and metrics.

The list below[58] provides an insight into the challenges that the very definition of impact can raise, and the nuances and sophistication of the impact measurement process:

- *Outputs* are the direct products of an organisation's activities, such as client-provided services, goods produced or trainings delivered.
- *Outcomes* are the changes that result from these activities and outputs, such as client savings, higher student graduation rates or improved health.
- *Breadth* is the reach of impact across groups of people or ecosystems.
- *Additionality* indicates that the positive impact would not have occurred anyway, without the investment.
- *Depth* is the significance of the impact for the people or ecosystems impacted.
- *Attribution* is evidence that positive impact results from the investment, not from other factors (such as market growth or another party's investment).
- *Longevity* is the durability of impact over time.

[58] The list is drawn from Abhilash Mudaliar et al., *The State of Impact Measurement and Management Practice*, Global Impact Investing Network (GIIN), December 2017, p. 37, https://thegiin.org/research/publication/imm-survey.

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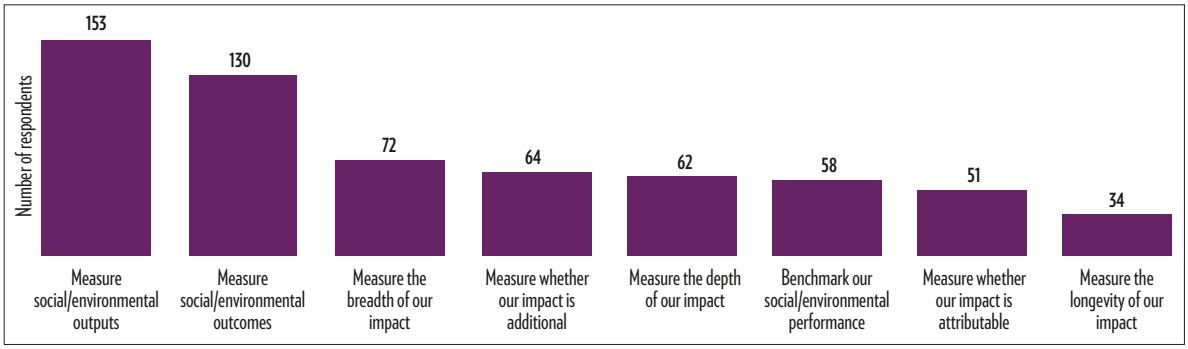
In Figure 16, respondents to a survey run by the Global Impact Investment Network reveal the gap between measuring outputs and the ability to measure whether results can be attributed to the work of the investee company, and how long their impact will last.

Figure 16 | What impact investors measure



Source: Abhilash Mudaliar et al., *The State of Impact Measurement and Management Practice*, cit., p. 37.

To overcome some of the impact measurement challenges, 2,000 organisations have convened the Impact Management Project (IMP), a forum for building global consensus on measuring, managing and reporting impacts on sustainability, relevant for "enterprises and investors who want to manage environmental, social and governance (ESG) risks, as well as those who also want to contribute positively to global goals".[59] Figure 17 shows an application of impact measurement metrics to investment in the clean energy sector.

The IMP reached consensus that impact can be measured across five dimensions:[60]

- *What* tells us what outcome the enterprise is contributing to, whether it is positive or negative, and how important the outcome is to stakeholders.
- *Who* tells us which stakeholders are experiencing the outcome and how underserved they are in relation to the outcome.
- *How much* tells us how many stakeholders experienced the outcome, what degree of change they experienced, and how long they experienced the outcome for.
- *Contribution* tells us whether an enterprise's and/or investor's efforts resulted in outcomes that were likely better than what would have occurred otherwise.
- *Risk* tells us the likelihood that impact will be different than expected.

[59] See the official website: https://impactmanagementproject.com.

[60] IMP website: *Impact Management Norms*, https://impactmanagementproject.com/impact-management/impact-management-norms.

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Figure 17 | Impact measurement in clean-tech investments

METRICS LIST: WHAT IS BEING MEASURED?		Acumen	Bamboo Finance	Calvert Foundation	Deutsche Bank	DOEN Foundation	FMO	Global Alliance for Clean Cookstoves	Gray Ghost Ventures	LGT VP	Lundin Foundation	OPIC	responsAbility	Shell Foundation
ACCESS TO ENERGY (pp. 14-15)														
1. Number of beneficiaries (Output Metric)	IRIS	●	●	●	●	●	●	●	●	●	●	●	●	●
2. Clean energy capacity of products or services sold (Output Metric)	IRIS		●	●		●			●	●			●	●
JOB CREATION (p. 16)														
3. Number of people employed (Output Metric)	IRIS	●	●	●	●		●	●		●	●	●	●	●
ENVIRONMENTAL BENEFIT (pp. 17-18)														
4. Reduction or avoidance of GHG emissions due to products or services sold (Outcome Metric)	IRIS		●	●	●	●	●	●	●	●		●	●	●
INVESTOR LEVERAGE OR DEMONSTRATION EFFECT (pp. 19-21)														
5. Investments catalyzed by leveraging own capital (Outcome Metric)				●	●	●	●	●	●	●	●	●		●
6. Level of influence on a sector (Outcome Metric)				●				●	●			●	●	●
7. Introduction, upscale, and replication of new business models or technologies (Outcome Metric)				●		●		●	●		●	●		
COST SAVINGS (RESULTING FROM SHIFTS IN SPENDING ON FUEL) (pp. 22-23)														
8. Household cost savings resulting from shifts in spending on fuel (Outcome Metric)		●	●					●	●	●	●			●
ENHANCED OPPORTUNITIES FOR PRODUCTIVITY AND INCOME GENERATION (p. 24)														
9. Increased income resulting from higher productivity or additional income-generating opportunities (realized by end users) (Outcome Metric)		●			●	●		●	●	●	●			
POVERTY LEVEL OF END USERS (p. 25)														
10. Beneficiaries broken down by socioeconomic status (number and/or percent) (Output/Outcome Metric)[9]	IRIS	●			●				●	●		●		●
GENDER IMPACT OR BENEFITS TO WOMEN AND GIRLS (p. 26)														
11. Investment supports or empowers women and/or girls (Outcome Metric)	IRIS			●	●			●				●		●
HEALTH BENEFITS (p. 27)														
12. Reduction in deaths and disability-adjusted life years (DALYs) (Outcome Metric)					●			●	●					

Source: GIIN, *Impact Measurement in the Clean Energy Sector*, April 2016, p. 11, https://thegiin.org/research/publication/network-insights-impact-measurement-in-the-clean-energy-sector.

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Conclusion: The long journey to effective ESG impact measurement

ESG investment is an increasingly important investment approach. This emerges from both its level of adoption by the market (as measured in capital flows), and the growing consideration among policymakers of ESG investment as a tool to fund and accelerate the transition to more sustainable economies.

Whether its promises will be kept depends on a number of factors that can be summarised by the following questions:

• Will investments that aim to directly achieve an environmental or social outcome (as per the EU definition of sustainable investment) be able to demonstrate that specific outcomes have been brought about as a result of the investment?

Unless the industry commits to complex impact measurements efforts such as those described in section 4.2, it is important that efficient public policy tools are developed as proxies for impact measurement. The EU Taxonomy is one such tool, as far as environmental impacts are concerned. More work is needed to address social impacts.

• Will investments that aim to protect a portfolio – or the savings of asset owners more broadly – from ESG risks succeed in their intent?

There are two steps to achieving this goal. First, the ability to demonstrate that significant adverse impacts are avoided or mitigated (not just measured or "considered"). Secondly, the ability to demonstrate that the avoidance or mitigation of those risks has reflected into better financial performance.

• Will investment with an ESG focus – regardless of the strategy it implements – be able to reduce the cost of funding of sustainable assets, so that an incentive is created for more enterprises to be set up and research & development carried out in sustainable sectors of the economy?

Also in this case there is first the problem of measuring that ESG investment is actually reducing the cost of capital for sustainable assets. It is a two-pronged problem, as it requires that a reduced cost is observed, and then that this observed reduction can be attributed to the influence of the ESG investment made. The second problem is showing a correlation – if not a causal relationship – between the lower cost of capital and increased levels of economic activity in the affected sectors.

While work is under way to identify metrics and methods for answering the first question – whether it is alignment with the SDGs or with a 1.5 degrees trajectory – work on the financial performance implications under the second or third questions is less developed, as it is considered less critical by policy makers, the community

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of NGOs and foundations, as well as the investment value chain players, probably because they rely on normal financial tools. However, as the figures provided in this report show, the vast majority of ESG assets are managed according to ESG integration, rather than impact-focused, strategies.

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References

Mahua Acharya et al., *Landscape of Green Finance in India*, Climate Policy Initiative, September 2020, https://www.climatepolicyinitiative.org/?p=31515

Toby Belsom et al., "How Can a Passive Investor Be a Responsible Investor?", in *PRI Discussion Papers*, 2020, https://www.unpri.org/download?ac=6729

Anshul Bhamra, Harshini Shanker and Zeenat Niazi, *Achieving the Sustainable Development Goals in India. A Study of Financial Requirements and Gaps*, Technology and Action for Rural Advancement (TARA), August 2015, https://www.devalt.org/images/L3_ProjectPdfs/AchievingSDGsinIndia_DA_21Sept.pdf

Chandan Bhavnani and Arnesh Sharma, *ESG Investing Scenario in India. Co-creating a Better Future*, Mumbai, Yes Bank, December 2019, https://www.yesbank.in/pdf/esg_investing_scenario_in_India

Bridgespan, "What Is Impact Investing and Why Should You Care?", in *Bridgespan Insights*, 12 June 2018, https://www.bridgespan.org/insights/library/impact-investing/what-is-impact-investing

Mark Carney, *Breaking the Tragedy of the Horizon: Climate Change and Financial Stability*, Speech given at Lloyd's of London, 29 September 2015, https://www.bankofengland.co.uk/speech/2015/breaking-the-tragedy-of-the-horizon-climate-change-and-financial-stability

Sachin Chaturvedi et al. (eds), *The Palgrave Handbook of Development Cooperation for Achieving the 2030 Agenda*, Cham, Palgrave Macmillan, 2021

Anushua Chowdhury, Sakshi Bahl and Upendra Bhatt, *Catalysing Private Capital for Green Investments in India*, cKinetics and Shakti Foundation, 2019, https://shaktifoundation.in/?p=11619

Xolisa Dhlamini, Stephanie Giamporcaro and Teboho Makhabane, *The African Investing for Impact Barometer 2017*, Cape Town, Bertha Centre, April 2018, http://www.gsb.uct.ac.za/files/ImpactBarometer5.pdf.

Adeline Diab and Gina Martin Adams, "ESG Assets May Hit $53 Trillion by 2025, a Third of Global AUM", in *Bloomberg Intelligence*, 23 February 2021, https://www.bloomberg.com/professional/blog/esg-assets-may-hit-53-trillion-by-2025-a-third-of-global-aum

Renita D'Souza, "Impact Investment in India: Towards Sustainable Development", in *ORF Occasional Papers*, No. 256 (June 2020), https://www.orfonline.org/?p=68378

ISSN 2610-9603 | ISBN 978-88-9368-212-1

European Asset Management Association (EFAMA), "Sustainable Investment in the European Asset Management Industry: Defining and Sizing ESG Strategies", in *EFAMA Market Insights*, No. 3 (November 2020), https://www.efama.org/node/191

European Commission, *Questions and Answers: Taxonomy Climate Delegated Act and Amendments to Delegated Acts on Fiduciary Duties, Investment and Insurance Advice*, 21 April 2021, https://ec.europa.eu/commission/presscorner/detail/en/qanda_21_1805

European Fund and Asset Management Association (EFAMA), *Asset Management in Europe. An Overview of the Asset Management Industry*, November 2020, https://www.efama.org/node/1062

European Parliament and Council of the European Union, *Regulation (EU) 2019/2088 of 27 November 2019 on sustainability-related disclosures in the financial services sector*, http://data.europa.eu/eli/reg/2019/2088/oj

European Parliament and Council of the European Union, *Regulation (EU) 2019/2089 of 27 November 2019 amending Regulation (EU) 2016/1011 as regards EU Climate Transition Benchmarks, EU Paris-aligned Benchmarks and sustainability-related disclosures for benchmarks*, http://data.europa.eu/eli/reg/2019/2089/oj

Global Impact Investing Network (GIIN), *A Guide for Impact Investment Fund Managers*, 2017, https://thegiin.org/giin-financial-management-resources

GIIN, *Impact Measurement in the Clean Energy Sector*, April 2016, https://thegiin.org/research/publication/network-insights-impact-measurement-in-the-clean-energy-sector

Global Sustainable Investment Alliance (GSIA), *Global Sustainable Investment Review 2018*, June 2019, http://www.gsi-alliance.org/trends-report-2018

Jon Hale, "A Broken Record: Flows for US Sustainable Funds Again Reach New Heights", in *Morningstar Articles*, 28 January 2021, https://www.morningstar.com/articles/1019195

Dean Hand et al., *Annual Impact Investor Survey 2020*, Global Impact Investing Network (GIIN), June 2020, https://thegiin.org/research/publication/impinv-survey-2020

Karim Harji and Edward T. Jackson, *Accelerating Impact: Achievements, Challenges and What's Next in Building the Impact Investing Industry*, Rockefeller Foundation, July 2012, https://www.rockefellerfoundation.org/report/accelerating-impact-achievements

ISSN 2610-9603 | ISBN 978-88-9368-212-1

High-Level Expert Group on Sustainable Finance (HLEG), *Financing a Sustainable European Economy. Final Report 2018*, January 2018, https://ec.europa.eu/info/files/180131-sustainable-finance-final-report_en

Institutional Investors Group on Climate Changes (IIGCC), *Net Zero Investment Framework Implementation Guide*, March 2021, https://www.iigcc.org/?p=4426

Intergovernmental Panel on Climate Change (IPCC), *Global Warming of 1.5 °C. An IPCC Special Report...*, 2018, https://www.ipcc.ch/sr15

Investor Forum, *Defining Stewardship and Engagement*, April 2019, https://www.investorforum.org.uk/wp-content/uploads/securepdfs/2019/04/Defining-Stewardship-Engagement-April-2019.pdf

Labanya Prakash Jena and Dhruba Purkayastha, "Accelerating Green Finance in India: Definitions and Beyond", in *CPI Discussion Briefs*, June 2020, https://www.climatepolicyinitiative.org/?p=23778

Marcel Jeucken, Shelagh Whitley and Nathan Fabian, *Investing with SDG Outcomes: A Five-Part Framework*, Principles for Responsible Investment (PRI), 2020, https://www.unpri.org/download?ac=10795

Daniel Klein et al. (eds), *The Paris Agreement on Climate Change. Analysis and Commentary*, Oxford, Oxford University Press, 2017

Ma Jun et al., "Green Bonds", in Alfred Schipke, Markus Rodlauer and Zhang Longmei (eds), *The Future of China's Bond Market*, Washington, International Monetary Fund, 2019, p. 155-168, https://www.elibrary.imf.org/view/books/071/25402-9781484372142-en/ch007.xml

Morningstar, *Global Sustainable Fund Flows: Q4 2020 in Review*, 28 January 2021, https://www.morningstar.com/content/dam/marketing/shared/pdfs/Research/Global_ESG_Q4_2020_Flows.pdf

Abhilash Mudaliar, Rachel Bass and Hannah Dithrich, *Annual Impact Investor Survey 2018*, 8th ed., Global Impact Investing Network (GIIN), June 2018, https://thegiin.org/research/publication/annualsurvey2018

Abhilash Mudaliar et al., *The State of Impact Measurement and Management Practice*, Global Impact Investing Network (GIIN), December 2017, https://thegiin.org/research/publication/imm-survey

Edward Mungai, *Impact Investing in Africa. A Guide to Sustainability for Investors, Institutions, and Entrepreneurs*, Cham, Palgrave Macmillan, 2018

ISSN 2610-9603 | ISBN 978-88-9368-212-1

Bernice Napach, "How Trump Presidency Is Boosting Demand for Impact Investing, ESG Funds", in *ThinkAdvisor*, 20 March 2017, https://www.thinkadvisor.com/2017/03/20/how-trump-presidency-is-boosting-demand-for-impact-investing-esg-funds

Billy Nauman, "'Green Bubble' Warnings Grow as Money Pours into Renewable Stocks", in *Financial Times*, 21 February 2021, https://www.ft.com/content/0a3d0af8-7092-44c3-9c98-a513a22629be

Mathew Nelson, "How the Energy Industry Is Leading on Climate-related Disclosures", in *EY Articles*, 1 June 2020, https://www.ey.com/en_gl/climate-change-sustainability-services/how-the-energy-industry-is-leading-on-climate-related-disclosures

Michael Ngoasong, Alex Korda and Rob Paton, "Impact Investing and Inclusive Business Development in Africa: A Research Agenda", in *IKD Working Papers*, No 76 (January 2015), http://oro.open.ac.uk/42157

Michael Ngoasong and Richmond O. Lamptey, "Gender Lens Investing in the African Context", in Elsa De Morais Sarmento and Paul R. Herman (eds), *Global Handbook of Impact Investing*, Hoboken, John Wiley & Sons, 2021, p. 273-302

Oxfam India and cKinetics, *Sustainable Investment Action in India*, 2020, https://d1ns4ht6ytuzzo.cloudfront.net/oxfamdata/oxfamdatapublic/2020-06/SUSTAINABLE%20INVESTMENT_09-03-2020.pdf

PGGM, *APG and PGGM Develop AI-Powered Platform for Investing in the UN Sustainable Development Goals*, 19 September 2019, https://www.pggm.nl/en/press/apg-and-pggm-develop-ai-powered-platform-for-investing-in-the-un-sustainable-development-goals

PGGM and APG, *Sustainable Development Investments (SDIs) Taxonomies*, May 2017, https://www.pggm.nl/media/jzypkdmv/sdi-taxonomies-apg-pggm-mei_2017.pdf

Aliana Pineiro and Rachel Bass, "Beyond Investment: The Power of Capacity-Building Support", in *GIIN Issue Briefs*, October 2017, https://thegiin.org/research/publication/capacity-building

Portfolio Alignment Team, *Measuring Portfolio Alignment. Assessing the Position of Companies and Portfolios on the Path to Net Zero*, November 2020, https://www.tcfdhub.org/?p=4903

Principles for Responsible Investment (PRI), *Responsible Investment in Private Equity. A Guide for Limited Partners*, June 2011, https://www.unpri.org/download?ac=260

ISSN 2610-9603 | ISBN 978-88-9368-212-1

Corinne Raux and Séverin Fischer, *Testing the Application of the EU Taxonomy to Core Banking Products: High Level Recommendations*, January 2021, https://www.unepfi.org/wordpress/wp-content/uploads/2021/01/Testing-the-application-of-the-EU-Taxonomy-to-core-banking-products-Final-v2.pdf

Shamika Ravi et al., "The Promise of Impact Investing in India", in *Brookings India Research Papers*, July 2019, https://brook.gs/2J1xFqX

Gopal Krishna Sarangi, "Green Energy Finance in India: Challenges and Solutions", in *ADBI Working Papers*, No. 863 (August 2018), https://www.adb.org/publications/green-energy-finance-india-challenges-and-solutions

Ellen Sheng, "US Continues to Lag Behind on ESG", in *Raconteur*, 9 August 2020, https://www.raconteur.net/?p=132267

Divjot Singh, Dhruba Purkayastha and Gireesh Shrimali, *From Banks to Capital Markets: Alternative Investment Funds as a Potential Pathway for Refinancing Clean Energy Debt in India, Climate Policy Initiative*, July 2019, https://www.climatepolicyinitiative.org/?p=12087

SynTao Green Finance, *Decennial Report on Responsible Investment in China*, 2018, http://www.syntaogf.com/Uploads/files/DECENNIAL%20REPORT%20ON%20THE%20RESPONSIBLE%20INVESTMENT%20IN%20CHINA(2).pdf

SynTao Green Finance, *Top 10 Trends in Sustainable Investment in China*, 2020, http://www.syntaogf.com/Uploads/files/Top%2010%20Trends%20in%20Sustainable%20Investment%20in%20China%202020.pdf

Task Force on Climate-related Financial Disclosures (TCFD), *2020 Status Report*, October 2020, https://www.fsb.org/wp-content/uploads/P291020-1.pdf

Technical Expert Group on Sustainable Finance, *Final Report on Climate Benchmarks and Benchmarks' ESG Disclosures*, September 2019, https://ec.europa.eu/info/files/190930-sustainable-finance-teg-final-report-climate-benchmarks-and-disclosures_en

Siew Hong Teoh, Ivo Welch and C. Paul Wazzan, "The Effect of Socially Activist Investment Policies on the Financial Markets: Evidence from the South African Boycott", in *The Journal of Business*, Vol. 72, No. 1 (January 1999), p. 35-89, https://doi.org/10.1086/209602

United Nations, *The Sustainable Development Goals Report 2020*, July 2020, https://unstats.un.org/sdgs/report/2020

US SIF, *Report on US Sustainable and Impact Investing Trends 2020. Executive Summary*, November 2020, https://www.ussif.org/files/Trends%20Report%202020%20Executive%20Summary.pdf

ISSN 2610-9603 | ISBN 978-88-9368-212-1

World Economic Forum and Deloitte, *From the Margins to the Mainstream. Assessment of the Impact Investment Sector and Opportunities to Engage Mainstream Investors*, World Economic Forum, September 2013, https://www.weforum.org/reports/margins-mainstream-assessment-impact-investment-sector-and-opportunities-engage-mainstream-investors

Valentina Wu et al., *China Sustainable Investment Review 2020*, China SIF and SynTao Green Finance, December 2020, http://www.syntaogf.com/Uploads/files/China%20Sustainable%20Investment%20Review%202020.pdf

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