

Rodrigo Tavares
Adjunct Full Professor (Professor Catedrático Convidado)
rodrigo.tavares@novasbe.pt

Introduction to Sustainable Finance

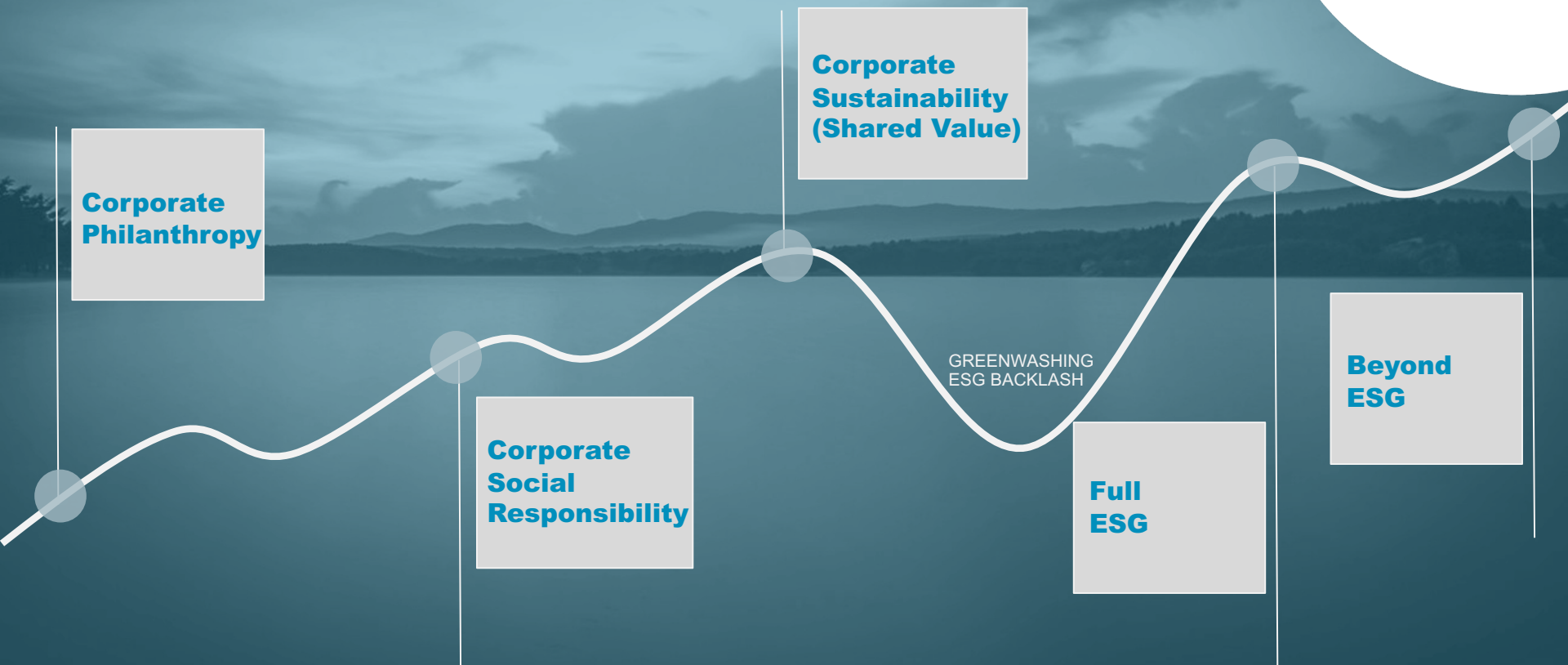
SUSTAINABLE FINANCE





Evolution of corporate sustainability practices

Sustainability evolution - companies





The global corporate sustainability market

Companies are embracing sustainability...



**BUSINESS
STRENGTH**

CLIMATE CHANGE

REPORTING

CLIMATE RISK

CEOs and ESG

83% of CEOs believe that focusing on ESG makes a business better and 43% have embedded ESG in their business strategy (KPMG ESG Survey, 2022).

A majority of global CEOs expect some degree of impact from climate change in the next 12 months—primarily in their cost profiles (where approximately 50% expect a moderate, large or very large impact) and their supply chains (42%). Fewer (24%) are worried about climate-related damage to their physical assets (PwC Annual Global CEO Survey, 2023).

96% of G250 (world's top 250 companies by revenue) report on sustainability or ESG matters and 71% of N100 (top 100 companies by revenue in 58 countries) identify material ESG topics (KPMG, Survey of Sustainability Reporting 2022).

Climate change risk is considered the fifth biggest risk to growth over the next 3 years (KPMG 2021 CEO Outlook Pulse Survey). 69% of CEOs surveyed globally reported that their businesses are being highly or moderately impacted by climate change (Accenture and the United Nations Global Compact, 2022).

98% of CEOs believe it is the role of a CEO to make a business more sustainable and 63% are launching new sustainable products or service offerings (Accenture and the United Nations Global Compact, 2022).



The business case of corporate sustainability

Sustainability can....

- Increase efficiency and help reduce costs
- Uplift productivity and employee satisfaction
- Drive innovation and introduce new product lines
- Reduce the probability of fines
- Attend to increasing regulatory requirements
- Improve a company's capacity to identify and manage external risks
- Pave the way for lower cost of capital
- Foster better corporate governance
- Improve reputation and branding
- Enhance and expand the client base



↳ Sustainability is no longer just a compliance requirement or a public relations tool. It's a business opportunity

Sustainability can increase efficiency and help reduce costs

Concepts

- Sustainability practices induce changes around the efficiency and effectiveness of the resources we use. **It unlocks opportunities for process and logistics savings, waste management, water reduction, energy conservation, and reuse of materials.** Companies may use less to produce more while causing less negative impact.
- **Sustainable companies also incur in lower environmental costs.** They earn insurance premiums, are more resilient to physical costs associated with weather-related disasters, may take advantage of carbon pricing, and pay lower environmental taxes.

Surveys and Data

- The required resource efficient investment may offer a **rate of return greater than 10 per cent per year** and an investment of USD 900 billion may potentially generate 9 million to 25 million jobs (UN Environment, 2018)
- Research shows that of companies focused on product-level sustainability, **64% significantly reduce costs across logistics and supply chains** (Pure Strategies, 2014).
- Resource efficiency can **affect operating profits by as much as 60%** (McKinsey Quarterly, 2019).
- A study analyzing data from CDP (formerly Climate Disclosure Project) estimated that companies experience an average internal **rate of return of 27% to 80% on their low-carbon investments** (We Mean Business, 2014).

Academia

Mioara Borza (2014), “**The Connection between Efficiency and Sustainability – A Theoretical Approach**” in Procedia Economics and Finance, Vol. 15.



A case study

Galp - Portuguese energy company



Expenses, investments and savings/cost avoidance

(M€/year)	2015	2016	2017	2018	2019	2020	2021
Investments	8.34	11.18	9.06	26.93	61.16	30.78	23.94
Operational expenses	5.35	4.62	5.13	6.20	5.55	5.35	5.97
Total expenses	13.68	15.80	14.19	33.13	66.71	36.13	29.92
Savings and cost avoidance	30.37	24.06	15.75	39.81	76.85	17.48	0.76
% of operations covered	100	100	100	100	100	100	100



Dow Jones
Sustainability
Indexes

Sustainability Award
Gold Class 2022
S&P Global

Source: Galp, 2023

Galp is ranked #1 in the Dow Jones Sustainability Indexes (DJSI) (2021 and 2022). As of December 2022, it achieved the highest score in the Oil & Gas Upstream & Integrated Sector in the S&P Global Corporate Sustainability Assessment

- The savings and avoided costs have remained at levels considerably above the total expenses (in capital investment and operational expenses) incurred in improving the operational eco-efficiency (with the exception of 2020 and 2021). This means that the investments have been effective and generated return, which confirms the success of the strategic decisions taken, enabling medium and long-term benefits.
- The operational expenses related to the environmental management systems at the refineries have been reduced since 2012, due to the improvements resulting from the eco-efficiency strategy. The investments made in 2012 and 2013 were based on the BATs, as part of the refinery conversion project.

Source: Galp, 2023

Sustainability can improve the company's capacity to identify and manage external risks

Concepts

- **Companies may be affected by un-priced ESG systemic risks, long-term trends and intangibles in a meaningful way (resource depletion, climate change, risks in supply chain).** More sustainable companies show more resilience in case of sudden changes within the business' operating environment. This could include the mitigation of insurance costs and liabilities resulting from extreme weather events, as well as the mitigation of potential increases in costs of production due to reducing availability of resources and materials.
- **Climate risk** is both systemic and local. It threatens the financial system and the global means of production as much as it poses risk on a more localised level for specific regions, sectors and companies. Its potential physical risks will manifest in both acute, event-driven forms (such as extreme weather) and longer-term, chronic shifts driven by the effects of elevated temperatures and rising sea levels.

Surveys and Data

- More than 200 of the world's largest listed companies forecast that climate change could cost them a combined total of almost \$1 trillion, with much of the cost due in the next five years (CDP, 2019).

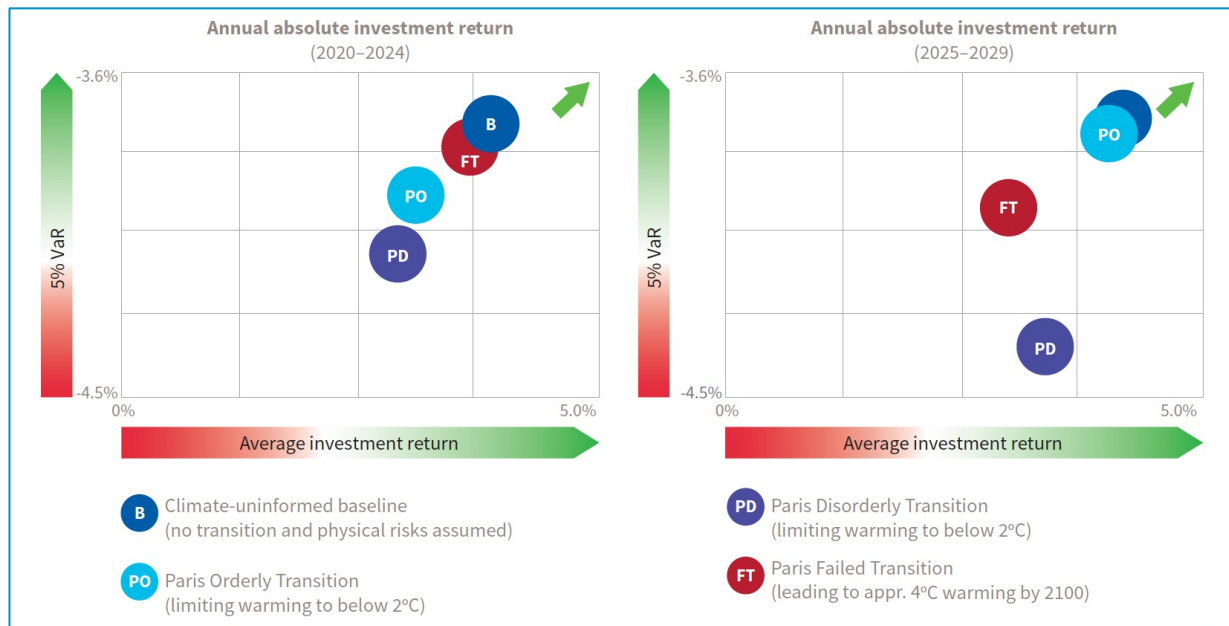
Academia

- Eccles, Robert G; Krzus, Michael P (2018), **"Why Companies Should Report Financial Risks From Climate Change"** in MIT Sloan Management Review, Vol. 59.
- Yongping Sun, Ying Yang, Nan Huang, Xin Zou (2020), **"The impacts of climate change risks on financial performance of mining industry: Evidence from listed companies in China"** Resources Policy, Vol. 69

A case study

Climate change impact on an institutional investor portfolio

INVESTMENT RETURN OF A REPRESENTATIVE PENSION FUND'S PORTFOLIO IN DIFFERENT CLIMATE PATHWAYS AND TIME BUCKETS (STYLISTED RISK-RETURN PROJECTIONS)



In the **nearer-term simulation (2020-2024)**, climate transition risks point to lower expected investment returns relative to the Paris-aligned pathways (Orderly and Disorderly). While a **Paris Orderly Transition** gradually prices in lower earnings expectations across the 2020-2024 period, a **Paris Disorderly Transition** represents an earnings correction that produces a shock in 2024 and higher subsequent volatility.

In the **later-term simulation (2025-2029)**, the average investment return in an orderly transition is similar to the climate-uninformed baseline where transition risk and physical risks are not modelled. In contrast, both the Paris Disorderly and Failed Transitions point to lower expected investment returns.

Sustainability can pave the way for lower cost of capital

Concepts

- **Less sustainable companies are likely to face higher refinancing costs for both loans and bonds if they receive lower credit ratings from banks and rating agencies, respectively.** This will not only increase funding costs but also constrain access to sufficient funding sources in times of financial distress.

Surveys and Data

- In the MSCI World Index, **the average cost of capital* of the highest-ESG-scored quintile was 6.16%, compared to 6.55% for the lowest-ESG-scored quintile;** the differential was even higher for MSCI EM (MSCI, 2020).
- The average cost of debt of high-ESG-rated companies was lower than that of low-ESG-rated companies. This was in line with expectations, as the corporate-governance standard, one of the pillars of ESG, is known to reduce a firm's default risk, which directly impacts its cost of debt (MSCI, 2020).

Academia

- Höck, A., Klein, C., Landau, A. et al. (2020), **"The effect of environmental sustainability on credit risk"** in Journal of Asset Management, Vol. 21.
- Yasser Eliwa, Ahmed About, Ahmed Saleh (2021), **"ESG practices and the cost of debt: Evidence from EU countries"** in Critical Perspectives on Accounting, Vol. 79.
- Maaloul, A., Zéghal, D., Ben Amar, W. et al. (2021), **"The Effect of Environmental, Social, and Governance (ESG) Performance and Disclosure on Cost of Debt: The Mediating Effect of Corporate Reputation"** in Corporate Reputation Review.

* The weighted average of the cost of equity, debt (after tax) and preferred stock.

A case study

ESG scores are related to a company's cost of capital



Monthly averages were reported over the period from Dec. 31, 2015, to Nov. 29, 2019. The average number of companies in the MSCI World Index and MSCI Emerging Markets Index over the analysis period was 1,552 and 960, respectively.

Difference in cost of capital (in %) between high- and low-scoring (Q1 – Q5) companies by GICS sector

GICS Sectors	MSCI World	MSCI Emerging Markets
Energy	0.38	0.59
Materials	0.23	0.90
Industrials	0.39	1.03
Consumer discretionary	0.43	1.00
Consumer staples	0.39	0.69
Health care	0.35	0.61
Financials	0.39	1.06
Information technology	0.46	1.14
Telecommunication services	0.41	0.75
Utilities	0.55	0.73
Real estate	0.43	0.46

Sustainability can...

All these factors....

- Increase efficiency and help reduce costs
- Uplift productivity and employee satisfaction
- Drive innovation and introduce new product lines
- Reduce the probability of fines
- Attend to increasing regulatory requirements
- Improve a company's capacity to identify and manage external risks
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- Foster better corporate governance
- Improve reputation and branding
- Enhance and expand the client base

**Contribute to
better business
and financial
performance**

The sustainability business case – research

Morgan Stanley

“Investing in sustainability has usually met, and often exceeded, the performance of comparable traditional investments. This is on both an absolute and a risk-adjusted basis, across asset classes and over time” (*Sustainable Reality: Understanding the Performance of Sustainable Investment Strategies, 2015*)



A performance analysis of 1,700 companies conducted between 2010 to 2017 concluded that buying the top 20 percent best-ranked ESG stocks and selling the 20 percent worst ranked ESG stocks would have generated annualized returns of 3.3 percent in North America and 6.6 percent in the Eurozone (*The Alpha and Beta of ESG Investing, 2019*)



A study on the ESG scores of companies that declared bankruptcy between 2008 and 2016 found that “an investor who held stocks with above average-ranks on both Environmental and Social scores would have avoided 15 of the 17 bankruptcies we have seen since 2008” (*Equity Strategy Focus Point: ESG Part II: A Deeper Dive, 2017*)



“ESG companies show lower stock return volatility in comparison to non-ESG companies on average by 28.67 percentage points less. And the positive effect on equity return is 6.12 percentage points higher for ESG companies on average” (*Journal of Sustainable Finance and Investment, 2016*)



“53 private equity impact funds from around the world, that demonstrated market-rate-seeking impact funds, could indeed achieve targeted returns and successful, mission-aligned exits” (*Great Expectations, 2015*)



THE BOSTON CONSULTING GROUP

An analysis of more than 300 pharmaceutical, consumer goods, oil and gas, banking and tech companies found that those with more ethical operations made bigger profits and tend to be valued more highly than their competitors (*Total Societal Impact: A New Lens for Strategy, 2017*)



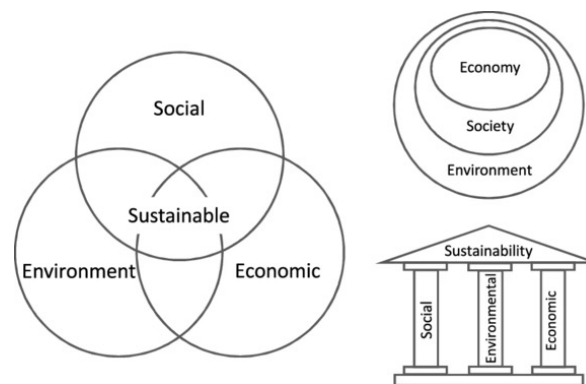
Definitions

Sustainable development

”Development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs”.

Brundtland Report, 1987

The concept of sustainable development has a focus on **economic development**, **social development** and **environmental protection** for future generations.



SDGs

The **Sustainable Development Goals (SDGs)** or Global Goals are a collection of 17 interlinked **objectives** designed to serve as a "shared blueprint for peace and prosperity for people and the planet now and into the future"

The SDGs were formulated in **2015** by the United Nations General Assembly (UNGA) to succeed the Millennium Development Goals, which ended that year. They were formally articulated and adopted in a UNGA Resolution called the **2030 Agenda**.



Corporate sustainability

Corporate sustainability is a **business approach aiming to create long-term stakeholder value through the alignment of the economic mandate of a company with sustainability practices.**

The more sustainable a company is, the higher its capacity to maximize ESG opportunities and positive externalities and minimize ESG risks and negative externalities.

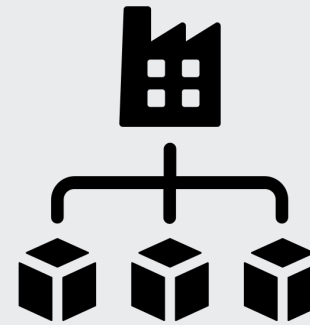


The double nature of corporate sustainability



> Internal corporate sustainability

HOW COMPANIES ACT



> Impact of companies' products and services
> Impact-driven sectors (renewables, healthcare, education etc.)

WHAT COMPANIES DO

Sustainable finance in one sentence

“Sustainable finance is a new paradigm that entails the blending of **pure financial** with **environmental, social and governance (ESG)** data in investment and credit decisions to minimize risk, maximize risk-adjusted returns or generate positive social and environmental impacts.”

What is Sustainable Finance?



Corporate sustainability and sustainable finance are mutually dependent

While investing in companies, **asset managers and asset owners** integrate ESG considerations in their decision-making to better manage risk, to avoid negative impacts and externalities, to improve investment returns and unlock new value-generating opportunities or to generate positive social/environmental impacts.

Investors dissect company's credentials on ESG issues and engage with them to improve performance.



ESG

- Environmental, Social and Governance (ESG) criteria or information is a set of issues and indicators that investors and lenders use to screen potential investments and loans.
- **ESG issues can manifest at global, regional, national, industry and company level.**
- **At company level, ESG issues impact strategy, operations, products, stakeholders and governance.**

How ESG manifests itself at a company level



Environmental

The **E** in ESG, *environmental criteria*, includes the energy a company takes in and the waste it discharges, the resources it needs, and the consequences for living beings as a result. Not least, *E* encompasses carbon emissions and climate change. Every company uses energy and resources; every company affects, and is affected by, the environment.



Social

S, *social criteria*, addresses the relationships a company has and the reputation it fosters with people and institutions in the communities where it does business. *S* includes labor relations and diversity and inclusion. Every company operates within a broader, diverse society.



Governance

G, *governance*, is the internal system of practices, controls, and procedures a company adopts in order to govern itself, make effective decisions, comply with the law, and meet the needs of external stakeholders. Every company, which is itself a legal creation, requires governance.



The global sustainable finance market

Sustainability is also one of the most talked about issues in the finance press

Banks worth \$47T adopt UN-backed responsible banking principles

22 September 2019

UN Principles for Responsible Banking are a guide for the global banking industry to respond to, drive and benefit from a sustainable development economy. 132 Founding Signatories

The year capitalism went cuddly

Business world keen to recast itself as a constructive social actor

Financial Times, 2019

ESG accelerates into the investment mainstream

Financial Times, 2019

ESG funds approach \$2trn as majority of European flows turn green

ESG ETF flows could double record

Investment Weekly, May 2021

Big investors push UK to go further on green finance

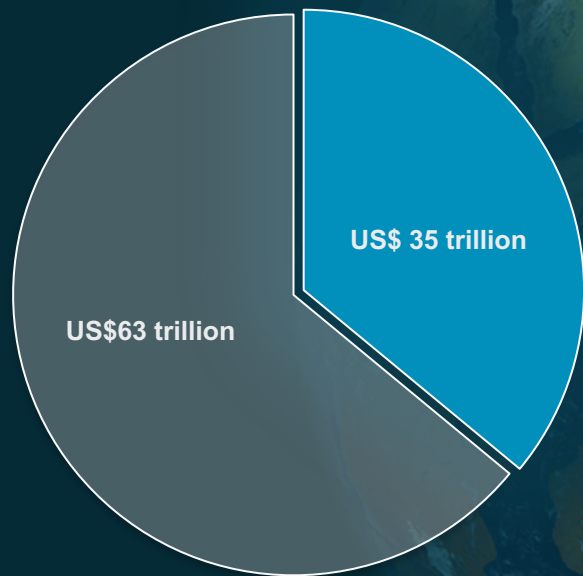
Chancellor's proposals must be robust and pave way for net-zero economy, say asset managers

Financial Times, 2020

To Be A Smart Investor, Be An ESG Investor

Forbes, 2019

How big is the sustainable finance market?



Source: Global Sustainable Investment Alliance 2021, PwC, BCG

1

- Sustainable Finance 36%
- Non-sustainable finance 64%

2

Assets under management in global sustainable funds hit nearly \$2.5trn at the end of December 2022. ”

Morningstar's Global Sustainable Fund Flows: Q4 2022



Trends indicate uptake growth by financial market players

FAMILY OFFICES

56% of family offices globally have ESG allocations. Of those family offices that still don't invest sustainably, more than a quarter (27%) point to lack of standard definitions of sustainability as a barrier to investing (*UBS, The Global Family Office Report 2022*).

GESTORAS DE ATIVOS

85% of asset managers (300 investment fund companies in the U.S. and Europe) reported that over the past year, ESG has become more of a priority within their company's overall investment offering or strategy (*Annual ESG Global Survey of Asset Managers, Index Industry Association (IIA), 2022*).

INVESTIDORES INSTITUCIONAIS

60% of investors say that sustainability considerations play a 'major role' in manager selection, with large institutions and European investors continuing to lead the way. This figure has risen from 41% in 2018 (*bfinance, 2021*).

BANCOS

67% of banks plan to purchase assets in carbon markets to meet ESG goals, and 50% say setting achievable ESG goals and reporting compliance are priorities (*KPMG, ESG: 2022 Banking Industry Survey*).

HERDEIROS

84% of millennials agree that social or environmental impact is important to investment decisions, compared with 71% of Generation X and 55% of baby boomers (*US Trust Bank, 2018*).



Evolution of sustainable finance practices

Timeline

The beginnings

1500 BC-1700s

Judaism, Islam, Christianity (Methodists and Quakers) – laid out principles associated to responsible investments

The modern era

1920s-2000s

- 1928. Amundi's Pioneer Fund– first ESG fund in Europe
- 1962. Pilgram's Fund Board – first Islamic investing fund (Malaysia)
- 1971. Pax World Fund – first ESG fund in the USA
- 1990. Domini 400 Social Index – first ESG Index
- 1992. The Seven Pillars of Corporate Social Performance and Responsibility (CSP/CSR) – first ESG rating system
- 1999. Launch of The Dow Jones Sustainability Indices (DJSI)
- 2000. Launch of UN Global Compact
- 2002. European Commission High-Level Group of Company Law Experts – first ESG regulations.
- 2002. The Johannesburg Stock Exchange becomes the world's first exchange to require listed companies to report on sustainability.

The boom

2000-2022



THE GLOBAL COMPACT

Who Cares Wins

Connecting Financial Markets to a Changing World

Recommendations by the financial industry to better integrate environmental, social and governance issues in analysis, asset management and securities brokerage

Endorsed by:
 ABN Amro • Actia • AXA Group • Banco do Brasil • Bank of America • BNP Paribas • Citigroup • CNP Assurances
 Credit Suisse Group • Deutsche Bank • Goldman Sachs • Henderson Global Investors • HSBC • Invesco
 ISS Asset Management • KLP Insurance • Morgan Stanley • OCMA • UBS • Westpac

The future

2022-

Scenario 1: A consistent but slow growth

Scenario 2: The merging of sustainable finance and traditional finance

All financial assets globally will be managed through ESG lenses in the next 10-15 years (Deutsche Bank Equity Research, May 2018)



Why financial markets consider sustainability?

Financial players integrate ESG factors:

- To meet fiduciary duties
- To better manage risk
- To avoid negative impacts and externalities
- To improve investment returns and unlock new value-generating opportunities
- To improve the quality of engagement and stewardship activities
- To generate positive social/environmental impacts
- To enhance reputation
- To respond to client demand
- To attend to increasing regulatory requirement

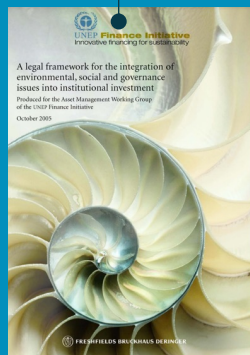


ESG is no longer just a compliance requirement or a public relations tool. It's a business opportunity

To meet fiduciary duties

RATIONALE

- Fiduciary duty is the spinal cord of financial markets. The 2005 landmark report *A Legal Framework for the Integration of Environmental, Social and Governance Issues into Institutional Investment* (commonly referred to as the Freshfields report) states that “integrating ESG considerations into an investment analysis so as to more reliably predict financial performance is clearly permissible and is arguably required in all jurisdictions.”
- **Failing to consider long-term investment value drivers – which include ESG issues – in investment practice may be regarded a failure of fiduciary duty.**



According to CFA and the PRI, to meet their duties financial players should:

- Incorporate financially material ESG factors into their investment decision-making, consistent with the time frame of the obligation.
- Understand and incorporate into their decision making the sustainability preferences of beneficiaries or clients, regardless of whether these preferences are financially material.
- Be active owners, encouraging high standards of ESG performance in the companies or other entities in which they are invested.
- Support the stability and resilience of the financial system.
- Disclose their investment approach in a clear and understandable manner, including how preferences are incorporated into the scheme's investment approach.

To better manage risk

RATIONALE

- **Many investors seek to integrate ESG into investment processes to better understand and lower investment risk.** But there are many ways in which ESG risks can impact a company's bottom line. Identifying those issues which are genuinely material to a sector and company is one of the most active challenges within ESG investment. Each company is unique and faces its own challenges related to its culture, particular business model, supply chain structure, etc. So not only are there substantial differences between sectors, there are also differences between what is most material to individual companies within a single sector.
- Of the many issues concerning ESG, climate change has gained particular attention in the eyes of governments, regulators, businesses and investors. **The 2006 Stern Review on the Economics of Climate Change concluded that climate change is the greatest and widest-ranging market failure ever seen**, presenting a unique challenge for economics and that early action far outweighs the costs of not acting. According to the report, without action, the overall costs of climate change would be equivalent to losing at least 5% of global gross domestic product (GDP) each year, now and forever.

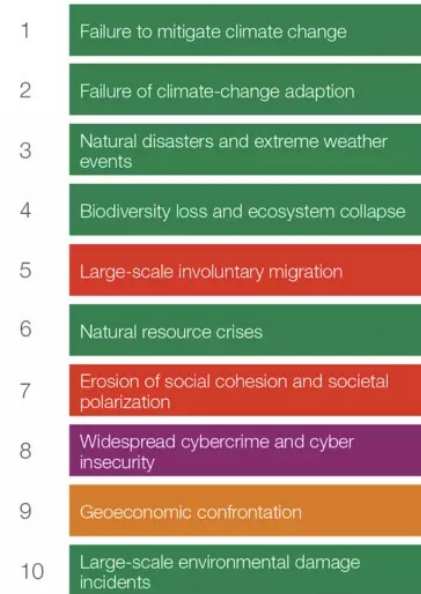
Top 10 Risks

“Please estimate the likely impact (severity) of the following risks over a 2-year and 10-year period”

2 years



10 years



Risk categories

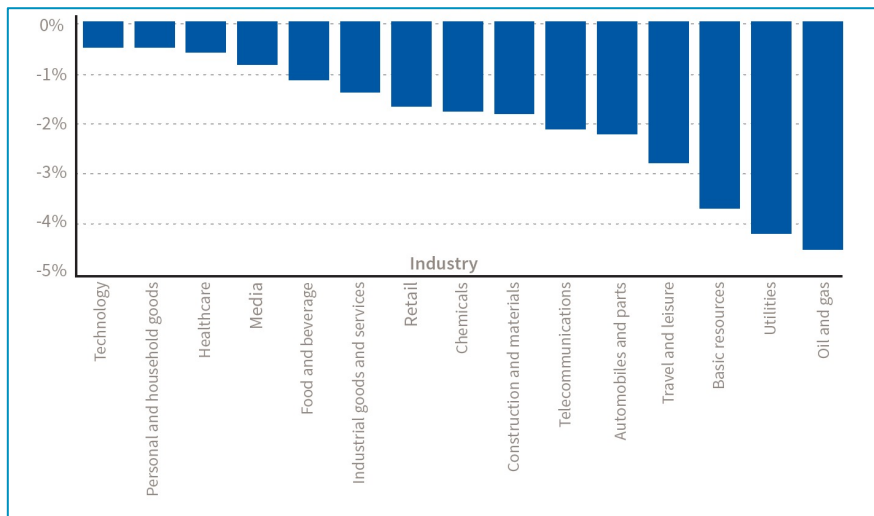
■ Economic
 ■ Environmental
 ■ Geopolitical
 ■ Societal
 ■ Technological

From economic to environmental. Environmental risks now top the risks agenda, while the economy has disappeared from the top five

Source: World Economic Forum, 2023

To better manage risk

ENTERPRISE VALUE ADJUSTMENT FOR PHYSICAL CLIMATE RISK BY INDUSTRY



Source: Schroders

An illustration of how environmental risk (in this case caused by physical climate change) affects different industries. This shows the potential costs to some companies of insuring their assets against the impact of physical climate change. The sector exposures analyzed tend to vary according to the capital intensity of the business.

In 2015, Mark Carney, then Governor of the Bank of England and chairman of the Financial Stability Board, stated famously:

*“Climate change is the tragedy of the horizon. We don’t need an army of actuaries to tell us that the catastrophic impacts of climate change will be felt beyond the traditional horizons of most actors – imposing a cost on future generations that the current generation has no direct incentive to fix... The horizon for monetary policy extends out to two to three years. For financial stability it is a bit longer, but typically only to the outer boundaries of the credit cycle – about a decade. In other words, **once climate change becomes a defining issue for financial stability, it may already be too late.**”*



To avoid negative impacts and externalities

RATIONALE

- **Investors may rule out investments in companies, sector or countries based on ESG criteria** such as risk exposures (e.g., companies with high exposure and low resilience to ESG risks), product categories (e.g., weapons, tobacco, gambling), corporate activities and practices (e.g., animal testing, child labor, poor corporate sustainability standards), jurisdictions/countries (e.g., countries facing UN sanctions), industry sectors (e.g., oil & gas), or companies that generate adverse impacts to the environment, communities and other stakeholders. **Banned securities are often called “sin stocks.”**
- Other investors do not exclude companies, sectors or countries, but **monitor and try to mitigate the adverse impacts of their investments on sustainability**. These impacts are defined by the EU as “negative, material, or likely to be material effects on sustainability factors that are caused, compounded by, or directly linked to investment decisions and advice performed by the legal entity.”

Norway’s \$1tn wealth fund set to cut oil and gas stocks

Big groups reprieved as government recommends divestment from upstream producers

Financial Times, 2019

Risk September 19, 2019

University of California Endowment, Pension to Divest All Fossil Fuels

Chief Investment Officer, 2019

To improve investment returns and unlock value-generating opportunities

RATIONALE

- The inclusion of ESG factors in an investment process does not typically come at the cost of weaker risk-adjusted returns. Instead, academic studies have indicated that ESG strategies may outperform benchmarks and therefore some investors seek to enhance returns via ESG by seeking higher alpha.
- Outperformance is not taken for granted, however, as it depends on time horizons, asset classes, geographies, asset allocation strategies, size of companies, data quality, the ESG maturity of companies, among several other factors.
- ESG is also a powerful tool for investors to identify and unlock opportunities to generate financial value by improving the sustainability credentials of portfolio companies (mainly for active investors).



Meta-study on the relationship between ESG and financial performance

"We found a positive relationship between ESG and financial performance for 58% of the “corporate” studies focused on operational metrics such as ROE, ROA, or stock price with 13% showing neutral impact, 21% mixed results (the same study finding a positive, neutral or negative results) and only 8% showing a negative relationship."

"For investment studies typically focused on risk-adjusted attributes such as alpha or the Sharpe ratio on a portfolio of stocks, 59% showed similar or better performance relative to conventional investment approaches while only 14% found negative results."

Tensie Whelan, Ulrich Atz, Tracy Van Holt and Casey Clark (2021), "ESG and Financial Performance: Uncovering the Relationship by Aggregating Evidence from 1,000 Plus Studies Published between 2015 – 2020"

Comparing Sustainable Investing Performance (Returns and Risk) - Indices



ANNUALIZED GROSS RETURNS (as of 31 January 2022)

	1y	3y	5y	10y
FTSE USA	20.9	20.8	16.8	-
FTSE4Good US Index	25.6 (+4.7)	24.0 (+3.2)	19.1 (+2.3)	-
MSCI Emerging Markets	-6.94	7.56	8.68	4.53
MSCI EM ESG Leaders	-8.41 (-1.47)	8.89 (+1.33)	10.03 (+1.35)	7.21 (+2.68)
MSCI Europe Index	22.74	12.25	8.51	9.50
MSCI Europe SRI Index	20.85 (-1.89)	14.87 (+2.62)	11.11 (+2.6)	11.59 (+2.09)
MSCI ACWI	13.70	15.98	13.21	11.24
MSCI ACWI ESG Leaders	14.66 (+0.96)	16.79 (+0.81)	13.70 (+0.49)	11.68 (+0.44)



ANNUALIZED RISK (as of 31 January 2022)

	1y	3y	5y	10y
FTSE USA	13.4	19.7	16.0	-
FTSE4Good US Select Index	13.8 (+0.4)	19.5 (-0.2)	15.9 (-0.1)	-
MSCI Emerging Markets	-	18.10	16.55	16.03
MSCI EM ESG Leaders	-	18.14 (+0.04)	16.72 (+0.17)	15.62 (-0.41)
MSCI Europe Index	-	16.45	14.34	13.10
MSCI Europe SRI Index	-	15.66 (-0.79)	13.76 (-0.58)	12.73 (-0.37)
MSCI ACWI	-	17.08	15.07	13.23
MSCI ACWI ESG Leaders	-	16.57 (-0.51)	14.69 (-0.38)	12.94 (-0.29)

The **FTSE4Good US Select Index** is a socially responsible investment (SRI) index of US stocks that excludes companies with certain business activities such as weapons, tobacco, gambling, alcohol, nuclear power, and adult entertainment. Additionally, in order to be included companies must meet a series of stringent environmental and social criteria in areas including environmental management, labor rights, human rights, health and safety, and diversity.

The **MSCI Emerging Markets (EM) ESG Leaders Index**, is a capitalization weighted index that provides exposure to companies with high ESG performance relative to their sector peers. MSCI EM ESG Leaders Index consists of large and mid cap companies across 24 Emerging Markets (EM) countries

The **MSCI Europe SRI Index** includes large and mid cap stocks across 15 Developed Markets (DM) countries in Europe. The index is a capitalization weighted index that provides exposure to companies with outstanding Environmental, Social and Governance (ESG) ratings and excludes companies whose products have negative social or environmental impacts

The **MSCI ACWI ESG Leaders Index** is a capitalization weighted index that provides exposure to companies with high ESG performance relative to their sector peers. MSCI ACWI ESG Leaders Index consists of large and mid cap companies across 23 Developed Markets (DM) and 24 Emerging Markets (EM) countries.

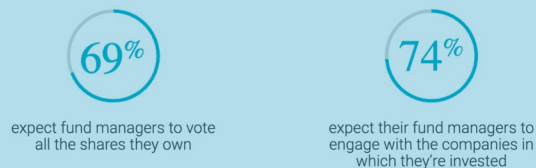
* Risk is defined as standard deviation calculated based on total returns using monthly values.

To improve the quality of engagement and stewardship activities

RATIONALE

- "Active engagement" is the use of shareholder power to influence corporate behavior, including through **direct corporate engagement** (i.e., communicating with senior management and/or boards of companies), **filing or co-filing shareholder proposals**, and **voting at the Annual General Meeting**, that is guided by comprehensive ESG guidelines.
- Investors also engage with portfolio companies to detect sources of risk and identify opportunities to unlock financial value.

Investors expect fund managers to be active owners



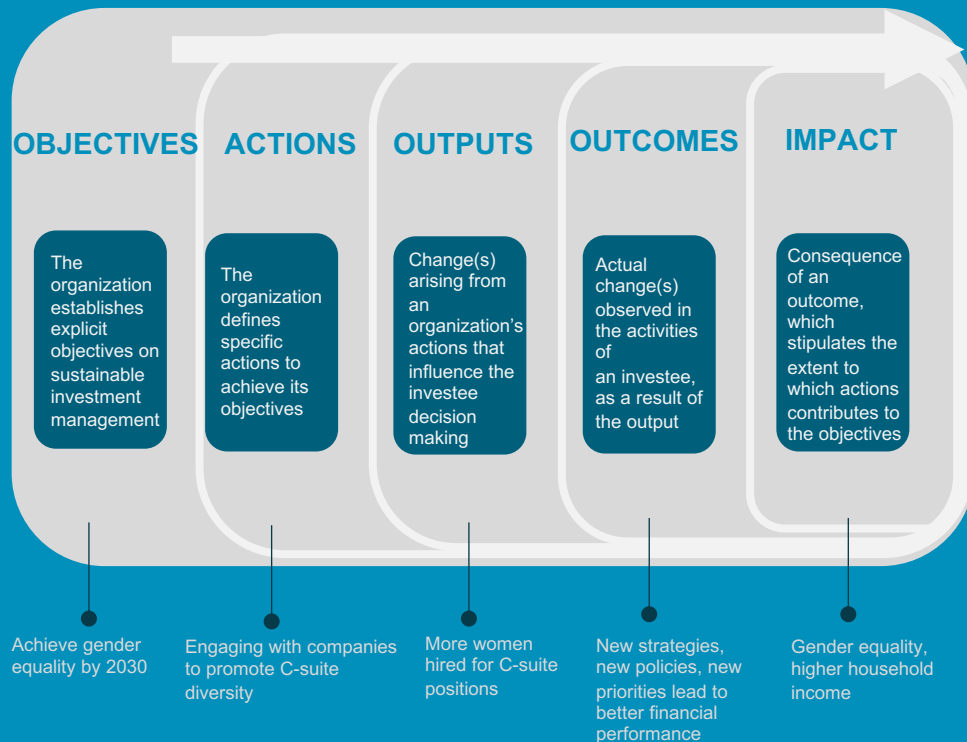
Source: 2021 Natixis Global Survey of Individual Investors

To generate social/environmental impacts

RATIONALE

- Those investing for positive impact see **investment as a means of tackling the world's social and environmental problems through effective deployment of capital**. The aim is to put beneficiaries' money to good use rather than to invest it in any activity that could be construed as doing harm – essentially a moral argument. This idea is giving rise to the growing area of impact investment, itself a response to the limits of philanthropy and a recognition of the potential to align returns with positive impacts.
- According to Bloomberg New Energy Finance (BNEF), in 2020, total investment in the low-carbon energy transition worldwide was US\$501bn (£360bn), with China as the largest investor, followed by the USA.²¹² The largest area of funding in 2020 was renewable energy, followed by electrified transport and heat.

Impact investments are guided by a Theory of Change

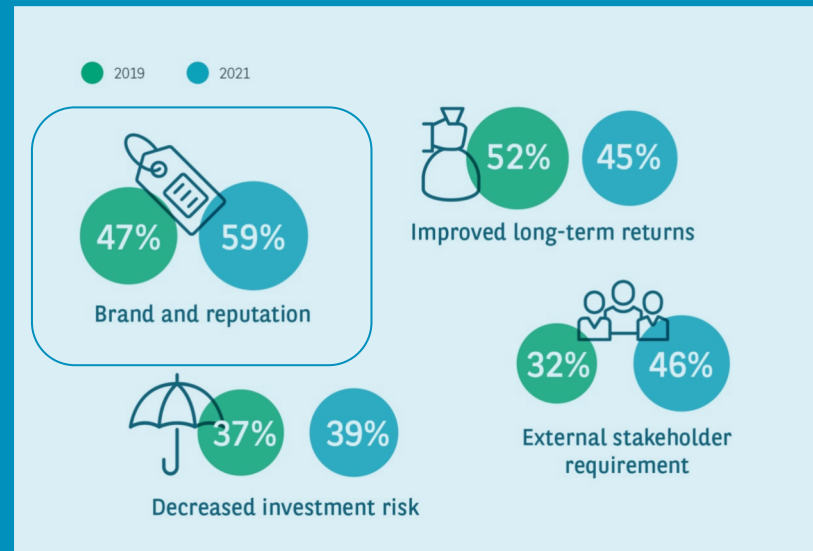


To enhance reputation

RATIONALE

- Asset managers may view ESG integration as necessary to ensure a strong reputation and limit reputational risk with stakeholders. **Managing ESG risks and opportunities therefore becomes an important part of managing brand and reputational value.**

Motivations to embrace ESG investments



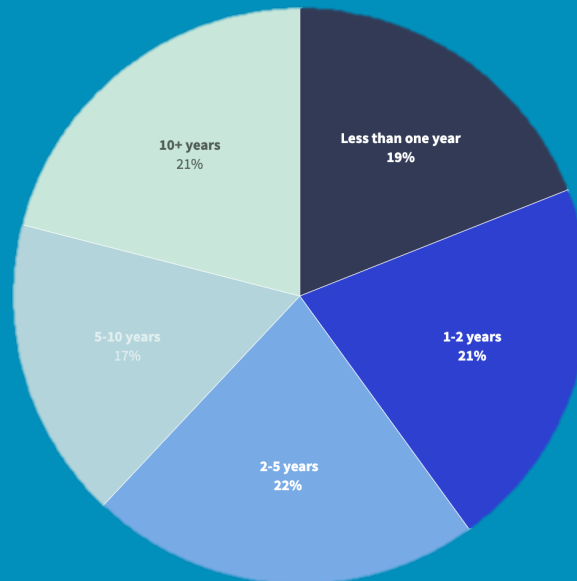
Source: BNP Paribas, The Global ESG Survey 2021

To respond to client demand

62% of ESG investors took up investing in ESG-related products only within the last five years

RATIONALE

- Global ESG assets may reach \$50 trillion by 2025, one-third of the projected total assets under management globally. This trend continues the rise of ESG assets after they surpassed \$35 trillion in 2020 (Bloomberg Intelligence).



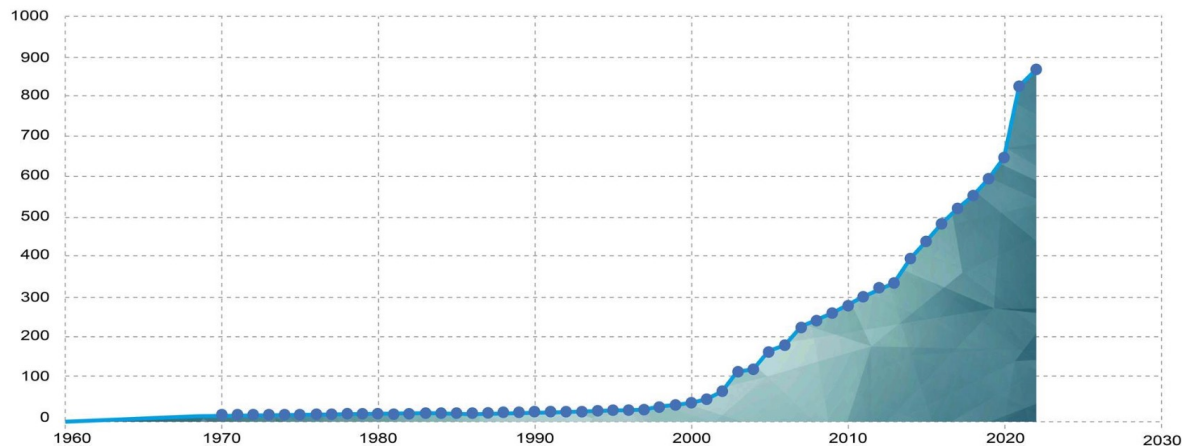
Source: Investopedia + Treehugger Survey, 2021

To attend to increasing regulatory requirement

RATIONALE

PRI's regulation database documents existing and in progress sustainable finance policies around the world. It covers **868 policy tools and guidance** and more than 300 policy revisions which support, encourage or require **investors** to consider all long-term value drivers, including environmental, social and governance (ESG) fact

Cumulative number of ESG policy interventions per year



Source: PRI Regulation Database (<https://www.unpri.org/policy/regulation-database>)

Regulatory requirement in the banking sector

“Banks in Europe need to prepare for the biggest set of regulatory changes since the aftermath of the 2008 global financial crisis. They’ll soon have to comply with sweeping sustainability rules drafted by national governments and financial services regulators.”

(Accenture, 2022)



Key sustainability regulatory frameworks

EU SFDR



- The **Sustainable Finance Disclosure Regulation (SFDR)** imposes mandatory ESG disclosure obligations for asset managers and other financial markets participants with substantive provisions of the regulation effective from **10 March 2021**.
- The SFDR contains ESG-specific transparency requirements to be disclosed to (potential) investors via various channels, i.e. website, pre-contractual documents (e.g. prospectus), periodic reports. **The transparency requirements contain disclosure obligations on an entity and product level** and apply to entities manufacturing financial products (Financial Market Participants) or providing investment or insurance advice (Financial Advisors).
- Asset managers need to disclose information on **websites, in prospectuses, and in periodic reports**.
- The disclosures to be made require a strategic positioning of all asset managers regarding their sustainable finance approaches as they will be required to be transparent about the following three topics: i) Sustainability risks, ii) Principle adverse impacts (PAI), and iii) ESG approach positioning (e.g., exclusions, norms-based screening, best-in-class, ESG integration, thematic and impact related approaches)
- Investment funds may fall into the categories of **Article 6** (no relation with ESG), **Article 8** (i.e. promoting ESG characteristics) or **Article 9** (with sustainable objectives).

EU Taxonomy



The **Paris Agreement**, approved in 2015, obliges signatory countries to cut their greenhouse gas emissions. Virtually every industry has a part to play in contributing to the transition towards decarbonization.

In July 2020, the European Union launched a Taxonomy — **a classification system designed to outline what constitutes a sustainable activity under the EU**, exactly defining when a company or enterprise is operating sustainably or environmentally friendly. It is a technical document that was developed after consultations with over 200 industry specialists and scientists.

The taxonomy has established **six environmental goals**: climate change mitigation; adaption; the protection of water and marine resources; the transition to a circular economy; pollution prevention and control; and the protection and restoration of biodiversity and ecosystems.

To claim alignment with the Taxonomy, economic activities need to substantially **contribute to one of 6 environmental objectives, do not significantly harm any other, and meet 'minimum safeguards' such as the UN Guiding Principles on Business and Human Rights** to not have a negative social impact.

Thus far it only defines the economic activities that substantially contribute to the **first two goals**, mitigation of and adaptation to climate change, for a very large number of activities within different sectors such as among others transport, construction and real estate, manufacturing and energy. The Technical Screening Criteria (TSC) for the other four objectives are still under development and are set to be published in the coming years.

The Taxonomy was developed by a **technical expert group** set up by the European Commission.

Taxonomy regulation **applies** to companies subject to Corporate Sustainability Reporting Directive (**CSRD**), financial market participants offering financial products in the EU, and the European Union and EU Member States

Corporate Sustainability Reporting Directive (CSRD)



- On 21 April 2021 the European Commission put forward a legislative proposal for a Corporate Sustainability Reporting Directive (CSRD) which would oblige companies under scope to report in compliance with European sustainability reporting standards.
- Adopted by the European Parliament on 11 Nov. 2022 (525 votes in favor, 60 votes against and 28 abstentions). The Council adopted the proposal on 28 Nov. 2022. The directive entered into force on 5 January 2023, 20 days after publication in the Official Journal.
- Member States must bring into force the laws, regulations and administrative provisions necessary to comply with Articles 1 to 3 of the directive by 6 July 2024.
- Companies need to report according to European Sustainability Reporting Standards. They are tailored to EU policies, while building on and contributing to international standardization initiatives. They are being prepared by the European Financial Reporting Advisory Group (EFRAG), an independent body gathering various stakeholders (first draft was released in Nov. 2022 and final version expected by mid-2023).

Corporate Sustainability Reporting Directive (CSRD)



(cont.)

The rules will start applying between 2024 and 2028:

- **From 1 January 2024** for large public-interest companies (with over 500 employees) already subject to the non-financial reporting directive, with reports due in 2025;
- **From 1 January 2025** for large companies that are not presently subject to the non-financial reporting directive (with more than 250 employees and/or €40 million in turnover and/or €20 million in total assets), with reports due in 2026;
- **From 1 January 2026** for listed SMEs and other undertakings, with reports due in 2027. SMEs can opt-out until 2028.

The rules introduced by the Non-Financial Reporting Directive (NFRD) remain in force until companies have to apply the new rules of the CSRD.

ECB's expectations on banks and climate change

STEP 1

The ECB expects banks to adequately **categorize climate and environmental risks** and to conduct a full assessment of their impact on the banks' activities by March 2023 at the latest.

STEP 2

The ECB expects banks to **include climate and environmental risks in their governance, strategy and risk management** by the end of 2023.

STEP 3

By the end of 2024, banks are expected to meet all remaining supervisory expectations on climate and environmental risks outlined in 2020, including full integration in the Internal Capital Adequacy Assessment Process (ICAAP) and stress testing. **ECB expects banks to be able to fully manage their climate-related and environmental risks.**

The deadlines will be closely monitored and, if necessary, enforcement action will be taken. Supervisors are already including bank-specific climate and environmental findings in the Supervisory Review and Evaluation Process (SREP).

ECB's expectations on banks and climate change are crystalized in a dense regulatory and policy framework

- European Central Bank guide on climate-related and environmental risks (Nov.2020)
- The Taxonomy Regulation (2020/852) (2020)
- Delegated regulations (2021/1253 and 2021/1269) (2021)
- Article 8 Disclosures Delegated Act (July 2021)
- European Central Bank Climate Stress Test (2022)
- Thematic review of banks' strategies and governance and risk management frameworks (2022)
- Corporate Sustainability Reporting Directive (CSRD) (2022)
- Basel Committee on Banking Supervision frequently asked questions (FAQs) (2022)
- European Central Bank report on good practices for climate stress testing (2022)



ESG Challenges

Conceptual Challenges

1.

**“Do Good”, “Tree Hugging”,
“Moral”, “Woke” or “Political”
Sustainability gains ground**

Personal and emotional, not rational

Subjective, not standard and metrics-
based

PR-driven, not business and
financially-oriented

Immediate, not long term

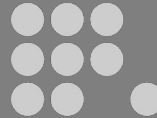


2.

“Sliced Sustainability”

Integrated in parts (only some
divisions in a company, only
some companies in a group,
only in some countries)

Integrated superficially, not
systematically



Operational Challenges

1. Alphabet Soup. ESG still regarded as an umbrella term that covers both impact and risk management strategies.

2. Regulatory frameworks are being designed, in multiple geographies. But the market still lacks rules, standards and norms.

3. ESG rating agencies. Data by nearly 100 providers is still not fully reliable, transparent and comparable. There is also lack of data for private companies, SMEs and EMs.

4. ESG reporting. There are nearly 30 global frameworks for companies to communicate their performance and impacts on sustainability topics hindering comparability and reliability.

5. Technical capacity. A very substantial volume of companies do not have the know-how to systematically and successfully integrate sustainability practices in their strategies and operations nor expertise to handle external ESG risks.



5. Shortage of ESG Talent

91% of Portuguese companies do not currently have the necessary talent to implement sustainability strategies. This is a reality in line with the global scenario, where **94%** of employers claim to face the same challenge.

To respond to the talent shortage related to ESG, “**45%** of companies in Portugal intend to recruit new professionals”. On the other hand, “**41%** intend to upskill their workers and **24%** consider adding new ESG responsibilities to their team's current roles, with **23%** also counting on resorting to external consultants in this matter”.

ManpowerGroup, “The Search for ESG Talent“ December 2022

The universalization of ESG depends on the universalization of knowledge and abilities on corporate sustainability and sustainable finance.

What keeps investors from investing in ESG funds?

41% I don't know enough

17% I don't know what they are

Source: 2021 Natixis Global Survey of Individual Investors

The result is....greenwashing



Companies are not inhibited to disclose false or inflated information about their credentials on environmental or social issues.

“Greenwashing is the practice of deliberately deceiving consumers by presenting a false sustainable image to the public to foster goodwill and increase sales and pricing.”

Simon Smiles and James Purcell, Sustainable Investing in Practice, 2023

....ESG backlash....

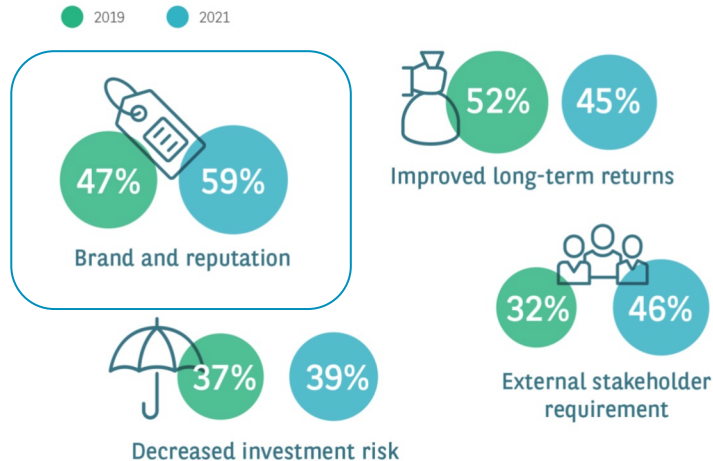


“Sadly those three letters have morphed into shorthand for hype and controversy.”

The Economist, 21 July 2022

...and ESG is regarded superficially ...

Motivations to embrace ESG investments



Companies and fund managers attempt to manage ESG risks and opportunities as a way to improve brand and reputational value

Source: BNP Paribas, The Global ESG Survey 2021

Rodrigo Tavares
Adjunct Full Professor (Professor Catedrático Convidado)
rodrigo.tavares@novasbe.pt

Introduction to Sustainable Finance

SUSTAINABLE FINANCE

