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What is ESG investing?



ESG is primarily a risk management framework

Top 5 global risks according to investors over the years

Economic

2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 **Financial Financial** Climate action Climate action Infectious Climate action Fiscal crisis Fiscal crises Water crisis failure failure failure failure diseases failure Weapons of Infectious Extreme Extreme Climate action Climate action Extreme Climate action Climate change Water Crisis Water crisis failure diseases weather weather failure failure weather Fiscal Natural Extreme **Biodiversity Biodiversity Food Crisis** Water crisis Water crisis Water crisis imbalances disasters weather loss loss Asset price Fiscal Involuntary Natural Climate action Extreme **Biodiversity** Social cohesion Water crisis Unemployment failure collapse imbalances migration disasters weather loss erosion **Energy price** Climate action Infrastructure Climate action **Energy price** Climate action Natural Natural Livelihood **Energy price** Water crisis Water crisis volatility volatility failure breakdown failure shock failure disasters esource crises crises

01

ESG risk, especially ecologic ones are now considered as the major future threats. This was not the case even 10 years ago

02

Environmental

Companies not adapting to ESG considerations will be confronted with intensified problems.

Geopolitical

03

Societal

Investors taking into account sustainability criteria maybe able to mitigate ESG risk.

Technological

Source: WEF, S&P Global, Deutsche Bank AG, Data as of Jan 2022.

ESG investing is part of a structural market shift

Institutional involvement raises awareness

Instruction of the first sustainable investment fund (Pioneer Fund) in the US Exclusion of defense companies in the context of the Vietnam War First market-cap weighted index launched for companies meeting ESG criteria (Domini 400 Social index, now MSCI KLD400)

Becoming more mainstream

United Nations Principles for Responsible Investment (UN PRI) report defines principles for responsible investment

ESG: part of business as usual

Global climate change is a catalyst for environment dimensions

UN PRI report concludes that "failing to consider all long-term investment drivers, including ESG issues, is a failure of fiduciary duty"

Global commitments towards Sustainable Development Goals (SDGs) and Paris Climate Accord

1887-1914

1928 1950

1955-1975

1980s 1990 1995 2006

2008 2014

2015 2020

2022

Ukraine war poses fundamental question on ESG, such as defense

Levers Brothers (later Unilever) construct Port Sunlight "a model village" in the UK to house factory workers and improve their welfare through offering education and healthcare

First efforts led by individuals

US Pension Scheme demands that social, as well as financial, considerations be used to determine investments

Apartheid in South Africa is a catalyst for the social dimension of sustainability

Initial research & developments

Launch of diversified ESG funds

First academic studies on ESG investments emerge, initiating an intense debate Law Commission in England and Wales confirms that pension fund trustees may take ESG factors into account when making investment decisions COVID-19 pandemic acts as an overall and energy

EU regulate integrating into target investment

catalyst for all

dimensions

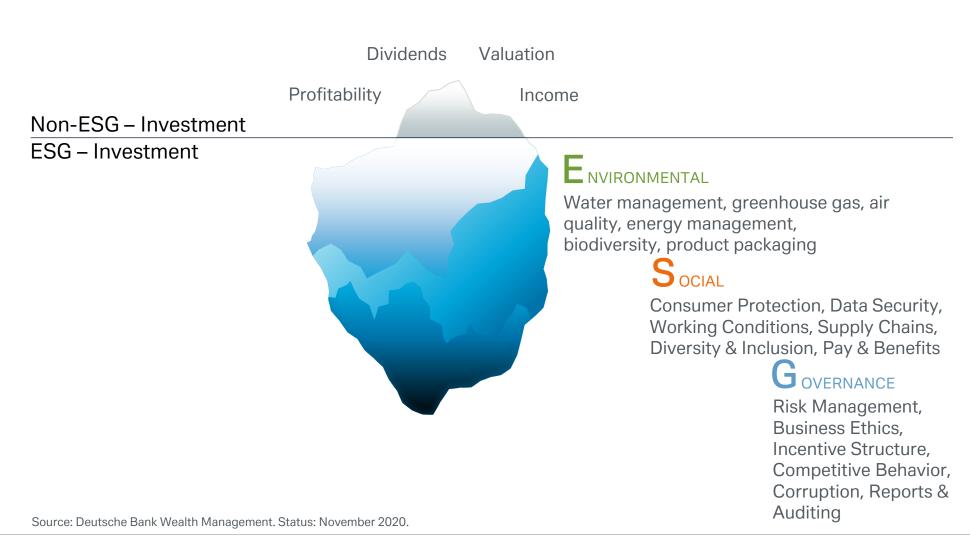
ESG

EU regulatory changes on integrating sustainability into target market and investment process

Broadening focus "beyond climate"

Source: Deutsche Bank, July 2022

F for Finance, ESG for Sustainability



Why focus on ESG investing?



ESG focus is improving corporate transparency

Number of entities required to make sustainability disclosures will increase from 11,600 to 49,000 under the Corporate Sustainability Reporting Directive, resulting in increased transparency¹



Market attitudes are increasingly positive

Over 75% of our clients slightly or strongly agree that investments should have a positive impact to the world²



ESG can help to mitigate risk and improve resilience

Over the past five years, 15 out of 21 ESG indices outperformed their peers³



Opportunity to contribute to ongoing sustainable capital reallocation Global economy set to lose up to 18% GDP from climate change if no action taken⁴

Source: Deutsche Bank, July 2022

¹ FY com

² CIO Special (2021) Biodiversity loss: recognising economic and climate threats, Survey of investor attitudes to ESG.

Morningstar standard sustainability indices; Morningstar.com

⁴ Swissre.com

Client insight: our house view on ESG

Leading Perspectives

ESG is at the core of our CIO research, in line with the fundamental secular trend which underpins the global sustainability transition

This is reflected in our key area of focus:

Nature as Capital



We need to see our world as a "stock" of natural capital. If we manage this efficiently, future flows of ecosystem services which underpin economic activity will be ensured and enable growth

This approach not only helps identifying solutions for immediate environmental challenges, but also gives investors guidance on how to channel investments into long-term opportunities

Biodiversity & Oceans



Our focus on Oceans and Biodiversity reflect the need to view nature as an asset, and manage it more effectively over time. These topics' importance is still underappreciated compared to climate change

Capabilities

Developing thought leadership

- Award-winning¹ in-house CIO thought leadership, focusing on long term secular trends shaping our societies via special publications and reports², podcasts, and events
- Covering ESG topics with focus on triple planetary crisis and capital, bridging the gap with economic implications and analysis

Driving impact partnerships

 Partnership with ORRAA (Ocean Risk and Reliance Action Alliance) for research advancement and new financing architecture development



 Contribution to the "Handbook for Nature-related Financial Risks" in partnership with the Cambridge Institute for Sustainability Leadership (CISL)³



Participation in critical policy forums and global roundtables,
 e.g. COP 26 and UN Ocean Conference

- 1. https://www.asiamoney.com/article/27i6gralrq1bhq3whzzls/awards/asia-private-banking-awards/best-for-investment-research-in-asia-2022
- 2. ESG publications are available on deutschewealth.com
- 3. https://www.cisl.cam.ac.uk/resources/sustainable-finance-publications/handbook-nature-related-financial-risks



2

Assisting clients with an ESG transition: our end-to-end approach



We offer clients an end-to-end approach to ESG

Client Insight

ESG house view and thought leadership via our award-winning¹ Chief Investment Office (CIO)



Investment Preferences

Client-led sustainable investment preferences in conjunction with investment objectives and risk appetite



Product Offering

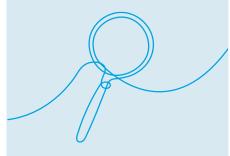
Investment and financing products to support clients in meeting their ESG preferences across a variety of asset classes



Transparent Reporting

Transparent reporting

that assists clients in understanding their progress on a sustainable transition²

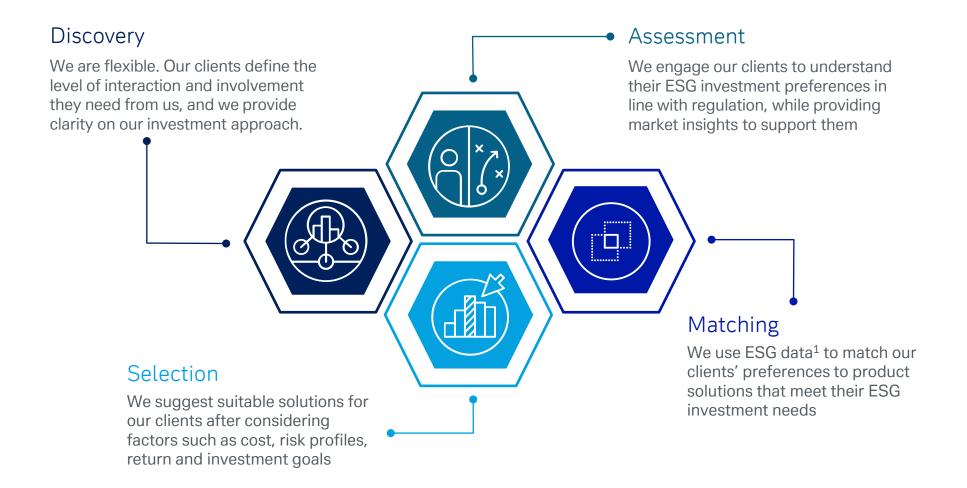


Source: Deutsche Bank, July 2022

¹ Asiamoney.com

² This service may not yet be available to all clients in all locations as of August 2022. Please speak with your Deutsche Bank representative for more information.

Investment preferences: ESG selection



Data sources include: (1) MSCI ESG Research (UK) Limited and MSCI ESG Research LLC (together "MSCI") is an independent third party data provider. The accuracy and completeness of the MSCI ESG data and compliance with sustainability criteria is neither audited nor monitored by the Bank and Deutsche Bank AG assumes no liability for any possible misjudgments. There is no guarantee that investment objectives or return expectations may be realized

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Source: Deutsche Bank, July 2022

Product offering: a modular approach to ESG

Our modular solutions approach offers an active approach to ESG investing by blending advisory opportunities with our robust strategic asset allocation (SAA) process

ESG Strategic Asset Allocation (SAA)

Our SAA strategies represent the cornerstone of our ESG investment offering and integrate exclusion criteria with our ESG method

Complementary solutions

Strategies emphasising one, or several, specific ESG factors and covering asset classes additional to ESG SAA

Examples: Income, exposure to alternative asset classes

Thematic solutions

Investments tailored to preferences for environmental or social themes using a variety of negative screenings and impact investing methodologies Examples: Blue Economy, Climate Tech

High Conviction

Stand-alone opportunities arising from experts across our global franchise Examples: Structured solutions with Green Funding

Strategic Liquidity

Cash products taking into account ESG criteria to optimise liquidity needs within the portfolio

Examples: Green Deposits



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Source: Deutsche Bank, July 2022

Glossary

COP26 is the 26th UN Climate Change Conference of the Parties, which was hosted in Glasgow on 31 October to accelerate action towards the goals of the Paris Agreement and the UN Framework Convention on Climate Change.

ESG is short for "Environmental, Social and Governance" and sums up the key areas in which we must collectively act to protect the natural world, ensure social progress and improve the corporate governance standards that underpin the development and prosperity of the global economy.

ESG investing pursues environmental, social and corporate governance goals.

MSCI is an independent provider of market indices and other analytical tools.

The Paris Agreement refers to a 2015 agreement under the United Nations Framework Convention on Climate Change.

SDGs stands for Sustainable Development Goals. They are a collection of 17 global goals set by the United Nations General Assembly in 2015. They include 169 targets.

UN stands for United Nations and is an international non-profit organisation to increase political and economic cooperation among its member countries.

UNPRI stands for UN Principles for Responsible Investment. It is an UN-supported international network of investors working on responsible investment principles.

USD is the currency code for the U.S. Dollar.

Glossary

An emerging market (EM) is a country that has some characteristics of a developed market in terms of market efficiency, liquidity and other factors, but does not meet standards to be a developed market.

The European Central Bank (ECB) is the central bank for the Eurozone.

EUR is the currency code for the euro, the currency of the Eurozone.

Green Bonds: Green bonds fund projects that have positive environmental and/or climate benefits. Most of the green bonds issued are green "use of proceeds" or asset-linked bonds. Proceeds from these bonds are earmarked for green projects but are backed by the issuer's entire balance sheet. There are also green "use of proceeds" revenue bonds, green project bonds and green securitized bonds. The Green Bond Principles (GBP) are voluntary process guidelines that recommend transparency and disclosure and promote integrity in the development of the Green Bond market by clarifying the approach for issuance of a Green Bond.

Carbon Pricing: Carbon pricing is an instrument that captures the external costs of greenhouse gas (GHG) emissions—the costs of emissions that the public pays for, such as damage to crops, health care costs from heat waves and droughts, and loss of property from flooding and sea level rise—and ties them to their sources through a price, usually in the form of a price on the carbon dioxide (CO2) emitted. Carbon pricing can take the form of a carbon tax or fee, or a cap-and-trade system that depends on government allotments or permits.

ESG: ESG stands for Environmental Social and Governance. It refers to the three key factors when measuring the sustainability and ethical impact of an investment in a business or company.

ETS: Emissions trading system is a market-based approach to controlling pollution by providing economic incentives for reducing the emissions of pollutants. The EU emissions trading system (EU ETS) is a cornerstone of the European Union's policy to combat climate change and its key tool for reducing industrial greenhouse gas emissions cost-effectively.

EUA: A European Union allowance (EUA) is the official name for Europe's emission allowances, which in 2008 was defined as the official Kyoto allowance for countries in the EU. One EUA entitles MWh is megawatt-hour the holder to emit one ton of carbon dioxide or carbonequivalent greenhouse gas.

Europe: Countries included: Austria, Belgium, Bulgaria, Croatia, Republic of Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Switzerland, United Kingdom.

Social Bonds: Proceeds of Social bonds are used to raise funds for new and existing projects that tackle a specific social issue and/or seek to achieve positive social outcomes. The reference framework for issuance of Social Bonds is the Social Bond Principles (SBP). The SBP promote integrity in the Social Bond market through guidelines that recommend transparency, disclosure and reporting Social objectives may include (but are not limited to): affordable housing, affordable basic infrastructure, employment generation and sustainable food systems.

SRI: Socially responsible investing or SRI, is a strategy that emphasizes not only the financial gains from an investment but also ethical or social change.

Sustainable Bonds: Proceeds of Sustainable Bonds are split between green projects and social projects.

Sustainable-linked bonds: Performance-based bonds where payments are contingent on pre-determined KPIs which are aligned with sustainability strategies.

Transition bonds: Brown bonds issued by carbon intensive companies with the intention of starting to green their operations.

Gigawatt abbreviated as GW

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