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Sustainable Investments and ESG Financial Framework

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Abstract

Financial markets can be viewed as the heart and the bloodstream of economic activity, one of the main activities they carry out, in fact, is “pumping” liquidity where needed, not for free of course, but in change of some returns. As today, data about climate changes and environmental issues cannot be overlooked anymore, now more than ever the world of finance and investments must undertake actions and processes to move liquidity in favor of sustainable development and growth, in order to be able to satisfy both expectations of current generation and needs of future ones. For this reason, socially responsible and sustainable investments are experiencing a rapid escalation (Dorfleitner et al, 2015), growing more than non-sustainable ones, both in mediatic resonance and in asset under management. Hence, the market for Sustainable Responsible Investment is currently in a stage of rapid growth, making it difficult to estimate future developments (Flotow et al., 2001). Besides it is dated 2001, this quote did not lose its validity, since the bond between finance and sustainability has become much tighter in past few years. What’s interesting it’s that the fountain of the growth is double; not only there is an exponential growing in the demand of sustainable products from the bottom-up, guided by megatrends and awareness of public opinion about environmental decay, but also financial intermediaries are running across those megatrends that drive investors’ appetite towards such sustainable finance products, to satisfy their demand.

Ethic finance is not a new concept, since has its roots in the religion (Fowler and Hope, 2007), since 1960’s, SRI Principles starts to effectively impact financial decisions, when some investors began to exclude from their choices of investments the so called “sins stocks”, such as stocks of companies have an active core business in production of weapons, alcohol, tobacco, gambling, adult entertainment, or other activities considered “immoral”. Then, the step-up, ESG Investments, in which both issuer and investor deeply understand that all the activities tied-up with financing activity needs to take car Environmental, Social and Governance aspects, as well as traditional returns’ target, typical of the asset management activity.

Starting from the origin of Ethical Finance history, the true ancestor of Socially Responsible Investments, successively going in depth about where SRI originated in late sixties and now going through more sophisticated processes that impact investments decisions, this work aims to analyze the characteristics and behavior of ESG related equity and index products: their performance compared with other traditional investments products.

Hopefully, ESG material is not a one-time wonder.

Chapter 1

Literature and history about Sustainable Finance and Responsible Investments

Introduction

History of responsible and sustainable funds is an ancient one, which in last few years is ascending heavily, gaining traction since 2014 (Judd and Worthington, 2021)[1]. Right now, asset management companies are toiling to include those products in their portfolios, since the belief is that Responsible and Sustainable Finance is growing strong today to represent a standard in the future in the global market. This view is emerging prominently due the fact that environmental and social issues today are perceived as more probable and "around the corner" more than ever; furthermore, there is evidence reporting high returns in stocks with high ESG ratings (Hvidkjær, 2017)[2]. Also, financial culture about investments and how to effectively manage personal wealth has been gaining momentum (Reinicke, 2022)[3] in the global financial framework and the popularity of financial literature is spreading rapidly (Urban et al, 2022)[4]. Market's appetite for Sustainable Financial Products has grown sharply over past few years, and the masses under management in ESG related Funds and Portfolios are on track to reach $53 trillion in 2025[5], near a third of the total $140,5 trillion projection of Asset Under Management (AUM) of the same year. Only in 2021, the inflows of ESG Integrated Funds have known a raise of +55%, corresponding in over $500 billion in added absolute value; the growth is expected to continue in future years at high speed.[6] The shift seems to be so powerful due the fact that both institutional and retail investors are showing quite an important interest in conveying resources to more sustainable companies and business[7]. Now more than ever, financial industry is entitled to face seriously sustainability challenges that cannot be avoided any longer; also, authorities are working hard on regulating standards for non-financial related disclosures and regulations about ESG related investments.

[1] Source: https://worldfinancialreview.com/the-rise-of-esg-financial-products/
[2] Søren Hvidkjær, ESG investments a literature review, 2017
[3] Source: https://www.cnbc.com/2022/03/17/personal-finance-education-is-gaining-momentum-across-the-us.html
[4] Source: https://cepr.org/voxeu/columns/financial-education-effective-and-efficient
[5] Bloomberg Intelligence, 23 February 2021,
[6] Morningstar, USD as of 31st of December 2021. Includes all open-end funds and ETFs domiciled in Europe, excluding money market funds.
[7] J.P. Morgan, ESG Outlook of 2022

The entire financial system is reacting to the very strong push led by top-down[8] demand and it's going through new processes to incorporate new drivers in the global framework, with the main goal of influencing as much as possible financial intermediaries and advisors to cope with environmental and socially responsible investments. The main need is to globalize the solutions and to find a way to engage globally the economic production system, since studies shows lack of globally accepted standards and regulations (Martini, 2021)[9]. Sustainable Development Goals program, Paris Climate Agreement, EU Action Plan, EU Green Deal, Next Generation EU, UN PRI, UN PSI, UN PRB are only few examples of how the bond between finance and sustainability development are going under a process of internationalization started by the European Union with cooperation of United Nations. More collective efforts are required to strengthen the implementation of the ESG approach on investment decision-making, hoping that the path taken will go on evolving in future years and sustainable approach is not overlooked as a flash in the pan.

1.1 - Ethical Finance History: The Roots of Sustainable Finance

The search for new products that respect certain standards are in our days led by new Environmental and Social megatrends, which are strongly linked with the future of the planet; also, the growing awareness that the point of non-return is around the corner surely helps to strengthen this opinion. It is interesting to investigate from where originally the needs from sustainable and Socially Responsible Investments (SRI) emerged. Although sustainable and socially screened portfolios are a quite recent phenomenon (Schueth, 2003)[10], roots of social screened investments have been planted over 200 years ago.

It is quite ordinary to associate religious beliefs to the first origins of ethical investments, that are a common theme in the origins of socially responsible investment (Donovan, 2022)[11]. The principles at the base of the so called "Ethical Finance" are not newborn at all, literature is quite confident to suggest a strong entanglement with religious principles rooted in Europe and then diffused in United States of America by Europeans immigrants. It is important to notice that, despite a general consensus about the importance of ethics in investments decisions, the ethics is indeed different between religious group, and

[8] Source: https://am.jpmorgan.com/it/en/asset-management/liq/investment-themes/sustainable-investing/future-of-esg-investing/

[9] Alice Martini, Socially responsible investing: from the ethical origins to the sustainable development framework of the European Union, 2021

[10] Steven Schueth, Socially Responsible Investing in the United States, 2003

[11] William Donovan, The History of Socially Responsible Investments, 2022

this impacted the SRI basis among groups (Domini, 2001)[12]. Despite some hazy and overarching teachings present more or less in every different sacred book regarding ethic about wealth possession and management, first concrete cases of effectively exclusions judgements documented come in the late 1700s. For example, the Quackers, a Cristian group that register its presence since 1650 in England, were an important part of a community called "The Religious Society of Friends" which were well known for their opposition about slavery and war. In 1758, in the "Quacker Philadelphia Yearly Meeting" the board decides to abolish every slave-trade related investment. Eventually, Quackers had a primary standing in the financial history of Europe, since two of the largest intermediaries in the old continent were founded by some of their acolytes (Kinder and Domini, 1997)[13]. Barclays was founded around 1690 by John Freame and Thomas Gould, both Quackers that established themselves as goldsmith bankers in Lombard Street, in the center of London. The name Barclays will emerge in 1736, right after the entry of James Barclays in the capital of the company. Around 250 years later, in 1958, Barclays will be the first bank in the United Kingdom to have a female director, anticipating again times in social and governance egality factors. Going back in the discussion, talking about Quackers bankers' family tree, in 1795 Lloyd's Bank was founded by John Taylor and Samson Lloyd.

However, in the same century, around late 1780's, John Wesley, an important Priest which is known for being considered the founder of Methodism (Biegel, 2020)[14], wrote a sermon called "Sermon 50: On The Use of Money". The essay enlightens his belief on social investing and basically outlined a completely new concept for the ages: avoid industries and companies that have the potential to effectively harm workers and any business practice that might harm your neighbor. Primarily, the first rule of the sermon may be summarized in those words: "*We ought to gain all we can gain, but not at the expense of life, nor at the expense of our health*"[15]. Wesley points out that this consideration will of course have to be kept in mind also in regards of other people's wellness and health. Moreover, Wesley was strongly against tobacco, alcohol, gambling promoting and others potentially harming activities, that are all enounced in his speaking. This belief was so strong and convincing, that eventually followers of methodism start resisting to investments involving those industries (Lumberg, 2022)[16]. Hence, very first raw definitions of

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[12] A.L. Domini, Socially responsible investing: Making a difference and making money, 2001
See also: https://www.mycnote.com/blog/the-history-of-socially-responsible-investing/

[13] Peter D. Kinder and Amy L. Domini, Social Screening - Paradigms Old and New, 1997

[14]Dr. Kenneth S.Biegel, A Belated Response to John Wesley's "Sermon 50: On the Use of Money",2020

[15] Source: "The Use Of Money": A Sermon by John Wesley, p. 174. Accessed from:
http://www.pas.rochester.edu/~tim/study/Wesley%20The%20Use%20of%20Money.pdf

[16] James Lumberg, A History of Impact Investing, 20222

“sinful company” and “sin stocks” appear in economic history, followed by a primeval concept of exclusion trend using negative screening. Those are ideas that will be developed much more in the 1900’s, when SRI starts to be consistently applied in investment decisions and effectively refined by literature.
Meanwhile, time passes, and new forms of collective investments arise, hence original form of mutual funds and close-end companies began their first activities in late 1700’s, probably introduced by Dutch merchants. At this regard, the literature is not certain about the true origin of mutual funds, but the most seem confident to indicate Adriaan van Ketwich as the creator of the first investment trust in 1774. He probably believed that diversification would be an attractive factor for low-budget investors, also the name of his trust can be translated in “Unity Create Strenght”(Das, 2009)[17]. Then, the main idea of spreading the risk pooling money through closed-end funds take a primary standing in the US starting from 1890’s. Finally, in the early 1900’s Investments Funds arise as new vehicles for collecting and investing huge amount of money. Mutual Funds do not have immediate success in the market, since they did not really capture the American investors until 1980’s and 1990’s, when noteholders in them hit record highs and realize incredible returns (McWinney, 2022)[18] Nevertheless, the oldest mutual fund is the Massachusetts Investor Trust established in 1924 and still in existence. Few years later, precisely during February of 1928, the evolution of Sustainable Investing (SI) reached an important milestone, which is the birth of the first negative screened investment fund (Knoll, 2002)[19]. Through the exclusion principle, which “excludes” in a screening process the investible universe taking out some sectors or companies that do not comply with the ethical vision of the issuer, Phil L. Carret launched the Pioneer Fund in Boston, realized having strong in mind principles and guidelines of the Methodist Church branch, allowing participants to enter in the world of exchange excluding sectors related to alcohol production, gambling promotion and other activities viewed as unethical (Donovan, 2022) [20]

1.2 - Sustainable Finance from 1945 to 1980

After the second world war, the path of ethical finance continues, mainly in the United States, and successive noteworthy disruptions stand out around 1960’s concurrently with social unrest generated form internal and external political decisions, especially in the USA. The 1960’s are renowned for upscaling

[17] Subhamoy Das, Perspective on Financial Services, 2009
[18] James McWhinney, A brief history of mutual funds, 2022
[19] Michael S. Knoll, Ethical Screening in Modern Financial Markets: The Conflicting Claims Underlying Socially Responsible Investment, 2002
[20] See also https://www.treccani.it/enciclopedia/finanza-etica_%28Lessico-del-XXI-Secolo%29/

social tension and riots in favor of human rights against the establishment (Trelstad, 2016)[21]. Indeed, there was also a new social context characterized by a growing protest culture that revolved mainly around civil rights and anti-war protests, due the Vietnam War just began. Especially in the case of the USA, the protests turned from being student-led demonstrations, sit-ins and walk-outs, to more radical political activism which, in most cases, saw business corporations as an integral part of the "establishment" they wanted to change with their actions (Trelstad, 2016).

There are some examples of ethic responsibility that emerge in this period, as a consequence not only of the popular opinion about the ongoing war but also for the growing awareness of social aspect that an economic system should guarantee.

In 1967, a group of people part of a community called FIGHT decides to target one of the biggest photography companies in the USA, Kodak entering the capital through the acquisition of some shares. During a shareholder meeting the group insists the immediate suspension of racial segregation policies adopted for the production site in Rochester, which in that period was the largest employer in Rochester (Wadwhani et al, 1997)[22]. This occurrence can be viewed as the first and unrefined attempt to build a hard engagement impact investment strategy, which includes the direct participation in the capital of the target company in order to indeed engage shareholders and influencing them to converge in adopting better environmental, social and governance practices (this will be later discussed more in details). Also, examples of exclusions start to become more popular, as in 1968 [23], when around 1200 students at Cornell University, located in the surroundings of New York, began clamoring directly to university's board of directors to exclude categorically stocks of companies involved in South African Apartheid Regime affairs (Berry, 2013)[24] from the University's financial portfolio; the same request is delivered to General Motors from the Episcopal Church in the capacity of shareowner, in 1971. Moreover, in the same year, nearly 50 years later the launch of Pioneer Fund, the second and maybe best-known socially responsible fund, the Pax World Fund, a financial entity which had in its guidelines to eschew military related investments (Fowler and Hope, 2007).[25]

Over and above preoccupations about the war in Vietnam, another ongoing phenomenon that surely helped the boost the social and responsible investment was indeed the Apartheid regime, active in South Africa

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[21] Brian Trelstad, Impact Investing, a brief History, 2016
[22] R. D. G. Wadhwani (1997) Kodak, Fight and the Definition of Civil Rights in Rochester, New York 1966–1967
[23] Source: https://www.nytimes.com/1985/04/13/nyregion/protests-at-columbia-students-and-issues-have-changed-since-the-60-s.html
[24] Melissa D. Berry, "History of Socially Responsible Investing in the U.S.", 2013
[25] Stephen J. Fowler, C. Hope, A Critical Review of Sustainable Business Indices and their Impact, 2007

in a time span that starts right after the second world war and lasted until 1994 (Trelstad, 2016). The regime put into action racist and segregation politics, harshly harming black people, and supporting white supremacist ideology. This situation generated a widespread grievance, in fact, a lot of market players began to completely block or at least limit their affairs and businesses with the apartheid regime. Probably, the most notorious example at this regard is the wrought of Leon Sullivan, a minister of the Baptist Church of Philadelphia. In 1977, right after his entrance in the General Motors board of directors, which by the way was the largest employer taking advantage of black manpower in South Africa, he made every effort possible to improve black workers' conditions. His intentions did not translate only in an ephemeral and volatile contribution, in fact Sullivan is mostly known for its actions rather than for sermons. His main contribution was drafting himself the pillars called "Sullivan's Principles", also with the contribution of others north American directors from the company management, a very first rulebook for corporate social responsibility in South Africa (Stewart, 2011).[26] The list is composed as follows:

1) *Non-segregation of the races in all eating, comfort, and work facilities*
2) *Equal and fair employment practices for all employees*
3) *Equal pay for all employees doing equal or comparable work for the same period of time*
4) *Initiation of and development of training programs that will prepare, in substantial numbers, blacks and other nonwhites for supervisory, administrative, clerical, and technical jobs*
5) *Increasing the number of blacks and other nonwhites in management and supervisory positions*
6) *Improving the quality of life for blacks and other nonwhites outside the work environment in such areas as housing, transportation, school, recreation, and health facilities*
7) *Working to eliminate laws and customs that impede social, economic, and political justice (added in a later update in 1984)*[27]

Eventually, Sullivan's Principles became very famous and had a lot of success, so much that in 1999 a global edited and upgraded version of Sullivan's Principles was presented by a commission and then signed by Kofi Annan, secretary general of the United Nations in charge at the time. Thus, it was born the so-called *Global Sullivan Principles (GSP)*, an extended form of those standards which helped South African workers to get over the tough period made of unfair racial discriminations. The wording of GSP is archived as follows:

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[26] James B. Stewart, Amandla! The Sullivan Principles and the battle to end Apartheid in South Africa, 1975-1987, 2011

[27] https://globalphiladelphia.org/sites/globalphiladelphia.org/files/Resource9ASullivanPrinciples.pdf, p. 3, Testual citation

1) *Express our support for universal human rights and, particularly, those of our employees, the communities within which we operate, and parties with whom we do business.*
2) *Promote equal opportunity for our employees at all levels of the company with respect to issues such as color, race, gender, age, ethnicity or religious beliefs, and operate without unacceptable worker treatment such as the exploitation of children, physical punishment, female abuse, involuntary servitude, or other forms of abuse.*
3) *Respect our employees' voluntary freedom of association.*
4) *Compensate our employees to enable them to meet at least their basic needs and provide the opportunity to improve their skill and capability to raise their social and economic opportunities.*
5) *Provide a safe and healthy workplace; protect human health and the environment; and promote sustainable development.*
6) *Promote fair competition including respect for intellectual and other property rights, and not offer, pay or accept bribes.*
7) *Work with governments and communities in which we do business to improve the quality of life in those communities – their educational, cultural, economic, and social well-being – and seek to provide training and opportunities for workers from disadvantaged backgrounds.*
8) *Promote the application of these principles by those with whom we do business.*

We will be transparent in our implementation of these principles and provide information which demonstrates publicly our commitment to them.[28]

Actually, a few years after the publication of the original Principles, the beginning of a revolution in industrial race relation started to come to light. North American companies found themselves faced between complying with Sullivan's principles or to retire their activities from South Africa, due the ineligibility between operating in Apartheid's territory and adopting those principles. Anti-Apartheid activism is not satisfied in advocating the withdrawal of institutional investor's direct investments in South Africa, in fact activists speak up for more divestment for all United State firms having interests in the South African market (Sparkes, 2002)[29]. Thus, north American Public Companies with South Africa interests found themselves in a difficult situation, since through the submission shareholder resolutions, stock owners started worring more about reputational collateral damage rather than stock price. Not

[28] Source: https://www.bu.edu/trustees/boardoftrustees/committees/acsri/principles/
[29] Russel Sparkes, Socially Responsible Investment: A Global Revolution, 2002

secondly, institutional investors such as public pension funds were the most prone to lobbyism action, eventually having to retire all their financial support to companies, a major threat most of company did not want to face off.[30] In conclusion, about sixties and seventies, it's emblematic how Sullivan's efforts were been implemented, the innovation in his way of doing. The minister did not only manage to hinder and exclude unethical investments using the negative screening filter, as it was more common in that period, but he stood and fight against them, participating personally in engagement activities from inside board of directors' meetings. Basically, not counting the early exploration of engagement arisen from Cornwell's students, he was responsible for the first concrete case of "hard engagement" policy, especially in a way quite similar as we know the concept of "hard engagement" today.

1.3 - Sustainable and Responsible Investments before Nineties

Switching to next decade, in the 1980's, the public opinion was deeply touched and shocked by some environmental disasters. Notable examples are the most known nuclear disaster after the second world war, the explosion of the nuclear center in Chernobyl in Ukraine (1986); the Bhopal Disaster, an explosion occurred in a facility, property of Union Carbide, in India (1984) and last but not least of notable examples, the stranded Exxon tanker named Valdez, which poured near one million tons of petroleum off the Alaskan shores. Those dramatic events surely helped in driving the focus for the evolution of Social and Responsible Investment towards two big issues: climate change and the environmental impact of the human economic activities. While mass disinvestment from South African affairs reached the peak around the mid-eighties, thanks also to the insisting boycott activities, in 1982, Joan Bavaria founded Franklin Research & Development, whose foundation represent the effective entrance of Sustainable and Responsible Investment in the asset management. Later renamed, Trillium Investments, Franklin Research & Development can be considered the first asset management company dedicated to socially responsible investments. In describing the trend about the goals of the Socially Responsible community in the 1980's, Bavaria wrote in 2007: "[…] were generally those of caretaker, protecting human and natural resources from harm and avoiding exploitation for profit." She also pointed out that "[…] in time, the SRI community has widened "[31]the lenses of capitalism beyond short-term financial gains for investors and bringing important new players to the table". A few years later, in 1984, a historic private insurance issuer originally called Friends Provident, today known as Friends Life and active as British financial institution

[30] https://businessday.ng/features/article/the-new-south-african-pass-laws-require-robust-corporate-response/
[31] Brian Trelstad, Impact Investing: a Brief History, 2016, p. 6

established an important pension fund, named *Stewardship Friend*. The latter is very important, since it is considered the first fully ethical investment fund offered by an investment house in the UK.[32] As of today, the Stewardship Life fund is still in existence and as 2021 it has $ 653 million under management. Besides, it is important to point out that in the investment strategy the Fund adopted more sophisticated criteria than previously employed such as negative screening, best in class and engagement. These are typical strategies of ESG investments, especially impact investments, which will be defined in depth later. From now on, not only a lot of new sustainable financial product were born, to satisfy the growing investors' appetite for sustainable finance, but also new techniques and criteria in the investment process decision were adopted. An immediate example of a more sophisticated is the positive screening, early adopted starting from the nineties. Opposed to negative screening method, which consist in excluding from the investment universe those companies involved in "controversial" businesses, positive screening consists in building a portfolio selecting investment targets based on corporate social performance, given by the application of the Corporate Social Responsibility (Dorfleitner et al, 2015).[33] Thus, positive screening requires more research and extended analyses.

However, in 1989, exponents from the SRI industry gathered at the first Sustainable and Responsible Investment Rockies Conference to exchange ideas and gain momentum for new initiatives. The name has since changed to *The SRI Conference* which meets annually at Green Building certified establishments and has attracted over 550 persons annually since 2006. This conference was founded by First Affirmative Financial Network, an U.S. investment advisory firm that works with advisors nationwide providing peculiar portfolios solutions specialized in sustainable and responsible investing. The conference agenda is divided in four main topics: ESG integration in portfolio management, Impact Investing, Shareowner engagement and Practice Management for Financial Planners and Investment Advisors[34]. In conclusion, Sustainable Finance is an expression that touches several financial instruments, such as alternative currencies, community investment, crowd funding, ethical banking, microfinance, social impact bonds, social impact investing, socially responsible investment, venture philanthropy" (Rizzi et al., 2018)[35].

[32] https://en.wikipedia.org/wiki/Friends_Provident#Ethical_stance
[33] Dorfleitner, Halbritter, Nguyen, Measuring the level and risk of corporate responsibility – An empirical comparison of different ESG rating approaches, 2015

[34] See also: https://www.firstaffirmative.com/investment-philosophy/
[35] Rizzi, F., Pellegrini, C., & Battaglia, M., The structuring of social fnance: Emerging approaches for supporting environmentally and socially impactful projects, 2018.

Sustainable finance is deeply rooted in religious belief and has an ancient history, even if it is experiencing exponential growth in these days, especially thanks to the Millenial (born between early 1980's and early 2000's) generation rising influence, which is an important driver for this shift is society expectations (UBS Sustainable Report, 2015). In the next paragraphs, sustainable and responsible investment concept will be analyzed more in details, a propaedeutic paragraph before defining ESG characteristics.

1.4 – Nineties: different approaches of SRI in EU and US and consolidation

The nineties are a period of consolidation for the Responsible and Social Investment history, a bridge that connects the first stage of exploring social and responsible investments by some scattered financial actors, representing a niche, to a period where the ball is in the hand of transnational institution, being invested with the duty to legislate about sustainability topics in the financial market system. Nonetheless, the path of sustainable and responsible finance begins to diverge, since different approaches at SRI regulation started emerging, especially between Europe and United States of America (OCED, 2017[36]). The North American context has always been characterized by a large concept of economic and financial freedom for individuals, often leaving more space for them to invent, promote and innovate. This factor is transposed also in how American institutions tends to legislate about market regulations. Hence, in our case of discussion, the U.S. context in SRI is characterized by more different approaches and usually, mainly promoted by independent organizations and specialist fund providers. Generally, in the U.S. the "*Wall Street Rule*" is applied, which states that "*The Wall Street Rule, which has been immutable for as long as any of us can remember, dictates that shareholders do not take an active role in corporate affairs. Love'em or leave'em*"(Lowenstein, 1988)[37]. In practice, shareholders usually do not use engagement or any active policy in order to regulate managers, but they sell shares instead. This rule makes very clear which is usually the individualistic shareholder behavior in the U.S. market, especially in Public Companies where thousand hundreds of shareholders can coexist. As a result, regulation by the U.S. Securities and Exchange Commission has historically focused on providing shareholders with access to proxy statements to allow disclosure of social and environmental issues (Martini, 2021). This approach also encourages alternative solutions to direct disclose regulation, which is mostly adopted in Europe, but

[36] OECD, Investment governance and the integration of environmental, social and governance factors, 2017

[37] Louis Lowenstein, What's Wrong With Wall Street: Short-term Gain And The Absentee Shareholder, 1988.

it tends to make SRI more information dependent and more sporadic. Differently, in Europe the predominant approach to Sustainable and Responsible investment is mostly driven by choices of institutional investor and authorities as well as government regulations, whose decisions often introduce new formal standards that impact directly institutional investors' strategy (Williams, 2007).[38]

1.5 – Some modern definitions for SRI

Apart from the still existing divergence in sustainable finance regulation among continents, which is a factor that hinders much an effective global implementations of sustainable processes in investment decisions of institutional market participants, a common topic that strongly emerged in nineties was the climate change and the awareness of environmental impact of human activity. Also in this period, the evolution of Corporate Social Responsibility and Sustainable Responsible Investment, which are strongly intertwined (Puaschunder, 2016)[39], experienced an evolution, touching different segmentation. Since SRI is interpreted in different ways, as today exists manifold definitions it and literature is confident in pointing out that SRI definition is not univocal (Busch et al., 2015)[40].

Some of the most renowned definition of SRI accepted from the literature are the following:

- "Socially responsible investing (SRI) is the practice of making investment decisions based on both financial and social performance. It is in the concept of investing in concert with your principles. The SRI strategy asserts that investing is not value neutral and that there are significant ethical and social, as well as economic, consequences in how we invest our money. It is a commitment, if you will, to achieving social good through investment" (Elaboration from Shapiro, 1992)[41];

- "The key distinguishing feature of socially responsible investment lies in the construction of equity portfolios whose investment objectives combine social, environmental, and financial goals. When practiced by institutional investors this means attempting to obtain a return on invested capital approaching that of the overall stock market" (Sparkes, 2002, p. 26);

[38] Geoffrey Williams, 2007, Some Determinants of the Socially Responsible Investment Decision: A Cross-Country Study
[39] Puaschunder, J. M., On the emergence, current state, and future perspectives of Socially Responsible Investment (SRI), 2016.
[40] Busch, T., Bauer, R., & Orlitzky, M. (2015). Sustainable development and fnancial markets: Old paths and new avenues. Business & Society, 55(3), 303–329.
[41] Shapiro, J. , Social Investing: Origins, The Movement since 1970, 1992

- “Socially responsible investment (...) describes any area of the financial sector where the social, environmental and ethical principles of the investor (whether an individual or institution) influence which organization or venture they choose to place their money with. It also encompasses how investors might use their power as a shareholder to encourage better environmental and social behavior from the companies they invest in” (Ethical Investment Research Services) [42];

- “An investment can be considered sustainable when accompanies and sustain the economic process towards a system able to grant its continuity in the long run. It’s an investment that aims to generate value for the investor as well as for the society as a whole, through a medium-long run-oriented strategy and enforce the traditional financial analysis with the environmental, social and governance valuation.” [43](Elaboration from “Forum per la Finanza Sostenibile)

Analyzing those statements, it is possible to glimpse two recurring aspects, firstly the long-term time horizon, imperative to grant sustainability for the future and, secondly, the integration of non-financial factors such as ESG factors, in the traditional financial analysis. It is also clear that as well as economic return, in sustainable investments it’s important to include non-financial disclosures, in order to measure the impact generated from non-financial activities. At this regard, John Elkington in 1994 defined the ”Triple Bottom Line”, thus three different dimensions to encompass in measurements of dimensions and aspects for sustainability reports (Slaper, 2011)[44]. So, it is possible to distinguish three pillars of sustainability”, which are defined in the “Triple Bottom Line” (Elkington, 1994):

1) Economic Sustainability: more related to traditional finance concepts, since it refers to conservation of the capital, better defined as ability of an economic system of creating a long-term growth of economic indicators;
2) Social Sustainability: referred to respect for human rights and consists in granting basic and safe conditions to human being. Conditions that need to be equally distributed between different generations;
3) Environmental Sustainability: identifies the capability of preserve over time basic environment mechanism, such as preserving the supply of natural resources and waste management.

[42] Source: www.eiris.org
[43] Source. https://finanzasostenibile.it/
[44] Timothy F. Slaper, Tanya J. Hall, The Triple Bottom Line: What Is It and How Does It Work? , 2011

Elkington's pillars are also called the "Three P's", being Profit (1), People (2) and Planet (3) and its work was further discussed and approved by the European commission in during the First European Conference on Triple Bottom Line in Lisbon (Steurer et al, 2008).
However, finding a univocally accepted definition of SRI is difficult, given that globally manifold SRI practices have emerged, due mainly to the difficulty to harmonize the legislation. Policy objectives and cultural customs practices are more often left in the hand of national or just to regional laws (Steurer et al., 2008), which can make both the concept and the practices of SRI rather vague and pretty inconclusive (Steurer et al 2008)[45]. As a matter of fact, with no stringent legal international basis, SRI activities are in the hand of national, federal, state, or local laws and regulations. At this regard, the European Union, also with the aid of the United Nations did start in the early twenty-first century a strong engagement program that is still in flux, also involving economic powerhouses beyond "western countries", such as China, India and Russia. This aspect is vital, without a global effort, the chance of obtaining rewarding progresses is absolutely improbable (OECD, 2017)[46].

1.6 – ESG Regulation Framework: European Union Initiatives to attempt harmonization

The previous paragraph has briefly introduced the contributions of supranational entities such as European Union, and United Nations, whose programs in terms of sustainability need to be examined more in detail, as we will do in this chapter.
The period that goes between the First Earth Summit in 1972 and the First United Nations Conference on Environment and Development in 1992 is devoid from major improvements about contrasting climate change. The Earth Summit was a notable event, because not only set a new framework for seeking international agreements to protect the integrity of the global environment, but also because the most significant event during the Conference was the opening for signature of the United Nations Framework Convention on Climate Change (UNFCCC); by the end of 1992, 158 States had signed it (Jackson, 2007)[47].
The cornerstone for climate change actions was, therefore, the adoption of the Kyoto Protocol by the United Nations Framework Conventions on Climate Change, precisely the 11 December 1997. The effective entry into forced happened during February 2005 and currently 192 Parties signed the document.

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[45] Reinhard Steurer, Sharon Margula, André Martinuzzi, Socially Responsible Investment in EU Member States: Overview of government initiatives and SRI experts' expectations towards governments, 2008
[46] OECD (2017), Investment governance and the integration of environmental, social and governance factors
[47] Peter Jackson, From Stockholm to Kyoto: A Brief History of Climate Change; Source online: https: //www.un.org/en/chronicle/article/stockholm-kyoto-brief-history-climate-change

The goal set was to reduce by 5% emissions below levels of 1990[48], but perhaps because of its lack of worldwide support, the Kyoto Protocol has not sorted the desired effects: greenhouse gas output has indeed increased. Besides, even if targets were not respected, Kyoto has been significant as a symbol as cornerstone to combat global climate change. The major institutional effort for a signific change should start from the most important actors in the western financial market, the institutional investors and financial institutions; eventually, needing supranational actors that supports a structured plan of global adoption of sustainable principles, since EU Sustainable Finance regulations impact business globally (Alamillos and de Mariz, 2022)[49].

The sustainable program of United Nations and immediately supported by Europe is the introduction of the seventeen Sustainable Development Goals (SDGs) as part of the 2030 Agenda, the latter composed by 169 goals. The seventeen goals adopted, whose space between environmental and social issues, are as follows:

Fig 1. - The seventeen Sustainable Development Goals [50]

In the same year, during December 2015, the objective number 13 Climate Action was enforced with the definition and the adoption of the Paris Climate Agreement[51], which replaced the Kyoto Protocol. The Paris Climate Agreement define in detail the content of sub-goal 13.2 and requires integrating measures against climate changes in national policies, strategies and planification. The 4 main goals of PCA are:

- Holding average annual increase of temperature to less than 2 °C in the long-run.

[48] https://unfccc.int/kyoto_protocol
[49] Redondo Alamillos R, de Mariz F. How Can European Regulation on ESG Impact Business Globally? *Journal of Risk and Financial Management*. 2022

[50] Fig. 1; Sustainable development goals, 2015, Source: https://sdgs.un.org/goals
[51] For more details: https://unfccc.int/sites/default/files/english_paris_agreement.pdf

- Aiming to limit the increase of the point before to 1,5 °C.
- Reaching maximum level of global emission as fast as possible.
- Consequently, put into action rapid reduction of emissions.[52]

In addition, in 2015, the Task Force on Climate related Financial Disclosures was founded by the Financial Stability Board, in order to develop recommendations for companies, which are going to be able to generate consistent climate-related financial risk disclosures; the objective is to support investors, banks and insurance underwriters in the assessment and pricing of climate-related risks (FSB-TCFD 2022). TFCD counts more than 3000 supporters from 95 different countries, among which there are regulators, central banks, corporations, governments, which engage actively to comply with the disclosure recommendations that TCFD issues (TCFD - FSB 2022). Then, the International Sustainability Standards Board (ISSB) was instituted, trying to foster a difficult but developing harmonization process. The ISSB has been asked to engage in the effort of standardizing sustainability-reporting guidelines basing the principles of the four pillars of the TCFD (International Financial Reporting Standards 2021). Experts in the field believe that the creation of the ISSB will be essential for setting a global baseline for company reporting on sustainability. Furthermore, experts' research shows how not complying with the Paris Accord would have disastrous consequences, it is expected that by 2030, more than 10 million people a year will be exposed to heat stress exceeding the survivability threshold (Alamillos and de Mariz, 2022). Moreover, there will be a sharp increase of cropland suffering from drought if global warming does not decelerate. Also, continuously shifting weather patterns can cause higher mortality rates due to food insecurity, changes to ecosystems, and the rise of diseases. Overall, this can lead to political instability and international conflict (Quiggin et al. 2021).[53]

Progresses on long-term goals are often hindered by the fact that information on potential exposure to extreme climate events is scarce, and that's also a reason for which climate stress test until now have focused only on local and near-term impact of climate policies (Rickards et al, 2014)[54]. Hence, long-term sustainability programs should be the heart of European Institutions regulations of financial markets; the focus should be serving the community in redirecting investments towards sustainable technology and

[52] For more details: https://unfccc.int/topics/introduction-to-climate-finance
[53] Quiggin, D. & Froggatt, A., 2021. *Climate change risk assessment 2021*
[54] Rickards, L., Wiseman, J. and Kashima, Y. Barriers to effective climate change mitigation: the case of senior government and business decision makers, 2014

businesses (1), financing a sustainable path for economic growth (2) and supporting the creation of circular economy, based on low-carbon emissions and resilient to climate changes (3)[55].

1.7 – The Nexus of EU Initiatives: The Action Plan

To achieve those ambitious goals, in 2018 was based the Action Plan of The European Commission, composed by 10 key points each of them related with one of the three main goals cited above. The key points of the EU Action Plan are:

1. Creation of a unified system for the classification of sustainable economic activities in the EU
2. Creation norms and labels for sustainable finance products
3. Promote investments in sustainable projects
4. Integrate sustainability in finance advisory
5. Elaborate benchmarks for sustainable activities
6. Integrate better sustainability in credit ratings and in market research
7. Clarify better which are the obligations for institutional investors and asset managers
8. Integrate sustainability in risk management and prudential requirements
9. Reinforce communications in sustainability topics and accounting regulation
10. Promote sustainable governance models and the long-term vision in capital markets. [56]

The firs key point is probably the most important because it's the cornerstone needed to give investors accurate information and transparency for helping them in decision-making. The process to establish this unified classification system produced the so-called Taxonomy Regulation, which was published in the Official Journal of the European Union in 2020. [57]Trough the individuation of six environmental objectives, which are climate change mitigation, climate change adaptation, the sustainable use and protection of water and marine resources, the transition to a circular economy, pollution prevention and control, the protection and restoration of biodiversity and ecosystems, the taxonomy establishes which economic activities can be considered environmentally sustainable[58]. About the second point and third

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[55] Elaboration from: https://investiresponsabilmente.it/glossario/piano-dazione-della-commissione-europea-sulla-finanza-sostenibile/
[56] Source: https://www.switchtogreen.eu/the-eu-action-plan-on-financing-sustainable-growth/
[57] For More details: https://finance.ec.europa.eu/sustainable-finance/tools-and-standards/eu-taxonomy-sustainable-activities_en
[58] Source: https://finance.ec.europa.eu/sustainable-finance/tools-and-standards/eu-taxonomy-sustainable-activities_en

point, labels for dedicated sustainable financial products not only can increase the demand for the product (Amman et al 2019)[59] and thus being profitable for the financial institution, but also can boost the inflows in sustainable products, being immediately recognizable and thus, make them more visible (Steruer et al, 2008). About point number four, it's important to develop educational programs about sustainability topics in finance framework, since in the past, evidence shows how, despite the demand for sustainable financial product was rising, financial institutions and mostly advisors tend to be hesitant when offering those products (Hoepner & McMillan, 2009)[60]. In addition, investment advisors seem to show a passive indifference for sustainable investments, even if investors have the intention to invest in sustainable financial products; more evidence shows that advisors withhold information about SRI from their clients in retail banking (Paetzold and Busch, 2014)[61].

With regard for point number five, in April 2020 two new type of benchmark were introduced in the UE regulations, respectively the EU Climate Transition Benchmark (CTB) and the EU Paris Aligned Benchmark (PAB). In the CTB the underlying activities are selected, weighted, or excluded in order that the portfolio which is based on the benchmark follows a de-carbonization trajectory, hence it supports activities for the reduction of carbon-based emissions. Instead, the PAB is more compelling, since it requires that the emissions of the portfolio following the index were aligned with the goals of the Paris Climate Accord. With growing evidence that foster the rise of passive investing rather than active, that accounts for almost 40% in AUM rather than 20% in 2008 (Geddes, 2018)[62], for a company, being listed in a benchmark means a lot, since individuals that rely on passive investing will buy shares of each company listed in the index; the desired effect should consist in having higher stock prices.

Lastly, point number seven, which is probably ranking in importance immediately after the first point, is responsible for the birth of Sustainability Finance Regulation Disclosures, in short SFDR, which has an important impact on the ESG market, because it requires institutional investors, asset managers and advisors to report how they will act in integrating sustainability risks and impacts at entity level, requiring them to disclose information about their portfolios and classify ESG products. SFDR, entered into force in 2019, is very ambitious, since it is not a voluntarily disclosure such as others; eventually, it started to

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[59] Ammann, M., Bauer, C., Fischer, S., & Müller, P. , The impact of the Morningstar sustainability rating on mutual fund fows. European Financial Management, 2019.

[60] Hoepner, A. G. F., & McMillan, D. G. , Research on responsible investment: An influential literature analysis comprising a rating, characterization and investigation, 2009

[61] Paetzold, F., & Busch, T. , Unleashing the powerful few: Sustainable investing behaviour of wealthy private investors. Organization & Environment, 2014

[62] Source: https://www.firstadvisers.com.au/the-rising-tide-of-passive-investment/

apply in March 2021 and to encourage even more the spread and includes specific disclosure requirements to institutions or asset managers that do not work with ESG compliant products (European Commission, 2018).[63]Additionally, recent evidence found that extra-EU companies with a combined market capitalization higher than $ 3 trillions could be subject to SFRD rules (Manikikar, 2021)[64].

In conclusion, SFDR embodies the theoretical concept highlighted by Herzig & Moon in 2013[65], hence the need for monitoring business activities, in particular the finance sector. Also, manifold theories and evidence suggested that in today's context firms respond to institutional pressures and regulations by communicating the integration of ESG criteria in their business activities or investments (Zerbini, 2017)[66], producing non-financial disclosures or by participating in sustainable initiatives of ESG framework (Beddewela & Fairbass, 2016)[67]. So, adhering to sustainability initiatives in one way to communicate externally the company's alignment to the values of ESG and to secure their legitimacy (Robinson et al, 2011).[68] Summarizing, the Action Plan is the crucial and ultimate conjunction between all objectives set by European Union, indeed it is the principal instrument put in place to foster the green transition for the financial sector. The approach adopted by EU is based on the deep understanding that climate change, environmental and social issues are often closely entangled and can have spill-over effects (Claringbould et al, 2019).[69] The plan policy is broad and includes all market participants, in fact it includes not only the originations actors, such as firms and companies targeted with SFDR and Taxonomy Regulations, but also the impact on the demand side, paying strong attention at the sustainability demand from costumers. Hence, the Action Plan aims to equip the Financial Sector with legislative and non-legislative tools to foster sector to embrace sustainability consideration in financial decisions. To evaluate demand from clients, the European Regulation introduced MiFID and MiFID II [70]surveys, which are distributed by intermediaries and periodically evaluated to draw a picture of the demand' status. Although, about the

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[63] European Commission Action Plan, Financing Sustainable Growth, Assessment of the reform areas for the signatories, 2018.
[64] Divya Mankikar, S&P Global, More than $3T of Companies Outside the EU Could Be on the Hook for SFDR, 2021. Source: https://www.spglobal.com/esg/insights/more-than-3t-of-companies-outside-the-eu-could-be-on-the-hook-for-europes-sustainable-finance-disclosure-regulation (accessed on 23 April 2022)
[65] Herzig, C., & Moon, J., Discourses on corporate social ir/ responsibility in the financial sector, 2013.
[66]F. Zerbini, CSR initiatives as market signals: A review and research agenda, 2017.
[67] Beddewela, E., & Fairbrass, J,. Seeking legitimacy through CSR: Institutional pressures and corporate responses of multinationals in Sri Lanka, 2016.
[68] Robinson, M., Klefner, A., & Bertels, S. Signaling sustainability leadership: Empirical evidence of the value of DJSI membership, 2011.
[69] Claringbould, Duco; Koch, Martin; Owen, Philip (2019) : Sustainable Finance: The European Union's Approach to Increasing Sustainable Investments and Growth – Opportunities and Challenges
[70] For More details: https://eur-lex.europa.eu/legal-content/en/TXT/?uri=CELEX:32014L0065

effectiveness of MiFID II there is still ongoing a prolific debate. A survey conducted by the CFA institute in 2019 shows how independent research providers have not benefitted from the new directive, as 57% of buy-side respondents report sourcing less research from investment banks than before MiFID II. In addition, mixed results emerge also from the analysis of the research quality and the coverage that MiFID II provides, since most of the sell-side professionals perceive a decrease both in coverage and in quality starting from the introduction of MiFID II (Anselmi and Petrella, 2021)[71]. In addition, not surprisingly, European Union decides to present the Corporate Sustainability Reporting Directive (CSRD) which states mandatory reporting on sustainability policies and performances. This directive will effectively be active starting from 2024 and it is an extension of the Non-Financial Reporting Directive, active in EU from 2018, which requires to crucial companies (such as banks, insurers, and publicly traded companies) with 500 or more employees to disclose information on how they're dealing with ESG issues. As today, expectations indicate that at least 50.000 companies in Europe will be targeted against the actual 11.600; hence, this enlargement of the directive is going to extend enormously the plethora of firms obliged to disclose ESG information, since not only is going to capture all listed entities but also whose firms which respect at least two of this three prerequisites:

- Having more than 250 employees;
- Having more than €40 million net turnover;
- Having more than €20 million on the statement of financial position.[72]

At this point, more clarification is needed, since CSRD is strongly entangled with some directives cited in the previous chapter, these are EU Taxonomy, Non-Financial Reporting Directive (NFRD) and Sustainable Finance Disclosure Regulations[73] (SFDR). CSRD and NFRD were already explained briefly upwards, while taxonomy was previously introduced. It basically refers to a tool able to translate the climate and environmental objectives individuated by EU into clear criteria to create a common language around green activity, providing a reference point for companies looking for a green transition. Furthermore, as also explained before, taxonomy indicates criterion for sustainable activities, creating a framework for companies and investors. Complementary to EU Taxonomy, SFDR expands the framework

[71] Giulio Anselmi, Giovanni Petrella,
Regulation and stock market quality: The impact of MiFID II provision on research unbundling, 2021.
[72] Source: https://www.grantthornton.global/en/insights/articles/mandatory-sustainability-reporting-for-large-companies/
[73] For More Details about SFDR: https://www.eurosif.org/policies/sfdr/

introducing labels and different levels of sustainable financial products for environmental performance; it is particularly important for financial institutions and asset management companies. [74]

1.8 – United Nations Principles for Asset Managers and Individual Investors

Previously, European Union regulations and plans for sustainable finance were introduced; meanwhile also the most important supra-national institution, the United Nations Congress, decided to support and actively produce standards about sustainability. Hence, in 2006 Kofi Annan, invited a group of composed by the global largest institutional investors and financial institutions, in order to participate in the process of creating and developing some international principles and standards, to be then approved by the UN itself, giving those principles an international boost. After a pool of twenty-person reunited to debate about this topic, drawn from institutions in 12 different countries and supported by a group of seventy experts from both supranational organizations and investment industry, finally, the United Nation general secretary signed the draft: it is the day of the institution of the so-called UN PRI's, the acronym for United Nation Principles for Responsible Investment. [75] Initially, in 2006 there were only a limited number of adopters, "The Founders", and the absolute value of Asset Under Management (AUM) was "only" $ 6,5 trillion, while as 2021 the count reached over than 4000 signatories spread around the world and $ 121,3 trillion under management. It is important to remark that the decision to become a signatory is on a voluntary basis, but still the growth rate in last years is not showing any kind of weaknesses, instead they are growing at a considerable pace, reporting +20% and +17% in the value of the AUM in 2020 and 2021. About signatures of Asset Owners (AO) that adhere to UN PRIs, such as Pension Funds, Sovereign Funds, Insurance Companies, and others financial institutions which desired to adhere voluntarily, data is indicating a constant and fast increase, both in AUM ($ 29 trillions in 2021, +24% from previous year) and in numbers (609 in 2021, +17% from previous year). Since main goals in United Nations' intentions were mainly to favor the sustainable development, to integrate ESG factors and to support adopters with research and data analysis, having always in mind a long-time value creation, the signatory commitment states as follows:

[74] Source: https://www.esgenterprise.com/esg-reporting/eu-taxonomy-sfdr-nfrd-csrd/
[75] https://www.unpri.org/about-us/about-the-pri

Fig. 2 - The Signatory Commitment of United Nations Principles for Responsible Investment [76]

Signatories' commitment

"As institutional investors, we have a duty to act in the best long-term interests of our beneficiaries. In this fiduciary role, we believe that environmental, social, and corporate governance (ESG) issues can affect the performance of investment portfolios (to varying degrees across companies, sectors, regions, asset classes and through time).

We also recognise that applying these Principles may better align investors with broader objectives of society. Therefore, where consistent with our fiduciary responsibilities, we commit to the following:

- Principle 1: We will incorporate ESG issues into investment analysis and decision-making processes.
- Principle 2: We will be active owners and incorporate ESG issues into our ownership policies and practices.
- Principle 3: We will seek appropriate disclosure on ESG issues by the entities in which we invest.
- Principle 4: We will promote acceptance and implementation of the Principles within the investment industry.
- Principle 5: We will work together to enhance our effectiveness in implementing the Principles.
- Principle 6: We will each report on our activities and progress towards implementing the Principles.

The Principles for Responsible Investment were developed by an international group of institutional investors reflecting the increasing relevance of environmental, social and corporate governance issues to investment practices. The process was convened by the United Nations Secretary-General.

In signing the Principles, we as investors publicly commit to adopt and implement them, where consistent with our fiduciary responsibilities. We also commit to evaluate the effectiveness and improve the content of the Principles over time. We believe this will improve our ability to meet commitments to beneficiaries as well as better align our investment activities with the broader interests of society.

We encourage other investors to adopt the Principles."

It is quite interesting to notice that many of the principles do not include any specification about which ethical stances should be included. Mackenzie (2006)[77] pointed out that Principles 1 and 2 outline the two basic investor actions which can be taken by PRI signatories in particular and socially responsible invest in general. Substantially, these are firstly the extension of fundamental investment analysis, such as

[76] Source: https://www.unpri.org/about-us/what-are-the-principles-for-responsible-investment
[77] Mackenzie, C, 'The Scope for Investor Action on Corporate Social and Environmental Impacts', 2006

considering ESG issues in the investment decision-making process. Secondly, in the second principle, the statement is clearly discussing active ownership practices. The third and fourth principles seem to emphasize an encouragement and defensive role besides active ownership practices, while, at the end, principles five and six introduce, respectively, cooperation paradigm and the commitment to share success on the implementation of the Principles. Regarding cooperation, PRI's style described in Principles seems to be selfish in character, with the resultant tendency to "downplay the importance of ethical considerations" (Viviers et al. 2008)[78]. Lastly, Principles seem to automatically consider as true the basic assumption that "environmental, social and governance issues can affect investment performance", which validation is as today still in debate. Besides, although data shows empirically a sharp growth of signatory over the period 2006 and 2021, the effectiveness of UN PRIs were discussed by literature. One of the main concerns that some authors pointed out is the voluntary nature of the act of signing, which has a double side. If on one hand it is possible that each committed party shows a real engagement about the initiative, not being forced to sign, on the other side some actors can exploit their participation without performing accordingly, even if this behavior might arise reputational damages (Berrone et al., 2017)[79]. Nevertheless, others suggests that this strong empirical evidence suggests that UN PRIs did effectively help in creating a framework which is important for the accessibility of responsible investment and encourage institutional investors to adopt it (Sievänen et al, 2013)[80]. Even after the adoption of the UN PRI's, it became clearer how easier access to responsible investment was needed, this needs stems mainly from impediments to responsible investment on institutional, organizational, and individual levels (Juravle and Lewis, 2008)[81]. An important note regarding voluntary nature in adhering PRI's principles was pointed out by Gutsche & Zwergel (2020) and also by Hartzmark & Sussman (2019); they indicate that such as sustainability labels, signatories of UN PRI's can expect a benefit from a positive reaction from investor to a UN PRI membership. Hence, along the lines of UN PRI's, in 2012 were drafted the four Principles for Sustainable Insurance (PSI), whose are worth citing, since insurance sector is entitled to manage the risk of the system, granting a primary role in promoting sustainable development. Without descending into details, since the PSI are strongly inspired from UN PRI's, the four principles state as follows:

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[78] Viviers, S., J. K. Bosch, E. v. d. M. Smit and A. Buijs: 2008, 'Is responsible investing ethical?'
[79] Berrone, P., Fosfuri, A., & Gelabert, L. (2017). Does greenwashing pay of? Understanding the relationship between environmental actions and environmental legitimacy.
[80] Scholtens, B., & Sievänen, R. (2013). Drivers of socially responsible investing: A case study of four Nordic countries.
[81] Juravle, C., & Lewis, A. (2008). Identifying impediments to SRI in Europe: a review of the practitioner and academic literature. Business Ethics: A European Review.

- ***Principle 1:*** *We will embed in our decision-making environmental, social and governance issues relevant to our insurance business.*
- ***Principle 2****: We will work together with our clients and business partners to raise awareness of environmental, social and governance issues, manage risk and develop solutions.*
- ***Principle 3****: We will work together with governments, regulators and other key stakeholders to promote widespread action across society on environmental, social and governance issues.*
- ***Principle 4:*** *We will demonstrate accountability and transparency in regularly disclosing publicly our progresses in implementing the Principles.*[82]

Even if those Principles seem to be an adapted replica of Un PRI's, they are an important introduction, since it is relevant to fine-tune financial regulation for each kind of intermediary (Risi, 2020[83]). In addition, the awareness of the different shades of fostering mechanisms usually helps financial institutions and insurance companies to target investors with a preference for proactive instead of reactive SRI practices (Berry & Junkus, 2013)[84].

Most importantly, on the path of fine-tuning Principles for all kind of financial institutions, another initiative in 2019 was programmed, the Principles for Responsible Banking (UN PRB), approved and supported from United Nation Environment Program (UNEP) Finance Initiative, the United Nations network of banks, insurers and investors actively promoting sustainable development. In a nutshell, the six principles are: Alignment of the bank strategy to be compliant with sustainable development goals and to contribute to community needs; Impact and Target, reducing negative impact and promoting positive ones; Costumers and consumers, working with them to encourage sustainable best practices; Stakeholders, involving and making them responsible on sustainability topics; Governance and Culture, promoting a responsible governance and culture; Transparency and Responsibility, analyzing periodically levels of integrations of the Principles[85]. Furthermore, in 2021 the UNEP promoted a further initiative, called Net-Zero Banking Alliance, which brings together a handpiece of global banks sharing the goal of zero emissions by 2050 for their investments and portfolios. [86]

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[82] Source: https://www.unepfi.org/insurance/insurance/the-principles/

[83] David Risi, Time and Business Sustainability: Socially Responsible Investing in Swiss Banks and Insurance Companies, 2021

[84] Berry, T. C., & Junkus, J. C. (2013). Socially responsible investing: An investor perspective.

[85] Source: https://www.unepfi.org/banking/bankingprinciples/

[86] Source: https://www.unepfi.org/net-zero-banking/

1.9 - Conclusions

Sustainable Finance encompasses three investment objectives: generating social and environmental returns; generating pure financial returns to capital as in the case of conventional investing (Nicholls, 2010)[87]. Substantially, a new dimension is included, creating a financial product which embodies both an attention to financial return and a focus on social and environmental outputs and outcomes (Emerson, 2003)[88]. This is what literature calls blended value, which aims to challenge the common assumption indicating that it is necessary to sacrifice financial returns to achieve greater social and environmental impact (Emerson & Spitzer, 2007)[89]. The regulatory framework is still in development, but the differences among jurisdictions are one of the obstacles that need to be surpassed to find common solutions. Both supra-national authorities and global organizations, United Nations above all, are engaging hardly in a sustainable standardization process, in which institutional investors and banking institutions are at the center in the sustainable finance project; having always in mind that that from an institutional perspective, the main goal of business sustainability is to combine both social welfare with market logic (Besharov & Smith, 2014)[90]. Also, Reinecke and Ansari (2016)[91] pointed out that "time is an important building block of institutional logics", which highlights once again the importance of the long-time horizon needed in programming sustainable programs.

This chapter has shown how the demand for SRI products is growing strong and it has a lot of potential in terms of growth; even if evidence indicates ESG as a profitable approach to project selection for investors and companies (Mirelles-Quiròs et al, 2019), are financial institutions really believing in ESG investments or are they simply complying passively to some rules from above? This will be discussed further.

[87] Nicholls, A. (2010). The institutionalization of social investment: the interplay of investment logics and investor rationalities.
[88] Emerson, J. (2003). The blended value proposition: integrating social and fnancial returns.
[89] Emerson, J., & Spitzer, J. (2007). From fragmentation to functionality: Critical concepts and writings on social capital market structure, operation and innovation.
[90] Besharov, Marya & Smith, Wendy. (2014). Multiple Institutional Logics in Organizations: Explaining Their Varied Nature and Implications.
[91] Reinecke, Juliane & Ansari, Shaz. (2016). Time, Temporality, and Process Studies.

Chapter 2 – ESG and Implications for Institutional firms

2.1 – Introduction

Currently more than 3800 institutional investors and insurance companies are formally adhering to Principles of Responsible Investment (PRI), an agreement to incorporate ESG issues into their investment analysis and decision-making processes (Gillan et al, 2021). At this regard, numbers about assets under management for these investors has increased from $6.5 trillion in 2006 to over $121 trillion in 2021[92]; in addition, flows in favor of Funds which exhibit ESG labels have increased, reaching around $ 3 Trillion of asset value in the first quarter of 2021 (Bonaparte, 2022)[93]. In addition, according to Sparkes (2002, p. 42), "corporate social responsibility (CSR) and socially responsible investing (SRI) are in essence mirror images of each other. Each concept basically asserts that business should generate wealth for society but within certain social and environmental frameworks. CSR looks at this from the viewpoint of companies, SRI from the viewpoint of investors in those companies'"

CSR for financial institutions is essentially tied up with Sustainable Finance Disclosure Regulation (SFDR), started in 2019 when European Council published the Regulation (EU) 2019/2088 on sustainability-related disclosure in the financial services sector, which starts to be effective in 2021 (Becker et al., 2022)[94].

In this chapter, the integration of Corporate Social Responsibility in financial firms will be analyzed, considering some evidence and consideration on what it is based, and both the effect reported in the integration of the factors for a financial institution, especially considering the implementation of SFDR regulation that started in 2021.

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[92] https://www.unpri.org/about-us/about-the-pri

[93] Bonaparte, Yosef, Why NOT to Invest in ESG Funds? (2022).
Source: https://ssrn.com/abstract=4183882 or http://dx.doi.org/10.2139/ssrn.4183882

[94] Martin G. Becker, Fabio Martin, Andreas Walter, The power of ESG transparency: The effect of the new SFDR sustainability labels on mutual funds and individual investors, 2022.

The Importance of CSR

Generally speaking, the 1960's and the 1970's are a very important period not only for the evolution of ethic investing materials, but also for what's called Corporate Social Responsibility, (CSR), a concept that, as a matter of fact, begins to appear a little early, in 1950's. It's important to identify pillars of CSR because it's directly linked with the evolution of the ESG integration process happening in last few decades, being an important gear in the whole system of sustainable finance. In synthesis, CSR stands on the idea that corporations should follow a set of principles to fulfill their social responsibilities as their great power concentration has the consequence to have a very strong impact in society with their decisions. A paper written in 1953 by Howard Bowenn, an American businessman, is considered as a foundation of set of principles about social responsibility of firms, starting a literature that even now is continuously been refining (Caulkins, 2013). Hence today CSR is a commonly accepted standard and it's seen as central in corporate decision process to focus on market products and services in a sustainable, responsible, and efficient ways. Evidence reports that 86% of S&P 500 firms produced sustainability and corporate responsibility reports compare to just less than 20% in 2011.

Dough Caulkins, President Howard Bowen & Corporate Social Responsibility, 2013. Source: https://www.grinnell.edu/news/president-howard-bowen-corporate-social-responsibility

Gillan, Koch and Stars, Firms and social responsibility: A review of ESG and CSR research in corporate finance, 2021, reported also in: https://www.ga-institute.com/storage/press-releases/article/flash-report-86-of-sp-500-indexR-companies-publish-sustainability-responsibility-reports-in-20.html

2.2 - ESG factors in non-financial disclosures

The concept of CSR is fundamental in defining the path of evolution for Sustainable Finance; not only companies and financial institutions were inducted to going through a process to redefine themselves and their responsibilities, but also investors are able to observe the data about the firms' ESG behavior. This framework aims to reduce information asymmetry, hence creating a transparent disclosure environment in which ESG focused investors can reward whichever company fits better their standards.

Previously, introducing the concept and the manifold definitions of sustainable investments, the definitions for sustainable finance and for sustainable investments are widely opened and can be declined in different ways, models, and tools. However, literature is confident in stating that any sustainable and responsible investment product, three main non-financial elements need to be present; those are

Environmental, Social and Corporate Governance issues, which are reunited in the acronym ESG. According to The Global Sustainable Investment Alliance, ESG is an acronym used in finance to indicate all the activities linked with Responsible Investment which, in the considerations of making profits, aspects about Environment, Social and Corporate Governance issues are included in the decision-making process.[95] Starting from environmental issues, it's not certainly a news that climate changes in last decades are not sustainable for the sake of our planet. Empirical data is showing an exponential increase in the global annual temperature anomalies, registering nineteen of the hottest years that have occurred since 2000; global warming issue is a state of fact, since the global average temperature has risen by 1,14 Celsius grades from the beginning of second millennium.[96] Studies about the impact of the global warming in the economy are severe, indicating that between 1980 and 2019 extreme environmental events did impact European Union economy for near € 446 billion, an amount that match 3% of the EU Gross Domestic Product (GDP). In addition, the average annual damages due climate change are quantified in € 11 billion, which trends are constantly raising over periods; in decade 1980-1989 the average was € 6,6 billion and in the last decade (2010-2019) the annual average nearly doubled at €12,5 billion. [97] Climate risks that can seriously harm the financial sector and the entire economy are divided in two categories, physical risks, and transactional risks. The physical risk refers to the economic impact arising from climate changes, in particular the consequences of extreme natural events in the shape of material damages or a decrease in productivity (De Guindos, 2021). Physical risk is also subdivided in two types, chronical risks, which are provoked by progressive mutations like global warming, and acute risks, caused by extreme events like flooding and arsons. About transactional risk, it is defined as the economic impact arising from the development process in a situation of transition to an economy at low carbon emissions and more sustainable at environmental level.

At this regard, the European Central Bank in 2018 decided to assess the resilience capability about climate disruption for the economic system, pulling out a stress test on 4 million companies and 2000 banks to estimate the entity of the damages and the costs linked with calamity and transitional costs in the next 30 years. Results of this analysis point outs that primarily, an effective and balanced timed transition is always preferred in costs than damages caused by more frequent and severe natural disaster in the long-term, since the cost of sustainable technology will be surpassed by the increase in profitability and in avoiding

[95] Global Sustainable Alliance Investment Review, 2020
[96] Source: NASA and Goddard Institute for Space Studies (GISS)
[97] Source: Economic Losses for climate-related extremes in Europe – European Environment Agency: at https://www.eea.europa.eu/data-and-maps

higher insurance premiums in the futures due to increasing probability on incurring in natural disaster that intact the capital of the company (De Guindos, 2021 and 2019). This aspect is very important, since usually the dominant context in the market is the pursuit of immediate profit (Glynn and Lounsboury, 2005) and both the fulfillment of social aspects and impact of the activities are seen in contrast to market logic (Pache and Santos, 2013).

Switching to social and corporate governance factors in ESG, the firsts are related to how a company manages relationships with stakeholders, such as employees, supplier, customers, and minority shareholders (social) and the seconds deals on how a company is managed.[98]

Differently from environmental factors, which, except strange exceptions, are usually common for all the market participants, social factors and corporate governance instead are not, since they depend on stakeholders' relations and managers ethics and beliefs. Some social factors are difficult to measure, since they can be qualitative and not quantitative; for example, employee engagement, community relations, training, and workforce development (Ogletree, 2022). Recently, social factors are being considered relevant material since it can be considered as a metronome of the human capital management. In fact, there are evidence about companies that overlook social issues which state that they incur in the risk of facing labor shortages and even strikes[99]. In addition, there are cases of consumers that boycotts products, incurring in the risk of losing market legitimacy. Governance factors are often related with the board composition and policies adopted, usually gender balance and minority representations in companies being at first places and perceived by most as a signal of fairness. Governance factors were considered the most important of the ESG factors in a survey conducted in 2015 among institutional investors, because weak governance was often a signal that before long the company would manifest also environmental and social problems as well; for instance, this is exactly what happened both in the Volkswagen Emission scandal and in the BP Deepwater Horizon (OCED, 2017).

2.3 – ESG disclosures in Corporate Finance

Corporate Social Responsibility (CSR) experimented a huge development among the years since its inception, being very popular and interesting not only to investors and corporate managers but also academic research, which is expanding greatly (Gillan et al, 2021). As of today, a full-round definition of CSR can be identified in the incorporation of Environmental, Social, and Governance (ESG)

[98] See also: https://www.dedalus.com/ne/en/environmental-social-and-governance/
[99] UBS Sustainable Investing Report, 2015

considerations into corporate management, financial decision making, and investors' portfolio decisions (Liang & Renneboog, 2020).[100] Surely, interest among investors in non-financial reporting has a positive impact in the implementation of CSR and non-financial disclosure methods; they have a positive effect in promoting CSR best practices in different businesses (Crifo & Forget, 2013)[101]. Besides, measuring impact of CSR in both firms and financial institution is not easy at all, for many reasons. First, some effects are not immediately quantifiable as financial indicators or mere numbers; the latter are so much easier to interpret rather than qualitative criteria, which are usually embedded in ESG impact factors valuation. Likewise, a unified and unique model able to represent the real actual situation about ESG incorporation for all firms it's nearly impossible to draft; there are too many entangled peculiarities that a unique model would not be able to represent univocally. Several studies show how different factors such as the adoption of civil-law or common-law, country economic development and cultures play an important role in explaining CSR implementation characteristics (Cai et al, 2016)[102]; in addition, the analysis of those elements might directly impact the financial structure of the firm (Eccles & Viviers, 2011). Usually, to evaluate how a firm has implemented CSR in its processes, most institutional guidelines derived by institutional, or delegate acts rules indicate the ESG reporting methods for Sustainable non-financial reporting. Unlike other financial reporting, which are compulsory not only for publicly traded companies but also for a multitude of companies, and, produced following a well-established set of rules (World Economic Forum, 2020), non-financial reporting (or ESG reporting) guidelines are not clearly defined, often leaving space for interpretation (Erkens et al. 2015). Moreover, as introduced in previous chapter, ESG reporting is still on voluntary basis; this framework surely contributes to the arise of some inconsistencies in reporting content and discrepancies about quality and accuracy of disclosed information, as pointed out by several studies (Sethi et al, 2017, Michelon et al. 2015). Additionally, due to the voluntary nature of ESG guidelines, firms that follows guidelines have room of maneuver for adapting reporting content and procedures, as well as the magnitude of information to disclose. For example, Darnall et al. (2022)[103] found out that in the case of Japanese firms, which were given the choice by the government to decide to pursue either process or content verification about their ESG disclosure, firms prefer to use content rather than process verification; this is a peculiar case study that can may raise

[100] Hao Liang, Luc Renneboog, Corporate Social Responsibility and Sustainable Finance: A Review of the Literature, 2020
[101] Crifo, P., & Forget, V. D. (2013), "Think Global, Invest Responsible: Why the Private Equity Industry Goes Green".
[102] Y.Cai, C.H. Pan, M. Statman, Why do countries matter so much in corporate social performance?, 2016
[103] Darnall, N., Ji, H., Iwata, K., & Arimura, T. H. (2022). Do ESG reporting guidelines and verifications enhance firms' information disclosure?

an important research pillar, since nowadays most of ESG guidelines enhanced by institutional rules are based on process verification. As of today, the Japanese government is the only one institution that created this opportunity for firms to use either third-party verifications about processes or about contents. More specifically, the distinction between process-focused verification and content-focused verification is defined by Darnall et al. 2022; the first method assures if a firm's report complies to the established reporting rules and standard, while the second focuses on the completeness, accuracy, and quality of information included in reports. Given the multitude of ESG reporting guidelines, among which there are Sustainability Accounting Standard Boards (SASB), Global Reporting Initiative (GRI), and Task Force on Climate-Related Financial Disclosures (TCFD) the most important and prevalent ones usually follow a process-focused verification (Threlfall et al, 2020)[104]. The study concludes that both process-focused and content-focused verifications enhance the disclosure of ESG data, but the latter seems to offer greater potential to inform stakeholders solidly about sustainability initiatives.

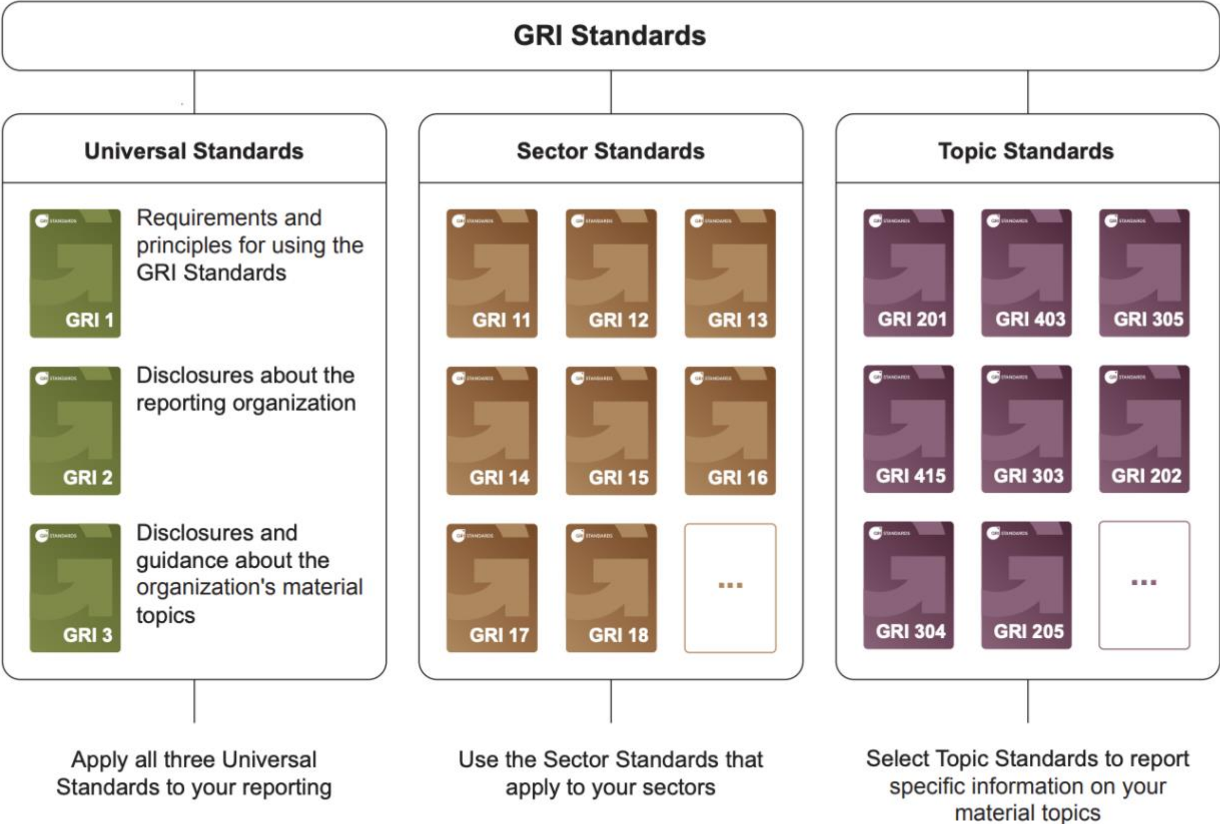
2.4 – Standards for non-financial disclosures: GRI Standards and TCFD

As introduced before, as today there is not a unique accepted standard for non-financial reporting to rely on, since the concept of mandatory ESG disclosure it's quite new. First, as today a formal definition of sustainability boundaries does not exist. Furthermore, the plethora of interested in sustainability reporting are multiples, resulting in more topics that need to be included to satisfy all demands (Report ESG EY, 2021)[105]. Such reporting practices grew-up along with the increasing demand of ESG reporting and have been accompanied by multiple attempts of standardization over the years; the Global Reporting Initiative (GRI) was the first mover in establishing international standards for non-financial disclosures (Brown et al., 2009)[106]. The Global Reporting Initiative was founded with the goal of implanting a responsibility mechanism in the firm's view; adopting the Standards produced by GRI means tacitly adhering to principles related to a responsible and sustainable behavior. The GRI Standards are the principal guidelines to produce the reporting of sustainability performance for an organization or a company; the

[104] Threlfall, R., King, A., Shulman, J., & Bartels, W. (2020), The time has come: The KPMG survey of sustainability reporting 2020.
[105] For More Information: https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwjj6JC-9PH7AhXCu6QKHZ91BOoQFnoECAwQAQ&url=https%3A%2F%2Fassets.ey.com%2Fcontent%2Fdam%2Fey-sites%2Fey-com%2Fen_in%2Ftopics%2Fclimate-change%2F2021%2F08%2Fey-the-evolving-non-financial-reporting-landscape.pdf%3Fdownload&usg=AOvVaw3W3pMdxA2Mal1fDsPoVgIR
[106] Halina Szejnwald Brown, Martin de Jong, David L. Levy, Building institutions based on information disclosure: lessons from GRI's sustainability reporting, Journal of Cleaner Production, 2009.

structure of the standards resembles a modular system composed by three main series of standards, which are the Universal Standards, the Sector Standards, and the Topic Standards. Each Standard contains information about the disclosure and instructions on how each company should report information about itself and its impact; furthermore, disclosures can indicate requirements, which are compulsory to follow if a company wants to be considered GRI compliant as well as recommendations, which are not boundaries nonetheless indicates paths that are strongly encouraged. The Universal Standards are the most important and the pillars of the reporting; they are applied to all companies and are Foundation (GRI 1), General Disclosures (GRI 2), Material Topics (GRI 3). Revisited in their definition in 2021, the New Universal Standards will enter in force in 2023, since those definitions have been revisited and readapted to foster a superior level of transparency needed for the stakeholders.

Fig. 3 – The GRI Standards Modular Structure[107]



[107] Source: https://www.globalreporting.org/media/wtaf14tw/a-short-introduction-to-the-gri-standards.pdf

The definitions of the three Universal Standards given by Global Reporting Initiative are as follows:

- "GRI 1: Foundation 2021 (GRI 1) outlines the purpose of the GRI Standards, clarifies critical concepts, and explains how to use the Standards. It lists the requirements that an organization must comply with to report in accordance with the GRI Standards. It also specifies the principles – such as accuracy, balance, and verifiability – fundamental to good-quality reporting".
- "GRI 2: General Disclosures 2021 (GRI 2) contains disclosures relating to details about an organization's structure and reporting practices; activities and workers; governance; strategy; policies; practices; and stakeholder engagement. These give insight into the organization's profile and scale and help in providing a context for understanding an organization's impacts."
- "GRI 3: Material Topics 2021 (GRI 3) explains the steps by which an organization can determine the topics most relevant to its impacts, its material topics, and describes how the Sector Standards are used in this process. It also contains disclosures for reporting its list of material topics; the process by which the organization has determined its material topics; and how it manages each topic."[108]

Being a modular structure, the main idea starts from the three Universal Pillars and then each company can proceed in the drafting including Sector Standards to increase the quality, completeness, and consistency of the reporting. About Sector Standards, they are multiple and usually refers to those topics that are likely to be important to disclose about for each sector. To conclude, the Material Topics Standards contain guidelines about more specific topics for whichever institution that wants to disclose [109]even more information. This aspect is gaining importance, due to the growing relevance attached to environmental concerns and the subsequent need to disclose even further environmental information to stakeholders; for this reason, firms have tended to voluntarily disclose more information about their environmental impacts and issues. (Cormier and Magnan, 2015)[110]. Since GRI Standards were the first published and widely adopted guidelines for the corporate non-financial reporting, the Global Reporting Initiative guidelines can be considered *de facto* the principal reporting guidelines for non-financial disclosures (Skouloudis et al., 2010)[111]. On the other side, TCFD, acronym that stands for Task Force on Climate – Related Financial Disclosures is surely another important instrument that was created with the objective of developing a voluntary disclosure standard, which can be used by the companies to elaborate and deliver information

[108] Source: https://www.globalreporting.org/media/wtaf14tw/a-short-introduction-to-the-gri-standards.pdf

[110] Denis Cormier, Michel Magnan, Impact on Corporate Legitimacy: An Empirical Investigation, 2015

[111] Antonis Skouloudis, Konstantinos Evangelinos, Fotis Kourmousis, Assessing non-financial reports according to the Global Reporting Initiative guidelines: evidence from Greece, 2010.

to creditors, insurer, investors, and all other stakeholders. TCFD was developed back in 2015 by Financial Stability Board (FSB) but recommendations were published two years later, in 2017; the focus of the TCFD is to create market transparency about ESG disclosures and grant stability. The logic behind is very simple, delivering standards recommendation to firms enables the virtuous circle: a well-informed process of decision-making will produce better practices and hence better reports, boosting the possibility to create a resilient market environment. In turn, more resilient markets will be a better infrastructure for the transition process through a greener and low-emission economy. Additionally, TCFD principles integrates in its recommendations the advice for companies to include a resilience report for its own strategy, bearing in mind that for an effective and high-quality disclosure, it is necessary to consider also different climate changes scenarios. TCFD is composed by eleven recommendations, grouped in four main thematic areas, which are: Governance, Strategy, Risk Management and Metrics & Objectives. The main structure is articled as follows:

Fig. 4 – Structure of TCFD Recommendations[112]

Table A1

TCFD Recommendations and Supporting Recommended Disclosures

Governance	Strategy	Risk Management	Metrics and Targets
Disclose the company's governance around climate-related risks and opportunities.	**Disclose the actual and potential impacts of climate-related risks and opportunities on the company's businesses, strategy, and financial planning where such information is material.**	**Disclose how the company identifies, assesses, and manages climate-related risks.**	**Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material.**
a) Describe the board's oversight of climate-related risks and opportunities.	a) Describe the climate-related risks and opportunities the company has identified over the short, medium, and long term.	a) Describe the company's processes for identifying and assessing climate-related risks.	a) Disclose the metrics used by the company to assess climate-related risks and opportunities in line with its strategy and risk management process.
b) Describe management's role in assessing and managing climate-related risks and opportunities.	b) Describe the impact of climate-related risks and opportunities on the company's businesses, strategy, and financial planning.	b) Describe the company's processes for managing climate-related risks.	b) Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.
	c) Describe the resilience of the company's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.	c) Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the company's overall risk management.	c) Describe the targets used by the company to manage climate-related risks and opportunities and performance against targets.

[112] TCFD Status Report 2022, available at: https://assets.bbhub.io/company/sites/60/2022/10/2022-TCFD-Status-Report.pdf

It is immediately visible that, back in 2017, when the Task Force published its final draft of the recommendations, it highlighted the important role large asset managers and asset owners play in the investment chain in terms of influencing the companies in which they invest to provide better climate-related financial disclosures (TCFD Final Report, 2017)[113]. Not only, but it also intended that reporting by asset managers and asset owners is intended to satisfy the needs of clients, beneficiaries, regulators, and oversight bodies and follows a format that is generally different from corporate financial reporting (TCFD Final Report, 2022). Effectively coping with these issues is seen as a way of helping corporations ensure sustainable supply chains and markets for further development. CSR and its multiple interpretations implemented following those guidelines are considered as an essential and major business initiative for dealing with these new risks, such as environmental, social and governance ones (Lu et al., 2019)[114]. Therefore, in order to do encourage disclosures of climate related-issue, Task Force individuated suited guidelines for whose actors that sit in the top of investment chain, which can be individuated in asset owners and, rightly after, asset managers. Having in mind that non-financial disclosures by asset owners can boost better disclosures across all the investment chain and given the scarce existing data and methodology constraints, this process allows readers introducing them to climate changes topics; hence, both asset managers and underlying companies might have a reference to integrate such guidelines and thus expanding much more the stakeholders in possession of clear ESG information, a factor that will surely help in making better investment decisions. (TCFD Implementing Guidance, 2021)[115]. As today, also thanks to the increasing numbers of reportings, there is so much greater general awareness of corporates' increasing efforts for efficient environmental and welfare-oriented corporate initiatives. So, implementation of adequate policies for sustainability disclosures is an important task globally for governments, companies, and consumers. In fact, those actors need to accept their responsibility for external effects that own activities have on societies and the environment (Halkos et al, 2019). Nonetheless, the core objective of corporations' socially responsible activities should be to support most of the shared value which can indirectly create investment returns for a firm's shareholders while avoiding unfavorable effects on both environment and society (Navickas and Kontautiene, 2012)[116]. In other words,

[113] Source available at: https://assets.bbhub.io/company/sites/60/2021/10/FINAL-2017-TCFD-Report.pdf
[114] Lu Jintao, Ren Licheng, Lin Wenfang He Yifan Streimikis Justas, Policies to promote corporate social responsibility (csr) and assessment of csr impacts, 2019

[115] Source available at: https://assets.bbhub.io/company/sites/60/2021/07/2021-TCFD-Implementing_Guidance.pdf
[116] Valentinas Navickas; Rima Kontautienė, The Influence of stakeholder-company relationship on competitiveness of company, 2012

what should be sought, is a point of equilibrium between corporate profit and social and environmental responsibilities.

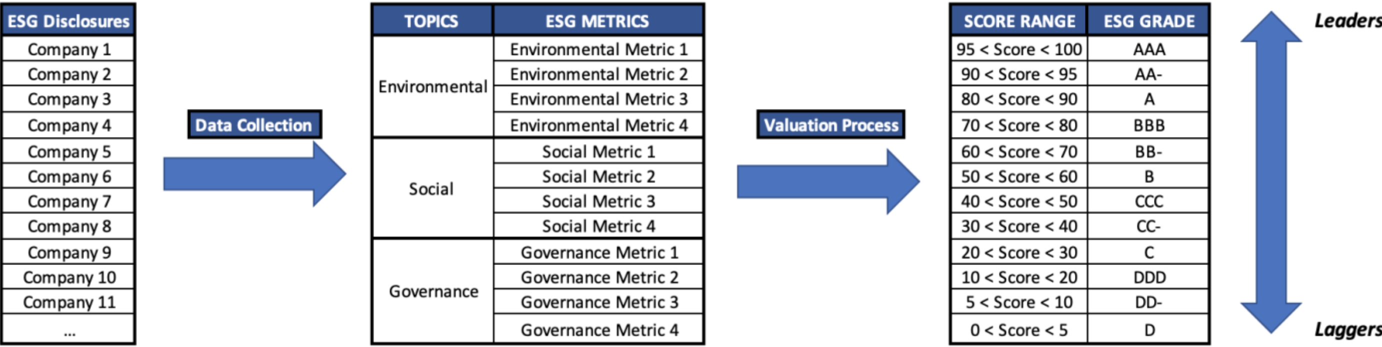
2.5 - ESG Ratings

The considerable surge of ESG investments and, consequently, the imponent wave of ESG reporting and non-financial disclosures we're observing were able only recently to brush off the title of niche in investing practices. To consolidate even more best policies for companies and financial institutions in ESG disclosures, among and complementary to traditional ratings, a new segment of the rating agencies has been developed; ESG evaluations started to be included in ratings provided by major rating companies such as Moody's, S&P and Fitch (Billio et al, 2021)[117]. Even more, less famous rating boutique companies started to specialize in ESG Ratings, for example Vigeo Eiris, ECIPI, ISS ESG, OWL analytics and many others. ESG Rating and Traditional rating do have the same purpose, which is drawing a ranking of all companies from the very best until the worst; what's different is the content of the analysis. Traditional rating or credit rating is a synthetic valuation regarding the solvency and the creditworthiness of securities and firms, which summarize qualitative as well as quantitative information about the possibility for a subject to repay its outstanding debts. For instance, sovereign rating is a traditional rating which can evaluate the possibility for a state to repay its own public debt; as well as corporate credit rating, which express the capacity of a company to cope with debt exposition[118]. With regards to ESG rating, also called sustainability rating, it is a synthetic judgement that certifies the strength of a security, issuer, or even fund from the point of view of sustainability performances. Hence, ESG rating sum up a group of practices and metrics which can measure the capacity of paying enough attention at environmental, social and governance issues. [119] Such as traditional ratings, there are several ways for ratings agencies to structure a process for the drafting of an ESG rating, but in this case, we can find even more divergence between different rating agencies, both in the process and in the results (Li & Polychronopoulos, 2020)[120]. To

[117] Billio, M., Costola, M., Hristova, I., Latino, C., & Pelizzon, L. (2021). Inside the ESG ratings: (Dis)agreement and performance. *Corporate Social Responsibility and Environmental Management*, 28 (5), 1426– 1445.
[118] Elaboration from: https://www.borsaitaliana.it/notizie/sotto-la-lente/rating.htm; https://www.spglobal.com/ratings/en/products-benefits/products/credit-ratings
[119] For more details: https://finance.ec.europa.eu/regulation-and-supervision/consultations/finance-2022-esg-ratings_en#:~:text=ESG%20ratings%20generally%20assess%20the,of%20default%20of%20a%20company.
; https://www.msci.com/our-solutions/esg-investing/esg-ratings
; https://www.sustainalytics.com/esg-ratings
[120] Feifei Li, Ari Polychronopoulos, 2020, What a difference an ESG Rating Providers Make!

better understand how ESG ratings can be structured, there is an example on how all the process chain usually is developed:

Fig. 5 – ESG Rating Overall Simulated Process [121]



The chain of production of the ESG rating starts from the data collection from multiple sources, starting from reporting published by the companies as well as others public sources of available information. Main examples are the annual income statement and balance sheet, the firm's website, non-financial reports, and others public information from documents delivered to the exchange or just public news. Then, all gathered information are elaborated through the construction of indicators, which can be both qualitative and quantitative metrics that will be used to sum up aggregated results. In some cases, the valuation process can comprehend also an in-depth study seeking for more and additional information, not only for the purpose of expanding the universe of analysis but also to certify and strengthen the data collected before. The result of the process is of course the ESG rating, which will be delivered by the data going through some proprietary algorithm. The overall process is not dissimilar to the traditional rating one, since a similar one is used in credit ratings or bond ratings; what's different is that ESG ratings of the same security or company can diverge a lot depending on the rating agency, while in traditional rating this rarely happen (Dimson et al, 2022)[122]. What really drives the difference in ESG ratings is an important subject of discussion in the literature debate, which is blossoming in recent years following the growing trends of ESG investing as a hot research argument. A first important step in this direction suggests that mainly two aspects have an effect in driving this difference, which are indicated as "theorization" and

[121] Ratings showed are not specific, they were produced only as an example.
[122] Elroy Dimson, Paul Marsh, Mike Staunton, Divergent ESG Ratings, The Journal of Portfolio Management Oct 2022.

"commensurability". The first is basically refers to what ESG rating agencies decides to measure and describe, while the second is a definition indicating the real consistency of whichever measuring agencies are performing (Chatterji et al, 2016)[123]. In practice, a lack of standard in evaluating procedures often result in different outcomes; more specifically, given raw datasets, outputs can be inhomogeneous and not easily comparable, due to different data harmonization and aggregation processes. This result reflects the ESG sector, which is experiencing a rapid growth, besides, it is still insufficiently regulated and all fundamental market actors such as investors, asset, and corporate managers and even policy makers strongly need a deeper understanding of the ESG inherent particularities and a broader knowledge of the potential impacts of ESG on the financial sector (Billio et al, 2021). Another evidence usually recurring in literature debate is the low correlation among ESG scores from different rating agencies, which is primarily due the fact that even if a common path of action can be envisioned, a true universal standard methodology between different providers do not exist (Berg et al, 2019)[124]. Additionally, a lot of quite recent evidence continue to underline the concept of low or minimal correlation between ESG scores by different providers (Dimson et al, 2022; Li et Polychronopoulos, 2020; Christensen et al, 2022), most of them indicating that the major driver for ESG ratings differences is the measurement divergence. Sustainable finance future studies will try to fill the gap in literature debate, still those results can be a starting point to study implications of ESG ratings and metrics, since they are considered an important base for ESG sector. In fact, multiple theories indicates that asset prices are prone to ESG preferences of the investor, however choices are guided by ESG ratings, expanding concern for misalignments among ESG ratings (Berg et al, 2019). For these reasons, it's important that future studies cope the scarcity of empirical data in ESG field, to create a more consistent database for more reliable research. For example, avoiding relying only on one single provider and do not stick to the same raters, trying to involve more of them in valuations could be useful for consistence purposes, even if probably it will be not sufficient to resolve mismatching among raters. Furthermore, mechanics of ESG rating market needs to be clarified yet, structural reasons and incentives that need to be better understood may influence how certain companies or categories are rated. All structural inefficiencies are tied with uncertainty in ESG ratings, which is an important topic that is gaining attention in literature, since the divergence in ESG rating produces an uncertainty that in some way can affect asset prices (Avramov et al, 2021)[125]. However, it's

[123] Chatterji, A.K., Durand, R., Levine, D.I. and Touboul, S. (2016), Do ratings of firms converge? Implications for managers, investors and strategy researchers.
[124] F. Berg, J. F. Koelbel, and R. Rigobon (2019). Aggregate Confusion: The Divergence of ESG Ratings.
[125] Doron Avramov, Si Cheng, Abraham Lioui, Andrea Tardelli (2021), Sustainable investing with ESG rating uncertainty

important to remark that ESG rating divergence does not imply that measuring ESG performance is a futile exercise; the framework simply highlights that measuring ESG performance is nowadays still experimental and challenging, as well as that the importance of the starting dataset is crucial, and lastly, that also the use of ESG scoring and ratings should be considered in regard of its application (Gibson Brandon, Krueger, and Schmidt, 2021)[126].

In conclusion, surely a harmonizing process for ESG disclosure would help improving existing data and fostering the creation of consistent datasets; also, an extended taxonomy for ESG categories would reduce divergence in comparing ESG ratings (Berg et al, 2019).

2.6 - The Seven Sins of Greenwashing

The non-standardized practices of ESG reporting often leave rooms for interpretation, this void in generalized ruling raises concerns for "green-washing" or "ESG-washing". Given the advantages that ESG labeled products bring in terms of marketing, there is the possibility to push ESG definitions beyond reasonable limit, or worse, enlighten features as ESG friendly where they're not. This fraudulent practice is called Greenwashing, which is a practice that refers to fool investors and other market participants building deceptively a false image of the firm under the profile of environmental impact. The aim is to divert the public opinion from the negative effects produced by firm's activity and products. In sustainable finance green washing usually can grant an unfair advantage on the competitors, promoting some products as sustainable when standards to consider it so are not satisfied at all. In particular, literature explores and identifies seven sins that firms which are eco-friendly self-declared can commit:

1. **Sin of Fibbing**: false environmental assertions
2. **Sin of Irrelevance**: introducing environmental assertion that can be true, but those are not useful at all for consumers
3. **Sin of Vagueness**: environmental indications in the products are too much generic and can be misunderstood
4. **Sin of No Proof**: environmental claims not supported by data neither verified from third parts
5. **Sin of the hidden trade-off**: declare environmental sustainability of a product basing claims only on some attributes, often hiding some others negative impacts.

[126] Rajna Gibson Brandon, Philipp Krueger & Peter Steffen Schmidt (2021) ESG Rating Disagreement and Stock Returns, Financial Analysts Journal, 77:4,

6. **Sin of worshipping false labels**: present false labels or presenting a product using counterfeits certifications
7. **Sin of lesser of two evils**: enlighten an indication which can also be true for a specific category of products but that can mislead the consumer from more impactful environmental effects for the whole category.

Not only those practices are really dangerous, but also they can represent one of the biggest threat and barriers for SRI development. For example, in 2012 the Italian water seller firm Ferrarelle was punished with a fine of € 30.000 for an advertising in which they claim that a specific product of the firm was "zero-impact". The company commitment in compensating the CO2 emissions though was considered by the Antitrust authority transitory and not sufficient to justify such strong statement, since the effective duration of the compensation lasted only two months. [127]

2.7 – Different Strategies of ESG Investing

The sector of sustainable finance is gaining wider day by day, recently more solutions to satisfy the public's demand were developed. The history of sustainable and responsible investments is founded upon the exclusion of specific activities from the investment horizon, such as slave trade related ones in Quackers' case (Kinder and Domini, 1997). From the very first exploration of negative screening, the plethora of possibility for ESG investments has been refurbished and expanded, resulting in different market participants asking for more differentiated products both for scope and methods. Hence, offer side is following with expansion of ESG products offered, not only to comply with new European requirements about sustainability but also to benefit from the advantages of being part of big communities such as PRI signatories, along with the stronger penetration that a diversified offer may bring in the financial market. Different strategies offer multiples approaches for coping the trade-off between performance and ESG desired attributes (Branch et al, 2019)[128]. The literature identifies different and multiple ESG investment strategies (Eurosif, 2021), that can be applied conjointly or stand-alone.

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[127] *(Sources: UL.com, available at https://www.ul.com/insights/sins-greenwashing#:~:text=A%20claim%20suggesting%20that%20a,from%20a%20sustainably%20harvested%20forest; Eco Note, available at https://www.econote.it/2012/03/02/ferrarelle-scivola-nel-green-washing-multata-dallantitrust/).*

[128] Michael Branch, Lisa R. Goldberg and Pete Hand (2019), A Guide to ESG Portfolio Construction, The Journal of Portfolio Management.

Exclusion Strategy - The very first strategies for ESG investing were individuated in the exclusion strategies, adopted yet over a hundred years ago, when sustainable finance was interpreted through the exclusion from specific activities and commercial sector, such as weapon, tobacco, and alcohol industries (Lumberg, 2022). In other words, certain firms or even entire sector perceived ethically or substantially hazardous are omitted from the investment universe. Still nowadays, where exclusion strategy is one of the most adopted strategies and it is considered as a basic feature for asset managers and investment companies, the application of exclusion consists in keeping portfolios of investments free from issuers which do not comply with some rules and values established *ex ante*. Exclusion strategy is considered the "original" strategy, also called "negative screening", because it includes a based screen process to omit whichever company that does not respect the predetermined standards (Hauff and Nilson, 2022)[129]. Since this strategy relies on different ethics and beliefs, exclusions can comprehend globally accepted standards like stocks from firms which exploit child labor or even more specific exclusions like shares of companies which promote unclear incentives to the top management. Specifically, literature indicates as "sins stocks" and "sins bonds" equity and debt shares of companies entangled in activities considered unethical or that exploit human weaknesses. However, exclusion strategies can diverge in ways of application. In particular, other than the ethical belief at the base of the selection, what can differ is the degree of exclusion based on the threshold setting. For example, there is the possibility to set a specific barrier which set the maximum threshold allowed for the specific measure in order to declare the company eligible for an investment. This additional methodology is called "open clause" and it is opposed to the "zero tolerance" method, which does not allow to invest in a company having even minimal transgressions on the unwanted area. Hence, usually the exclusion strategy is not dogmatic, this means that if the non-accepted area of the potential object of the investment is under a reasonable threshold or if the entanglement with the unwanted area is minimal and indirect the company is not excluded in most cases (Sandberg & Nilsson, 2015)[130]. Furthermore, a particular declination of the exclusion strategy is the norms-based screening, which literally consists in removing from the potential universe of investments products all the shares that do not fully comply with international accepted norms and standards, such as the Global Compact or the Human

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[129] Janette Carlson Hauff, Jonas Nilsson, Is ESG mutual fund quality in the eye of the beholder? An experimental study of investor responses to ESG fund strategies, 2022.

[130] Sandberg, J., & Nilsson, J. (2015). Do ethical investors want purity or effectiveness? An exploratory study on the ethical preferences of mutual fund investors

Right Declaration published by the United Nation[131]. Generally, institutional investors and asset management companies present more levels of exclusions, since nowadays some of them are *de facto* almost mandatory to be commonly accepted by developed markets as high-quality institution, given that also as mentioned before, some new regulations will take place in 2023 and 2024 according to the EU Action Plan, SFDR and CSDR. The "basics" exclusions, included in almost any ESG policy published by institutional financial actors, are sector of weapons, usually controversial weapons specifically, usurious loans, exploitation of child labor and most recently the tobacco industry. Hence, there are more exclusion that may appear differently in ESG policies, also exclusions may differ among different products or funds in the case of the asset management companies. For this specific category of institution, given the fact that there are multiple possible ESG strategies available to adopt for a diversification in funds offer (Bollen, 2007), the main concerns are which sustainability issue to incorporate and how to deal with them (Daugaard, 2020). Moreover, having a vast differentiated portfolio of sustainable funds may attract more investors with different approaches to sustainability investment, which can result in different mixes of desires to "do good" and "make money" (Semenova et al, 2010). The real deal especially for asset management companies and financial institutions, arises when the discussion centers on how these material issues should be included into the investment-making process. Demand side, research shows mixed preferences (Sandberg & Nilsson, 2015). In order to understand how practically exclusions are reported on funds ESG disclosures, for instance, a technical example of a varied exclusion policy, which is adopted by the sustainable fund Europe Sustainable Equity Fund managed by JP Morgan Asset Management, reported here:

[131] For more details: https://www.eurosif.org/responsible-investment-strategies/

Fig. 6 – European Sustainable Equity Fund (JP Morgan) Exclusion Policy[132]

	THRESHOLD EXCLUSIONS		FULL EXCLUSIONS
VALUES BASED	Electricity generation - oil & gas[2], nuclear: 30% of power production	Conventional weapons: 10% of revenue	Tobacco production
	Electricity generation - Coal: 10% of power production	Gambling: 10% of revenue	Controversial weapons (including white phosphorus)
	Thermal coal extraction: 10% of revenue	Adult entertainment: 5% of revenue	Nuclear weapons
	Tobacco related activities: 10% of revenue	Unconventional oil & gas extraction: 10% revenue	
	Conventional oil & gas extraction [2, 3]		
NORMS BASED[1]			Companies in breach of the UN[4] Global Compact

The chosen fund is the Sustainable Europe Equity Fund because it serves as a good suit to show blended exclusions. In fact, this policy is a good example of mixed exclusions, comprehending both full and threshold-conditioned ones as well as different levels of unwanted sectors. Furthermore, different thresholds for diverse undesired activities are set, in addition was envisioned also a norm-based screening based on United Nation Global Compact.

However, also financial institutions are entitled if not obliged to disclose their ESG policy, which is where the forbidden and limited sectors for investments are reported. For example, the ESG policy disclosure of Gruppo MedioBanca, an Italian banking group, contains the following statements about investments exclusion politics.

[132] Source: https://am.jpmorgan.com/content/dam/jpm-am-aem/emea/regional/en/policies/exclusion-policy/jpmfcvc-jpm-ex-uk-sustainable-equity-exclusion-policy.pdf

Fig. 7 – MedioBanca Gropu ESG Exclusion Policy[133]

The Group does not finance, and does not invest in activities which involve, the production, processing and/or sale of:

- Goods for which there is evidence of the adoption of unsustainable practices in environmental terms, i.e. breaches of the regulations on health, safety and human rights with reference both to workers and to local communities (e.g. use of child and/or forced labour, damage to cultural heritage, etc.) or recourse to bribery and corruption practices;
- Goods deriving from practices that do not conform to the other Specific Financing and Investing Policies, to the scope and area of which reference is made, including but not limited to:
    - Asbestos;
    - Rough diamonds from war zones or which have not been certified in conformity with the Kimberley Process[44];
    - Conflict minerals from war zones;
    - Tropical timbers without the necessary certification, FSC (Forestry Stewardship Council certification) or PEFC (Programme for the Endorsement of Forest Certification) which guarantee compliance with correct forestry management principles, or otherwise deriving from practices that are banned under the terms of the Group's Policy on forestry and use of forest areas;
    - Controversial weapons (or weapons which produce indiscriminate effects and cause undue damage and wounding), unconventional, biological, chemical, nuclear[45] or weapons of mass destruction or components specifically designed for such weapons (dedicated components) and/or that represent an essential component of the functioning of such weapons (essential components);
    - Drift nets longer than 2.5km;
    - Palm oil not certified by the Roundtable on Sustainable Palm Oil;
    - Trade of any species of plant or animal governed by the Convention on International Trade in Endangered Species of Wild Fauna and Flora" (or CITES), not authorized by a CITES permit.

Some elements to be aware of about exclusion strategy are mainly two, firstly exclusion strategy usually can prevent reputational collateral damage for the investor or the asset management company which

[133] Source: https://www.mediobanca.com/static/upload_new/pol/politica-esg_eng.pdf

applies it, the avoidance of directly investing in shady activities keeps for sure the investor free from misunderstandings. Besides, the negative screening process applied for the drafting of the new filtered investing universe may reduce the possibility to diversify the portfolio of investments. In addition, some arguments suggest that sinful companies may suffer from higher capital costs, the main idea is that the market borrowers will be entitled to price more the liquidity for a company that does not follow ESG practices, since it is bearing more risk than others ESG compliant companies. This argument is being object of a lot of studies and is still being tested, as today there is no consensus among research on sustainability performance and cost of equity or cost of debt (Gonçalves et al, 2022)[134]. Even if in theory shareholders can find some reason to price the ESG performance of the firm in different ways, such as claiming lower perceived risk and consequently higher and low-volatile cash inflows, the state of empirical studies is mixed and still unclear (Gillan et al, 2021); the scenario is composed of studies indicating negative effects links between sustainability and cost of equity (Sharfman and Fernando 2008; El Ghoul et al. 2011, 2018; Chen et al, 2023, La Rosa & Bernini, 2022; Gonçalves et al, 2022) and for cost of debt (Goss and Roberts 2011; Oikonomou et al. 2014; Du et al. 2017), and on the other side there are several studies indicating a positive relationship between cost of capital and cost of debt and sustainability (Magnanelli and Izzo 2017; Menz 2010; Khanchel & Lassoued 2010; Chouaibi et al. 2021; Gonçalves et al, 2022) or even there are inconclusive studies such as (Salama et al. 2011; Humphrey et al. 2012; Gregory et al. 2014; Johnson, 2020).

Inclusion Strategies - On the other hand, opposite to exclusion, there are inclusion or positive screening strategies, which consist in the active inclusion of selected securities in investment portfolios, always picking from an investment universe which considers at the foundation the environmental, social and governance pillars adopted from the issuers of those securities. This approach is aimed at the inclusion of whichever firms that consider in their operativity processes the three ESG pillars. For example, an investor which wants to invest in the energy sector will start from gathering information about all the industries in the sector. Then, through the positive screening process which needs *ex-ante* to be clear about the investment objective, the investor will pick the companies respecting certain features, for instance, those firms which have undertaken actions to aid the access to clean energy in underdeveloped areas. This

[134] Gonçalves TC, Dias J, Barros V. Sustainability Performance and the Cost of Capital. *International Journal of Financial Studies*. 2022

process can be performed through different inclusion strategies, whose differs in the way they are structured to reach the final investment universe or securities selection. One of the most used positive screenings for the structuring of an inclusion strategy is the so-called "Best in class" approach. Hence, the best-in-class approach is viewed as a variation of the inclusion strategy, where firstly positive screening is performed separately in each industry, also aiming at supporting ESG competition to strengthen best practices among companies in the same sector (Gougler & Utz, 2020). Connecting to the before mentioned exclusion strategy, the inclusion strategy may imply that a generally excluded company could still be invested in, given that the selected firm was resulted among the most environmentally responsible ones within its industry after the screening (Höhnke & Homölle, 2021). The central screening process performed in best-in-class approach and also in other declinations of inclusion strategy often requires an analysis of each issuer, resulting in being resource-demanding. This factor might help explaining why this strategy is less commonly applied (Eurosif, 2018), with some exceptions such as France SRI market (Sciarelli et al, 2021)[135]. However, recalling also prior arguments about ESG data availability and robustness, several empirical studies show how a sufficient level is not reached yet, but also thanks to increasing engagement a lot of steps forwards were done. In fact, ESG-data are more readily available and additionally stock evaluation according to different ESG-metrics is easier to perform (De Spiegeleer et al., 2021). Henceforth, the identification process allows to classify all companies in a specific industry and divide them into leaders and laggards, this step may be carried out without company-specific analysis. This is something that might foster the rate of ESG portfolios engaging in the inclusion strategy. (Hauff & Nilsson, 2022). In synthesis, this approach consists in actively selecting from a predetermined sample the companies whose ESG performance are the best in respective sector of activities[136]. One of the points of strength about Best-In-Class (BiC) strategy is that allows the comparison of companies starting from multiple different industries and provides a global framework of companies based on their active engagement for a sustainable development. Even in this case, there are different subcategories representing multiple ways to implement the strategy. The "Best-in-Sector" (BiS) declination consists in identifying the companies in top tier rankings regarding ESG behavior sampled from ESG scoring for each sector or industry. The "Best-in-Universe" (BiU) instead takes into consideration only the companies with better ESG scores or performances in a global investment universe. Lastly, the "Best in effort" or

[135] Mauro Sciarelli, Silvia Cosimato, Giovanni Landi, Francesca Iandolo (2021), Socially responsible investment strategies for the transition towards sustainable development: the importance of integrating and communicating ESG

[136] For more details: https://www.eurosif.org/responsible-investment-strategies/

“Best in progress” is a strategy that awards companies which made the best efforts in order to strengthen their ESG behavior and have proven substantial improvements in their ESG performance over a determined timespan. Given the fact that this attitude can generate a positive impact and may support fastest spreading of best practices, this former subcategory may be the most effective in bringing out some positive changes (Gosling, 2019)[137]. From a financial point of view, the Best-in-Class approach generally allows to build a portfolio with a good degree of diversification, since targets for investments are selected among different areas and industries. However, Best-in-Universe subcategory has a direct and evident lack, substantially not permitting the comparison of all sectors and industries as happens in BiC. In addition, there is evidence that some BiC portfolios may not diverge significantly from other non-ESG portfolios, this fact is influencing some investors to look most often at indexes and benchmarks coherently with their application, in order to implement a Best-in-Class approach (Eurosif, 2018)[138]. Besides, there are also examples in literature pointing at a possible advantage that the application of BiC strategy may offer. Recurring argumentations are the positive impact of investing in companies with high level of social responsibility which prevails over the disadvantages of excluding from the investment strategies shares of unwanted companies. This may offer investors branded solutions including both “doing good” and “doing well” features by adopting a BiC method for the construction of the desired portfolio (Statman & Glushkov, 2018)[139]. In addition, further argumentation in favor of Best-in-class approach insists on the fact that exclusion approach has become outdated and obsolete, hence supporting even more the positive effect on firm’s behavior that may bring out a huge spread of best-in-class adopters (Dawkins, 2018)[140]. Additionally, it is not rare to observe mere exclusion and best-of-class approaches conjoined. For example, some ESG funds have engaged divestment for some critical problems and after having satisfied most asked standards, employed best-of-class approach subsequentially. Indeed, exclusion has been used when issuer behavior strongly violates international standards norms, such as cluster bomb and land mine production, human trafficking or in general globally accepted protocols such as United Nations rights papers. Those matters are generally considered as absolutes pillars, but evidence shows that where the void around international consensus on ethical standards is bigger, results are less coherence between

[137] Source: https://medium.com/swlh/the-importance-of-the-best-in-class-approach-to-sustainability-46a28b45004e
[138] Source: https://finanzasostenibile.it/wp-content/uploads/2019/01/European-SRI-2018-Study.pdf
[139] Meir Statman & Denys Glushkov (2018), The Wages of Social Responsibility.
[140] Cedric E. Dawkins, Elevating the Role of Divestment in Socially Responsible Investing, 2018.

Best-in-class engagement and divestment strategies. (Dawkins, 2018). The example of the Sustainable Europe Equity Fund seen earlier, shows that it follows a Best-in-class approach:

Fig. 8 – JPM Sustainable Europe Equity Fund – ESG Approach[141]

Investment objective

The Fund aims to provide capital growth over the long- term (5-10 years) by investing at least 80% of the Fund's assets in the shares of European Sustainable Companies (excluding the UK) in any economic sector, or companies that demonstrate improving sustainable characteristics. Sustainable Companies are those that the Investment Manager believes to have effective governance and superior management of environmental and social issues (sustainable characteristics).

ESG Approach

Best-in-Class

An investment style that focuses on companies / issuers that lead their peer groups in respect of sustainability performance.

Thematic Approach - Moving on another inclusion strategy declination, the sustainable investments may be focalized particularly on some sustainability challenges and opportunities, those ESG investments strategy is called "thematic approach". Usually, institutional or retail investors interested in thematic approaches investments perform research for issuers which can provide concrete solutions to those sustainability challenges, through the development of their product or services. Thematic investments aim to gain profits from future macro trends, and it is based on the confidence that financial market prices adequately the implications of the sustainable development in the long run. The structural base that holds strongly the thematic investing is the growth potential given by specific drivers, such as improving technology, lower costs of production and development and lastly, regulatory changes. Thematic investing is also characterized as a top-down investment strategy that goes all-in on capitalizing on opportunities created by macroeconomic, geopolitical, and technological trends. These trends usually are not short-term turnarounds, but more often long term, structural and deeply transformative variations. These thematic shifts may change several aspects of the market, few examples are the growing digital economy, smart interconnected cities, the food sector revolution, clean and green efficient energy, as well as the upcoming developing sector of disruptive technology, such as fully automated one. Thematic shifts are the main driver that generate the perceived urgence of new products, so highly agile and smart companies started focus on certain themes; this trend has sharply increased, as demonstrated by the exponential growth of

[141] Source: https://am.jpmorgan.com/gb/en/asset-management/per/products/jpm-europe-ex-uk-sustainable-equity-fund-c-net-accumulation-gb00b235hp90#/overview

the adopters of this strategy over the last five years. (Eurosif, 2018). Additionally, some data brokers and researchers state that effects of these macrotrends already impacted thematic and other investment portfolios[142]. As mentioned above, thematic investment is often viewed as an incorporated ESG growth investment style, which may go in suffering state in times of high inflation and high interest rates, basically the macroeconomic scenario of second half of 2022. Besides, companies in the cyclical consumable sector, such as sustainable food and water, can be valued as "value" companies, which usually are able to hold the price positioning of the shares being more defensive. Hence, this kind of securities may hold well against the market and may be the right piece to complement the base growth pillar of the investment strategy. Furthermore, thematic investing strategies could potentially help investors in identifying whose trends may have a strong financial impact in the future. Also, retail investors should start to rebalance the weights in their portfolios amongst mobile assets such as green equities and bonds to be ready-to-go for better long-term environmental risk-adjusted return potential. (Shea, 2022)[143]. A clear example of thematic investments, not precisely ESG though, are the information technologies funds whose first appearance is set during late nineties and started to grow in number during the "internet bubble", hence around the first years of 21st century. The information technology sector was considered fairly poised for growth (Popp & Czupryna, 2021) but the financial bubble popped and lots of those thematic funds were closed due abnormal negative performances. Relative to ESG investing, a thematic approach application is for example an investment focusing on the sustainability of the energy sector focusing on renewable energy, trying to set the position to gain in the future an advantage on the global energy sector, that yet shows signs of future preference towards decarbonized and clean energy offer. Another valid example of thematic investments is surely the sector of social or affordable housing investing, which consists in investing in the development of buildings that, after proper capital expenditures, will be designed to be rented at population falling between some levels of low-income brackets (Scanlon et al, 2014)[144]. Usually, social housing investments happen through funds, which are widely used in real estate sector as financial vehicle due the costs structuring that favors both investors and asset management company. Eventually, real estate sector is often characterized by high amount of capex costs and huge liquid resources are needed, so funds are surely one of the most appropriate financial instruments for real estate sector.

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[142] Source: https://www.msci.com/our-solutions/indexes/thematic-investing
[143] Source: https://www.schroders.com/en/hk/retail-investors/insights/managers-views/is-esg-the-only-way-to-capture-thematic-investment-opportunities/
[144] Kathleen Scanlon, Christine Whitehead, Melissa Fernández Arrigoitia, Social Housing in Europe, 2014.

Generally, thematic investment finds its biggest downside in scarce diversification of the portfolio, since the mass concentrates in a specific theme or industry. Furthermore, thematic investment relies strongly on macroeconomic positions and trends, this is not clearly a negative fact, because the strategy may benefit in the long run concentrating in those trends, but it is surely a feature to pay attention on, since a reliable analysis of macroeconomic situation is indeed required at the base of the approach.

Impact Investing – Impact investing strategy can be identified in an investment which finds the main objective in maximizing the social, environmental impact return among the merely research for financial return, which of course is intended to be sought, but it becomes tied up with the impact return (de Jong & Rocco, 2022)[145]. The concept is tied up with the before mentioned "blended value" in which the definition of socially responsible investment should embody both the seek for financial and social return (Emerson, 2003). The "objective function" concept is reconsidered, the object of maximization is not only the mere financial return but also and even more considered is the social return that the investment intended to achieve in its plans. The impact investment underlying idea is orienting capital flows towards innovative companies, which usually apply disruptive business models to achieve their goals and have explicitly declared the willingness to generate positive social, environment and governance impacts for the society as whole; or reducing social and environmental costs in the society through the practice of investing (Berg and Binsbergen, 2022)[146] According to the general definition of impact investing given by the Global Impact Investing Network (GIIN), three main elements should always be present in impact investments, which are intentionality, additionality, and measurability (GIIN, 20079[147]. Firstly, intentionality means that the social impact is not a hidden secondary effect of the activities related to the investment, but indeed the scope and the objective of generating a social impact is sought at the base of the investment strategy. Next, the concept of additionality regards both where the investments intervene, usually in sub capitalized areas, and the activities carried out, which usually are out of range for other investors, such as microfinance sector or in emerging markets for example. Lastly, measurability feature implies that social impact that the investment is willing to generate not only has to be decided ex-ante, but also *ex post* results need to be measurable, to verify if social impact was efficiently achieved as intended (GIIN, 2019)[148]. Eventually, impact investment may embody downsides, mainly related to the risk in investing in disruptive activities,

[145] Marielle de Jong, Steve Rocco (2022), ESG and Impact Investing.
[146] Jonathan B. Berg, Jules H. van Binsbergern (2022), The Impact of Impact Investing.
[147] Source: https://thegiin.org/impact-investing/need-to-know/#what-is-impact-investing
[148] Source: https://www.thegiin.org/characteristics/

basically capital ventures activities where huge mass of liquidity fluctuates towards early stage and small-cap firms, much more riskier targets than consolidate and traditional business models, since it is globally recognized that the early stage especially in exchanged stock market firms is the most dangerous period but potentially the most remunerative for investors if firm survives its early life. For these reasons, it's common that big investors in impact investing are institutional investors, typically moving large masses and can afford to dedicate parts of the liquidity at disposal in alternative projects; foundations, which by construction are devoted to specific sustainability missions and objectives and, lastly, former or active entrepreneurs as private investors, usually driven by personal belief and motivations. Those categories of impact investors actively search for the achievement of a social goal; hence, they can be defined "socially motivated"; on the other hand, "socially neutral investors" are totally indifferent to social impacts of their investments. Besides, historically also "socially neutral investors" unintentionally contributed to social impact investing, this is the case of the development of telecommunications companies in emerging countries, even if they were interested only on financial returns, it happens that they also achieved a social impact (Brest and Born, 2013)[149]. Though, what really matters are *ex ante* intentions. Relatively to asset management firms, private equity and private debt funds are the financial instrument preferred for impact investing that receive the largest capital allocations, while traditional growth equity and venture capital are the most widely adopted in mutual funds sector regarding impact investing (Barber et al, 2021)[150]. Unfortunately, the large majority of socially neutral investors, which are attracted only by financial returns, seem to be not engaged by impact investing strategy. To foster the raise of impact investing, respected institutions which manage those funds or even the issuer of green financial products may indicate to those dubious investors that considerations for a sector or category of green financial products may be worth (Brest and Born, 2013). However, it is remarkable how in this era financial markets are considering much more the interrelation between financial, environmental, and social returns, indicating a clear shift towards in considering those impacts. The spreading of impact investment is also tied with the increasing risk of "impact washing" and this fact can be a strong hinderance to the development of this strategy (Findlay and Moran, 2019)[151]. In addition, the fact that many sustainability-oriented investors rely on ESG ratings data for the evaluation of their sustainable investments is certainly useful and surely have an immediate positive impact on the public opinions, though, focusing and relying too much on ESG

[149] Paul Brest, Kelly Born, (2013.) When Can Impact Investing Create Real Impact?
[150] Brad M. Barber, Adair Morse, Ayako Yasuda, Impact investing, Journal of Financial Economics, (2021).
[151] Findlay S, Moran M (2019) Purpose-washing of impact investing funds: motivations, occurrence and prevention.

data does not always mean enforcing best practices and does not indicate a certain positive impact of the investment (Busch et al, 2021)[152].

Engagement and Voting – The engagement and voting approach, which is different from the simple engagement that an investor may embody in its positive attitude towards sustainable investment, mainly differs from other strategies, not for the goals but for process applied, which is quite specific and requires some condition to be implemented successfully. All previous described approaches are not requiring any pre-condition in the investment structure; those strategies can be followed by any investor, retail or institutional, and implemented by whichever asset management company is interested in doing so on their products that formally respect the right features of course, regardless the difference between class of actives. Engagement & Voting approach (E&V) instead is not so flexible, strong engagement and majority ownership are key words, at the same time, institutional investors, which are important participants in corporate equity and thus are often referred as key actors in corporate governance (European Commission, 2012)[153] are key actors of the process. This approach does not refer exclusively to the investment process carried out, but it is tied up directly with the behavior of investors which hold the majority of company' shares. Precisely, the engagement consists in using actively the dialogue, the right of voting and other forms of active ownership as result of participation in capital stock. The main objective is to influence the top management of the firm in order to push them towards better environmental, social and governance practices over a long-run horizon. Investors, retail or institutional, who decide to adopt this active ownership practice aim to obtain some sustainability objectives relative to ESG performances, so relatively to the three main pillars of ESG. Truthfully, in E&V dominant actors are institutional investors or corporate, since it is most probable to find big stakes held by institutional investors and corporations rather than single retail investors, at least in the European framework (Griffin, 2020)[154]. Intended goals can be, for example, reducing the environmental impact of the firm for the E pillar, incrementing the diversity and the inclusion for the S pillar, and promoting tax transparency and CSR and ESG reporting for the G pillar. Hence, as mentioned before, institutional investors, acquire an important status in the process of E&V strategy, since they are called to dress the suit of the supervisor, being invested with the duty of pushing the investee companies' top management towards more sustainable practices (EFAMA,

[152] Busch, T., Bruce-Clark, P., Derwall, J. *et al.* Impact investments: a call for (re)orientation. *SN Bus Econ* 1, 33 (2021)

[153] Source: https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2012:0740:FIN:EN:PDF

[154] Griffin C.N. (2020) Margins: estimating the influence of the Big Three on shareholder proposals.

2018)[155]. Generally, there are three ways to carry out an Engagement & Voting strategy, based both on the hierarchical position occupied by the investor and the level of engagement that he wants to put in play. Hence, three common degree of application that scale up with the intensity of active ownership that the investor wants to engage. Those diverse typologies of application are Collaboration, Soft Engagement and Hard Engagement. Literature identifies hard engagement practices also as shareholder activism or active ownership. Collaboration refers to the action of signing, along with other institutional investors, in support of initiatives and programs that help fostering the attention of the board over ESG aspects. Usually, collaborations initiatives can be signed and sustained regardless the asset in portfolios; this mean that also actors as ONG or potential investors can contribute to the effort in signing those initiatives. In practice, collaboration is a way to engage also external potential and illustrious signatory that may bring a positive shift towards the conclusion of the initiative. Besides, unless very important and institutional personalities are involved, collaboration practices are often too soft and have negligible implications. More impactful instead are the other two typologies, soft and hard engagement, which are relative to whichever investor owns shares and the type of ownership the investor is representing. Practices of "soft engagement" include conference calls, drafting and production of sustainability relations and recurring meetings between representatives of the business and investors. Instead, "hard engagement" practices most often are put in place in form of active participation in shareholders' meeting and exercising the right of voting on the items on the agenda, presentations of resolutions. The main difference between hard and soft engagement, immediately visible, is that those latter practices imply inevitably the ownership of stocks.[156] In addition, hard engagement practices require altogether some influential power, such as a relative majority capital share, since higher the influence higher the probability of obtaining a concrete result in shareholder's meeting. Moreover, hard and soft engagement promoters may install a direct or indirect relationship with the company directors; while the first indicates that the investor is participating in first person at the meetings, the indirect way usually implies an intermediary, usually an asset management company or an asset manager that takes the mandate from the investor as promoter of the ESG initiatives. [157] However, soft and hard engagement should not be viewed as rigid alternatives decided *ex-ante* by the investor and then kept all along the management phase of the investment, but in some cases, it is observable a process

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[155] Source: https://www.efama.org/sites/default/files/files/Asset%20Management%20Report%202021_3.pdf

[156] Elaboration from: https://www.borsaitaliana.it/finanza-sostenibile/news/forum/engagement.htm

[157] Source: https://finanzasostenibile.it/wp-content/uploads/2015/06/Manuale_Engagement_su_temi_di_sostenibilita_sito_web.pdf

of escalation, which basically may imply a holistic approach, meaning a change of directions *in medias res* depending on the results obtained previously. The “process of escalation” describes the next steps agenda if the target company does not comply, especially if the investor is monitoring a soft engagement program, starting from a minority shareholder position. In fact, if the target company does not comply properly, an investor with an appropriate firepower might think of incrementing its position and start to put more pressure on the company’s heads with an hard engagement approach. Finally, if the intended result is not achieved, the way out is of course the divestment and may imply, even worse, the exclusion of that target from future approaches. However, there are some cases in which the legitimacy of the shareholder does not depend on the number of stocks possessed, the institutional and mediatic resonance of some investor might value more than the number of shares in possession (Wagemans et al, 2018)[158]. There are also other factors pushing the demand of engagement strategies, such as the actual insufficiency of public institutions and government regulations to adequately cover advanced public welfare and resolve market failures (Lund, 2022)[159]. Another factor that requires an analysis in this context, is the kind of ownership in listed company. Where it is indeed true that in the United States the majority of listed realities are public companies, thus, much more prone to takeovers and majority share acquisitions, in Europe the structure of public equity ownership is rarefied, even if there are evidence that the proportion of common ownership is moving towards more similarities with the US-based indicators (Rosati et al, 2020)[160]. As before mentioned, the existing lack of consensus on regulations strikes also best practices that should be followed in the relationship between asset management companies, that acts as intermediary, and the target firm. At this regard, the EFAMA, the European Fund and Asset Management Association, disposed a referential framework based on principles and recommendations that should be followed. The draft, called “Stewardship Code” is based on six principles, which are:

1. **Transparency:** The engagement policy adopted by the asset management company should be free to access for the public, to explain how they will exercise administration responsibilities.

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[158] Frank AJ Wagemans, CSA (Kris) van Koppen & Arthur PJ Mol (2018) Engagement on ESG issues by Dutch pension funds: is it reaching its full potential?, Journal of Sustainable Finance & Investment, 8:4, 301-322, DOI: 10.1080/20430795.2018.1485379

[159] Lund DS (2022) Asset managers as regulators. U Pa L Rev 171, 2022 (forthcoming), USC CLASS Research Paper No. CLASS22-12, USC Law Legal Studies Paper No. 22 – 12.

[160] Rosati N, Bomprezzi P, Ferraresi M, Frigo A, Nardo M (2020) Common shareholding in Europe. EUR 30312 EN, Publications Office of the European Union, Luxembourg, 2020, https://publications.jrc.ec.europa.eu/repository/handle/JRC121476.

2. **Monitoring:** Participated companies should be constantly monitored to determine when it is necessary to enter on an active ownership dialogue.
3. **Action:** Plans followed by asset managers should follow clear guidelines indicating how and when are going to intensify engagement on participated firms.
4. **Collaboration:** It's important that asset managers consider to involve also other investors to increment the effectiveness of their engagement action.
5. **Responsibility:** Asset managers should take the responsibility of their actions exercising actively voting rights, indicating objectives that are in line with activities carried out by the firm.
6. **Sharing:** It's highly recommended for asset managers to share with the public their results about their engagement and voting activities and their results in the dialogue with participated firms.[161]

Trying, to fill the normative gap at least partially, the European Union wanted to give a normative impulse to the engagement with the entry into force of Shareholders Rights Directive II in 2017. The directive implies that for institutional investors, asset management companies and proxy advisors is mandatory to adopt its own engagement policy when they act as shareholders in listed firms in regulated markets of EU. The aim of the directive is to reduce short termism and reduce excessive risk-taking working on the long-term engagement of shareholders and pushing on the transparency in monitoring issuers about ESG themed issues.[162] In conclusion, it's clear that public sector is unable to address the financial world to more sustainable solutions without incurring in some complications, hence, efforts to drive the shift towards sustainability requires the alignment of all relevant entities in finance: public, private, national, supranational and multilateral actors (Balp & Stampelli, 2022). [163]

Conclusions

The ascent of ESG in finance had huge several complications for the sector and it is expected to change even further some structured processes in financial reporting and in investing analysis. Next step of evolution about ESG framework consist in building a strong database about ESG data, to reach a consistency in ESG ratings and a uniform instrument of valuation about ESG practices carried out from

[161] For More details: https://www.efama.org/sites/default/files/files/EFAMA%20Stewardship%20Code_FINAL.pdf
[162] For more details: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32017L0828
[163] Balp, G., Strampelli, G. Institutional Investor ESG Engagement: The European Experience. *Eur Bus Org Law Rev* (2022). https://doi.org/10.1007/s40804-022-00266-y

companies. Relative to the different approaches about ESG investing strategies, asset management companies and investors should be careful about riding the wave of the sustainability without effectively considering the contribution they should give about the evolution of ESG and CSR. Actually, the main risk at the horizon is that the strong sustainability investment demand will vanish in the air as other trends; it is very important that all relevant financial actors conjoined foster the effort towards sustainability transition.

Chapter 3 – ESG Benchmarks Financial Performances

Introduction

The sharp growth of the demand for ESG financial products and the increasingly demanding regulation about sustainability of the financial framework have inducted most of asset management companies to introduce more sustainable funds and ETF; on the other hand, institutional and private investors, were induced to shift more masses of liquidity into sustainable and responsible investments. Having an overall view about ESG performances is very important, since socially neutral investors, which are still the majority, should be more attracted by products with good performances (Brest & Born, 2013). This chapter will analyze some of the most important ESG indexes issued by the one of the major financial data providers, aiming to establish if performances of those sustainable indexes were comparable with regards to their benchmark. The analysis focus on S&PDJ, and MSCI sustainable indexes, assessing if there is possible to observe a substantial difference between the performances of sustainable indexes and their parent indexes in a 10-year period.

3.1 – Introduction of Benchmark: S&P500 Index

Among the multitude of indexes and benchmark proposed by different data providers, without any doubt the most used and common is the S&P500, whose market ticker is SPX or GSPC. This index began to operate informatically in 1957, keeping the track records of most influential 500 firms quoted in Wall Street (NYSE and Nasdaq markets). Stocks included in the S&P500 represent around 80% of the total capitalization of the market and includes Apple, Microsoft Corp, Amazon, Berkshire Hathaway, Johnson & Johnson, JP Morgan Chase, Facebook, Exxon Mobil, Alphabet C e Alphabet A. Numerous funds indicate the S&P500 as selected benchmark, however, it’s near to impossible to replicate exactly the portfolio of 500 stocks, since it would imply cumbersome transaction costs. Many asset managers replicating S&P500 index usually exploit synthetic replication, a system of complex algorithms which

aims to replicate the index performance selecting less than 500 stocks. Companies which are selected to be part of the index usually with the method of floating capitalization, implying that the main parameter is the part of capital that is exchanged in the market. The S&P500 differs from other main indexes for the screening method, for instance, the Fortune500 index ranks companies for revenue, without distinction between listed and non-listed companies; another example is Dow Jones index, which follows a price-weighted screening method, meaning that it assigns higher weight to higher priced stock.[164]

The S&P500, is often referred to as “the market”, due the fact that manyfold market and financial actors consider it as a good indicator of “financial market’s health “, even if it doesn’t mean that S&P500 is always the best benchmark for evaluating a portfolio performance (Ferringer, 2021)[165]. The diversification of S&P500 is granted by the holding of more than 500 different stocks (more than 500 because some huge important listed companies, such as Alphabet, have more than one class of shares available for trading). However, it’s important to remember that S&P500 is market-cap weighted, so performances of the index are directly linked with gigantic cap companies having the largest weighting in the pool of assets; moreover, the S&P500 represent only a small part of the market, not including mid and small cap equity, fixed-income or commodities, which are all asset that can be reasonably found in a good and diversified portfolio. To describe the top 25 components by market cap of the S&P500 it is necessary to observe the weightings of one ETF (exchange traded fund, an investment product that is not actively managed and replicates a predetermined benchmark) that replicates the S&P 500 index, since the exact weightings are not available from S&P indications. Thus, here are reported the weights of the oldest ETF tracking the S&P500 performances, holding more than $380 billion in AUM and presenting high trading volumes. This ETF, which market ticker is SPY, is called SPDR S&P 500 and, although its weightings might not be the exact same as the index, the largest 25 components of this fund at are:

Chart 1 – Largest 25 components of SPDR S&P500

Company	Weight
Apple Inc.	6,40%
Microsoft Corporation	5,43%
Amazon.com Inc.	2,66%
Alphabet Inc. Class A	1,74%
Berkshire Hathaway Inc. Class B	1,63%
Alphabet Inc. Class C	1,56%
NVIDIA Corporation	1,49%

[164] Elaboration from: https://www.borsaitaliana.it/notizie/sotto-la-lente/sp500.htm

[165] Source: https://www.etf.com/sections/blog/best-portfolio-benchmark

Tesla Inc	1,40%
Exxon Mobil Corporation	1,40%
UnitedHealth Group Incorporated	1,33%
Johnson & Johnson	1,29%
JPMorgan Chase & Co.	1,21%
Visa Inc. Class A	1,11%
Meta Platforms Inc. Class A	1,00%
Procter & Gamble Company	0,98%
Home Depot Inc.	0,95%
Chevron Corporation	0,94%
Mastercard Incorporated Class A	0,93%
Eli Lilly and Company	0,79%
Merck & Co. Inc.	0,78%
AbbVie Inc.	0,76%
Bank of America Corp	0,73%
Pfizer Inc.	0,72%
Broadcom Inc.	0,70%
Coca-Cola Company	0,69%

Source: (Data updated on 27 January 2023) https://www.ssga.com/us/en/intermediary/etfs/funds/spdr-sp-500-etf-trust-spy

To be eligible for entering in the ranks of S&P500 index, companies must fulfill some preliminary requirements, which are compulsory to be met only to be considerate as a potential participant; needless to say, these requirements are necessary but not sufficient. Specifically, those requirements are:

- A market cap of at least $14.6 billion
- Must be a U.S. company
- Company's stock must have a public float of at least 10% of its outstanding equity shares
- Positive earnings over the most recent four consecutive quarters summed together
- A profitable earnings report for the company's most recent quarter
- Liquidity requirements. [166]

In addition, the weights of the S&P500 ETF's capitalization by sector are composed as follows:

Sector	Weight
Information Technology	26.67%

[166] Source: https://www.spglobal.com/spdji/en/indices/equity/sp-500/#overview

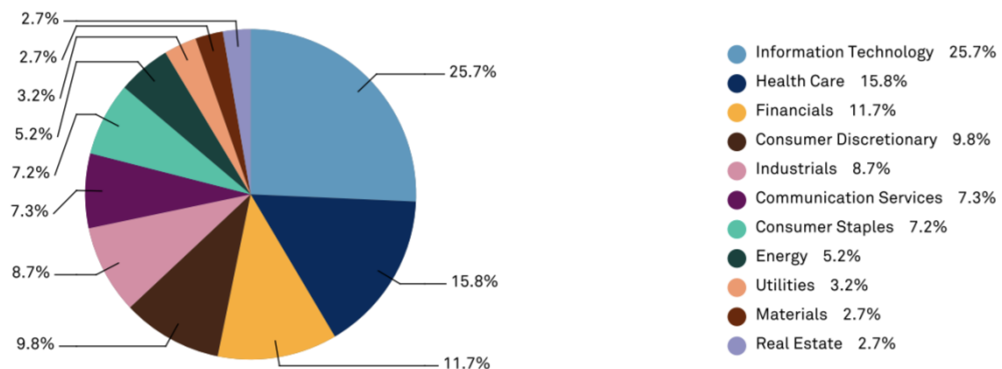
Health Care	14.64%
Financials	11.65%
Consumer Discretionary	10.58%
Industrials	8.33%
Communication Services	7.88%
Consumer Staples	6.64%
Energy	5.14%
Utilities	2.93%
Materials	2.77%
Real Estate	2.77%

Source: (Data updated on 27 January 2023) https://www.ssga.com/us/en/intermediary/etfs/funds/spdr-sp-500-etf-trust-spy

However, official weights by sector provided by S&P500 differs a little bit from weights proposed by the the issuer of S&P500 SPDR ETF. The official weights of S&P500 by sector at 31 December 2022 are set as shown in Figure 9.

Fig. 9 – Sector Breakdown of S&P500 weights

Sector* Breakdown



*Based on GICS® sectors

The weightings for each sector of the index are rounded to the nearest tenth of a percent; therefore, the aggregate weights for the index may not equal 100%.

(Source: https://www.spglobal.com/spdji/en/indices/equity/sp-500/#overview, Factsheet as 31 January 2023.)

Some considerations about the construction of the S&P500 index needs to be pointed out. First, as also mentioned before, the S&P500 index is very aggressive in its composition, being formed almost exclusively by large cap firms' stocks, not considering *a priori* mid-cap and small-cap equities.

Furthermore, the index does include ant king of debt product, such as obligations and bonds, keeping out from the valuation the world of fixed-income and debt financial products. So, in general, S&P500 is considered a good performance index for large-cap equites; however, the fact that the index is changed and renewed discretionally by the specific index committee, considering events like bankruptcies, M&A and spin-offs or carve-outs, surely helps it to be more dynamic and as representative as possible for the actual market conditions (Geppert et al, 2011)[167] . In the last decade, the diffusion of S&P500 related passive financial products has grown substantially due high demand and good performance of the index. In addition, its importance as a benchmark for active managed funds has been discussed for long time in economic literature; while in some cases the comparison may have sense, some studies debate the "naiveness" of comparing an active managed fund to S&P500 or generally their benchmark performances (Ikenberry et al, 1998)[168].

3.2 – Main Core S&P500 ESG Indexes

In 2019 the S&P Dow Jones Indices, the data provider issuer of one of the most famous indexes, announced the launch of the sustainable version of the world-renowned S&P500, which takes the name of S&P500 ESG Index, an innovative index aligned with main environmental, social and governance issues, in response to the ever-increasing demand of sustainable benchmarks. S&P Dow Jones is indicated as a pioneer in the ESG indexing, since in 1999 launched the Dow Jones Sustainability World index, one of the first world sustainability benchmarks. In addition, S&P-DJ did not limit to the launch of the brand-new S&P500 ESG Index, but the data provider company issued some specific sustainable benchmarks on regional basis and some other country-specific ESG indexes. In particular, the principal pillars of S&P ESG indexing are Core ESG, ESG Climate and Thematic ESG for equity products[169]. Differently to the standard S&P500 Index, the ESG version differs slightly in composition by sector and by single constituents. This principally reflects the different methodology construction of the index, which includes multiple ESG features described in previous paragraphs, such as full and threshold

[167] Geppert, J.M., Ivanov, S.I. & Karels, G.V. An analysis of the importance of S&P 500 discretionary constituent changes. *Rev Quant Finan Acc* **37**, 21–34 (2011). https://doi.org/10.1007/s11156-010-0193-0

[168] David L. Ikenberry, Richard L. Shockley, Kent L. Womack, Why active fund managers often underperform the S&P 500: The impact of size and skewness, 1998.

[169] For more details about single ESG indexes: https://www.spglobal.com/spdji/en/index-family/esg/

conditioned exclusions, and norm-based exclusions. Here is reported the synthetic process used by the committee to select the S&P500 ESG constituents:

- *Constituents are selected among S&P 500 stocks.*
- *Companies non respecting United Nations Global Compact (UNGC), resulting in low scores, are directly excluded from the eligible universe.*
- *Are excluded from stock selection companies which business is involved either in extracting or generating electricity from thermal coal. The accounting for this activity must be greater than 5% of their revenue for the direct exclusion.*
- *Are excluded from the evaluation and selection companies that are directly or indirectly involved in any ownership case, or companies that possess more than 25% of another company stakes which:*
    - *Produce Tobacco*
    - *Have Tobacco sales accounting for greater than 10% of their revenue*
    - *Have tobacco-related products and services accounting for greater than 10% of their revenue*
- *Are excluded from the process of evaluation and selection companies that are involved directly or indirectly in any ownership case, or possess more than the 25% stake of another company which produces:*
    - *Cluster weapons*
    - *Landmines (anti-personnel mines)*
    - *Biological or chemical weapons*
    - *Depleted uranium weapons*
    - *White phosphorus weapons*
    - *Nuclear weapons*
- *Companies that are classified as non-ESG Compliant are not included in the universe for selection.*
- *In addition, companies falling in the worst 25% of S&P ESG score by GICS Sectors, are excluded from eligible universe.*
- *After the creation of eligible universe, the selection of stocks is structured as follows:*
    - *Starting from each GICS group, companies which exhibit best ESG scores are selected, until 65% of the universe's float-adjusted market capitalization (FMC) is reached.*

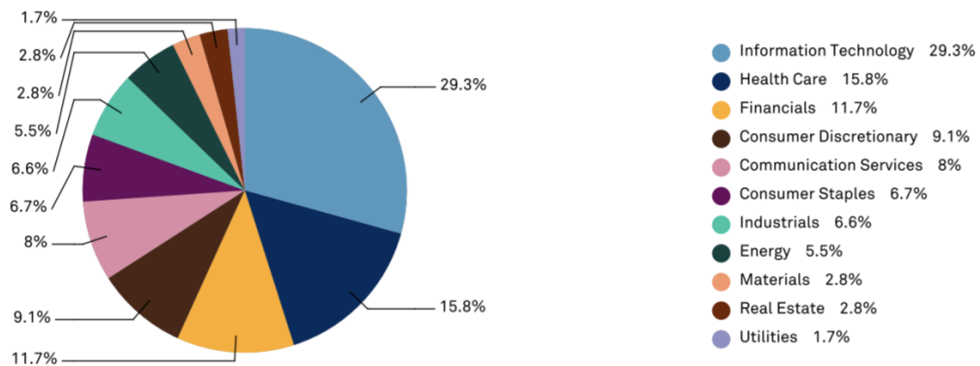
- *For each GICS industry group, existing companies which are ranked between 65% and 85% are picked to get as close as possible to possibly reach the target 75% of FMC.*
- *If after the first round of selection, the combined float-adjusted market capitalization of selected companies is not above the 75% FMC target, companies not already selected from the eligible universe may be included starting from the best ESG Score excluded ones to get as close as possible to the 75% FMC target. This process will stop when the addition of the next eligible company would result in the total FMC of the relevant GICS industry group moving further away from the 75% FMC target.*

- *Nex Index constituents are weighted by float-adjusted market capitalization.*
- *The index rebalances annually.*[170]

Along with some common features in ESG selection criteria, the process structured by the S&P500 is quite articulated, and implies the evaluation of the ESG score, which derives from the analysis of ESG disclosures published by companies; sometimes data providers which produce ESG scorings require some additional documentation that may be not public. In this case, the ESG Scoring of constituents is provided by Sam, the unit of RobecoSam specialized on ESG valuation, benchmarking, and indexing.

The composition of the S&P500 ESG Index by sector is represented in fig. 10:

Fig.10 – Sector Breakdown of S&P500 ESG



[170] For more details: https://www.spglobal.com/spdji/en/indices/esg/sp-500-esg-index/#overview, pp 1 of S&P500 ESG index factsheet

Source: https://www.spglobal.com/spdji/en/indices/esg/sp-500-esg-index/#overview, Factsheet as 31 January 2023.

It is immediately visible that this distribution is slightly different from the one in the original index. Firstly, the information technology sector gains 3,6% respect to the standard S&P500; since it is stated in the selection rules that the weights should resemble as much as possible the ones from the original index, this increment may mean that the information technology sector is more "virtuous" regarding ESG practices and achievements, because of more companies passing the screening process to be included in the index. Other sectors register slight differences, which may be the consequence of the adapting the weights as close as possible to the original index, considering the higher weight of the information technology sector. Regarding single constituents, the top ten by index weight is reported (as previously noted, unfortunately S&P does not provide exact weights for single constituents):

Chart 3 – Top ten constituents of S&P 500 ESG

Constituent	Sector
Apple Inc.	Information Technology
Microsoft Corp.	Information Technology
Amazon.com Inc.	Consumers Discretionary
Alphabet Inc. A	Communication Services
Alphabet Inc. C	Communication Services
Nvidia Corp.	Information Technology
Exxon Mobil Corp.	Energy
Unitedhealth Group Inc.	Health Care
JP Morgan Chase & Co	Financials
Visa Inc. A	Information Technology

Microsoft and Nvidia reported to be engaged and involved in consolidating best ESG practices. Microsoft not only is reported to be carbon neutral since 2012 and committed to be carbon negative within 2030, but also engages actively in removing around 2,5 billion metric tons of carbon in 2022 and the institution of the Microsoft Climate Research Initiative. In addition, the ESG efforts of Nvidia Corporation are exemplary, it has designed and developed one of the most powerful machines able to predict the climate changes impact, the EARTH-2 supercomputer. Moreover, Nvidia is very careful about waste of energy and massive energy consumption; it put in place a strong commitment to satisfy its own needs only from

renewable sourcing within 2025 and, speaking about its own production of GPUs, data suggests that they are 20 times less energy-intensive than traditional CPU servers. [171]

However, in 2020 S&P500 Down Jones launched another noteworthy sustainable index, the S&P500 Sustainable Screened Index. In synthesis, the goal of this index is to exclude systematically some "unethical" businesses applying threshold-based exclusions. The result is a parent index that is half-way between the traditional S&P500 and S&P500 ESG, the latter being more complex and choosier in its structured selection methods than the screened version, which in practice involve only partially a negative screening exclusion method. Specifically, the exclusions put in place for the stock selection of the S&P500 Sustainability Screened Index are briefly reported as follows:

- *Index Constituents are selected among the S&P 500 ones.*
- *Companies with the following business activities and/or companies deemed to be non-compliant with the United Nations Global Compact (UNGC) are directly excluded from the eligible universe.*
  - ***Fossil Fuels.*** *Companies that extract thermal coal or oil sands, companies which generate electricity from thermal coal, and which revenue from these activities surpass the 5% threshold, as well as companies that own fossil fuel reserves, are excluded.*
  - ***Controversial Weapons.*** *Companies that are directly involved in the core weapon system, or components/services of the core weapon system that both are and are not considered tailor-made and essential for the lethal use of the weapon, are excluded when surpassing the 0% revenue threshold. An ownership stake of 25% or more in another company related with these activities are excluded as well.*
  - ***Tobacco Businesses.*** *Companies that directly manufacture tobacco products, with a 0% revenue threshold limit, or comprehend the supply of tobacco-related products/services with a 10% revenue threshold limit, retail/distribute tobacco products, with a limit of 10% revenue threshold, or there is the ownership of at least 25% or more in another company that derives their revenues from the distribution and/or sale of tobacco products, with a limit of 10% threshold.*
  - ***Small Arms.*** *Companies that manufacture and sell assault arms, the so-called non-assault weapons directed to civilian or even military customers, also companies that manufacture and sell key components of small arms, and companies which retail/distribute assault weapons and small arms,*

[171] Source: https://www.nasdaq.com/articles/10-best-esg-stocks-for-2022

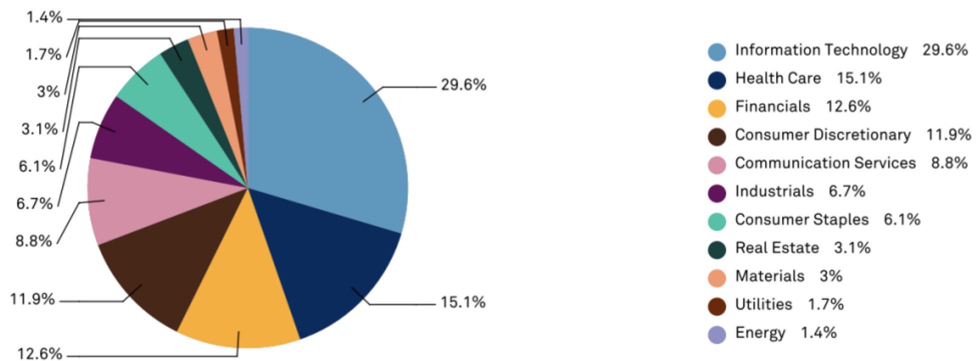
non-assault weapons, are not tolerated and excluded, imposing a with 0% revenue threshold, basically excluding all this kind of activities from the portfolio.

- *All eligible companies in the underlying index form the index.*
- *The index is based on a float-adjusted market capitalization weighting.*
- *The index is rebalanced quarterly after the close of the third Friday of March, June, September, and December.*[172]

Even if the exclusion process described above is milder than the process of the S&P500 ESG and should include some stocks that ESG index excludes for threshold and low ESG scoring, the sector breakdown of the screened index presents more similarities with the ESG one rather than the original S&P500 index. The sector breakdown is reported as follows:

Fig. 11 – Sector Breakdown of S&P500 Sustainability Screened Index

Sector* Breakdown



*Based on GICS® sectors

The weightings for each sector of the index are rounded to the nearest tenth of a percent; therefore, the aggregate weights for the index may not equal 100%.

Source: https://www.spglobal.com/spdji/en/index-family/esg/core-esg/sp-sustainability-screened/#overview, Factsheet as of 31 January 2023.

Another noteworthy index provided by S&P500, falling in the category of Other Core ESG, is the S&P500 Elite Index, which follows a Best-in-class strategy in its process of selection of the constituents,

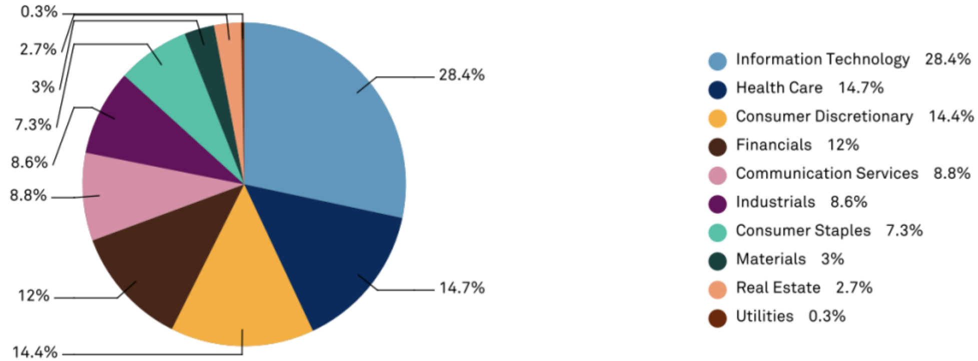
[172] For more details: https://www.spglobal.com/spdji/en/indices/esg/sp-500-sustainability-screened-index/#overview, pp. 1 of Factsheet of S&P500 Sustainability Screened Index.

trying to keep overall as much as possible sector weights of standard S&P500. As noted in the factsheet of the index, the ESG Elite draws from the 25% of the float market capitalization of every sector, using the classification known as Global Industry Classification Standard (GICS) developed by the world-renowned data provider MSCI. Potential constituents are screened through the ESG Scored assigned by S&PDJ committee employing data that was gathered and elaborated from ESG non-financial disclosures and Corporate Sustainability Assessment; in addition, more exclusions criteria are considered after the ESG score screening is performed. In particular, the screening process is structured as follows:

1. *Constituents are picked from the constituents of S&P 500 ESG Index.*
2. *Companies disqualifying United Nations Global Compact (UNGC) scores or low S&P DJI ESG Scores, are directly excluded from the eligible universe.*
3. *Specifically, these sectors are directly excluded from the eligible universe:*
    - *Fossil Fuels*
    - *Nuclear Power*
    - *Tobacco*
    - *Controversial Weapons*
    - *Small Arms*
    - *Military Contracting*
    - *Adult Entertainment*
    - *Alcohol*
    - *Gambling*
    - *GMO*
    - *Predatory Lending*
    - *Palm Oil*
4. *The selection of index constituents from the eligible universe is done as follows.*
    1. *Starting for each GICS sector, companies are selected starting from the best scores of S&P DJI ESG e until 17.5% of the float-adjusted market capitalization (FMC) of that same sector in the S&P 500 is reached.*
    2. *Companies ranked between 17.5% and 32.5% are chosen from eligible universe in order to reach the target of 25% of FMC.*
    3. *After the first two steps, if the combined FMC of selected companies is not above the 25% FMC target, companies excluded may be selected and added starting from the best ESG scores performers. This process will stop when the addition of the next eligible company would result in the total FMC of the relevant GICS sector moving further away from the 25% FMC target.*
5. *Index constituents are weighted by float-adjusted market capitalization, subject to a single company weight cap of 5% of the total index weight. The index is rebalanced annually.*

Fig. 12 – S&P500 ESG Elite Index - Sector Breakdown

Sector* Breakdown



*Based on GICS® sectors

The weightings for each sector of the index are rounded to the nearest tenth of a percent; therefore, the aggregate weights for the index may not equal 100%.

3.3 - Alternative S&P Sustainable ESG Indexes

As mentioned before, along with Core Indexes, which usually are considered most relevant due the huge wideness of data they include and analyze, S&P500 Down Jones provides additionally other more specific index. It's important to notice that S&P500 Sustainable Screened and S&P500 ESG indexes are part of the Core ESG category, which includes also more specific benchmarks. However, there are multiple categories, which of them in its turn regroups different indexes, from general to more specific ones. For instance, in the category of ESG Climate Index are grouped families of Paris Aligned & Climate Transaction indexes, Carbon Efficient indexes and Fossil Fuel free indexes. Additionally, there are available the categories of Thematic ESG Indexes to complete the Equity products families of benchmarks and for debt markets, there is the family of Fixed-Income ESG indexes, covering data about Green Bonds and other Fixed-Income sustainable financial products. Particularly interesting are ESG indexes in the family of Thematic ESG, which provides indications and gather information for ESG Thematic investments and Funds. Specifically, S&PDJ provides thematic indexes for these sectors:

- ***Clean and Renewable energy market****:*

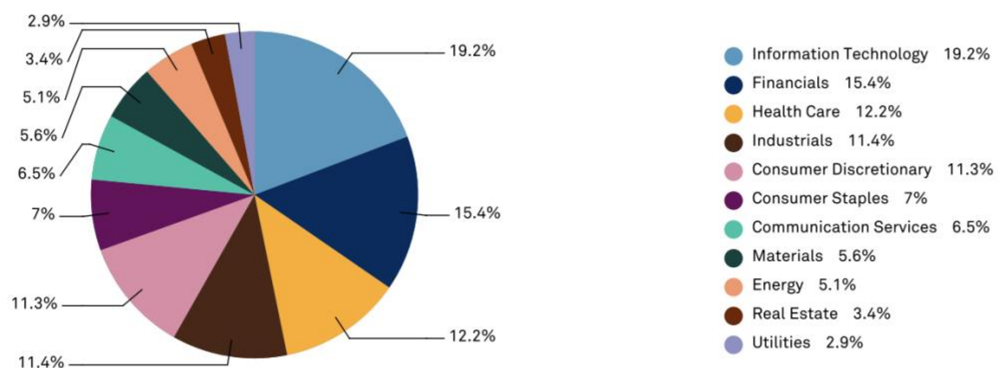
1. S&P Global Clean Energy Index: keeps track of the performances of the top 100 companies operating in the clean energy industry. The target number of constituents is set at 100.

- ***Sustainability Themed Water investments***
    1. *S&P Global Water Index: provides performances tracking of more liquid exposures of companies which are involved in the water-related business. The sectors of companies eligible to be constituents in this index are water and utilities infrastructures and water and equipment materials.*[173]

However, those alternative index are different in construction compared with ESG indexes described before. In fact, those more specific indexes are weighted following a modified marked cap strategy and do not depend directly on S&P500 parent index. Another difference is indeed the benchmark; while all S&P500 related indexes for an obvious reason refers to the traditional S&P500 as their benchmark, alternative indexes indicate as their benchmark the S&P Global Broad Market Index (BMI), a global index based on a modular structure that includes around 14.000 stocks picked from 25 developed countries and 25 emerging markets, weighted on a fully float adjusted weight method since 1989. Here it is reported the sector breakdown of S&P GBMI:

Fig. 13 – S&P Global BMI Index - Sector Breakdown

Sector* Breakdown



*Based on GICS® sectors

The weightings for each sector of the index are rounded to the nearest tenth of a percent; therefore, the aggregate weights for the index may not equal 100%.

(Source: https://www.spglobal.com/spdji/en/indices/equity/sp-global-bmi/#overview, Factsheet)

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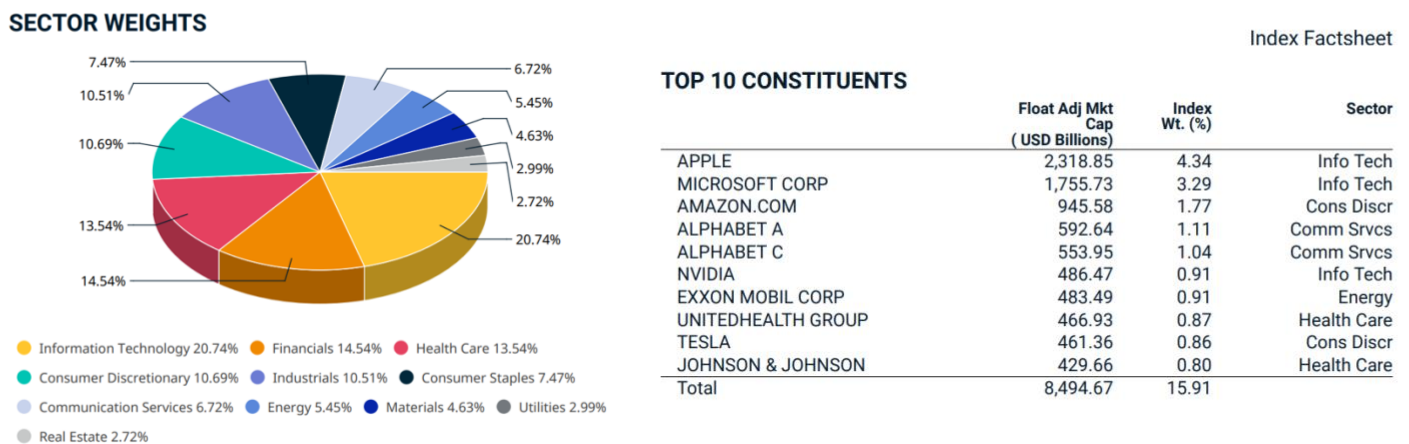
[173] *Sources: elaborations from s&pglobal.com, available at: https://www.spglobal.com/spdji/en/index-family/esg/*

3.4 – MSCI World and related sustainable indexes

MSCI, acronym of Morgan Stanley Capital International is probably the most renowned index provider in the financial world. MSCI is an independent unit from 2007, before it was dependent from Morgan Stanley Investment Bank. In synthesis, MSCI is a company specialized in financial services which core business consists in selling research and data models for institutional investors. It is leader in providing market indexes; the most famous one is without a doubt the MSCI World Index, which includes more than prime 1500 stocks relative to main sectors of the global economy[174]. In particular, the MSCI World Index is composed observing large and mid-cap performances across 23 developed markets, including near to 1510 constituents, and being able to cover broadly 85% of the free float-adjusted market capitalization in each weighted country. The specific index characteristics, top ten constituents, and the sector breakdown of the MSCI World Index are reported as follows:

Fig. 14 – Sector breakdown and top constituents of MSCI World Index.



TOP 10 CONSTITUENTS

	Float Adj Mkt Cap (USD Billions)	Index Wt. (%)	Sector
APPLE	2,318.85	4.34	Info Tech
MICROSOFT CORP	1,755.73	3.29	Info Tech
AMAZON.COM	945.58	1.77	Cons Discr
ALPHABET A	592.64	1.11	Comm Srvcs
ALPHABET C	553.95	1.04	Comm Srvcs
NVIDIA	486.47	0.91	Info Tech
EXXON MOBIL CORP	483.49	0.91	Energy
UNITEDHEALTH GROUP	466.93	0.87	Health Care
TESLA	461.36	0.86	Cons Discr
JOHNSON & JOHNSON	429.66	0.80	Health Care
Total	8,494.67	15.91	

Source: https://www.msci.com/documents/10199/178e6643-6ae6-47b9-82be-e1fc565ededb

MSCI is also leader for ESG related services, not only providing ESG scores valuation for the companies and institutional investors but also in the index portfolio since there are multiple sustainable indexes available; more than 1500 equity and fixed-income indexes provided by MSCI are exploited by asset

[174] Source: Elaboration from https://www.ubp.com/it/glossario-metriche-finanziarie/msci#:~:text=Nata%20come%20Morgan%20Stanley%20Capital,pubblica%20con%20il%20marchio%20MSCI.

managers and institutional investors for benchmarking and analysis purposes. The list of most relevant ESG indexes available is divided into three main categories, which are integration, values & screens, and impact. In particular, for the purpose of this analysis, three specific indexes are interesting to observe, which are respectively:

1. **MSCI World Leader Index –** The MSCI ESG Leaders Index is a broad aggregated index, composed by performances of companies that have the highest environmental, social and governance (ESG) rating in each sector of the parent index, which is the MSCI World Index. MSCI provides investors globally with ESG indexes designed to facilitate clients' integration of ESG considerations into their investment process. The indexes exploit a best-in-class approach by only selecting companies that have the highest MSCI ESG Ratings among their peers group sectors. The aim of the index is to represent at least 50% of the exposures deriving from the parent index (MSCI World). The index is designed for institutional investors seeking exposure to companies with a strong sustainability profile and relatively low tracking error to the underlying equity market.

2. **MSCI World Screened Index:** The MSCI World ESG Screened Index is based on the MSCI World Index, which is its parent index, and includes large and mid-cap securities across 23 countries which economy is classified as developed market. The index, which directly selects the constituents from the parent index, excludes companies that are associated with some environmentally and socially dangerous behavior, such as controversial, civilian, and nuclear weapons and tobacco, or companies that derive revenues from thermal coal and oil sands extraction and perform direct exclusions of whichever company that is not compliant with the United Nations Global Compact principles.

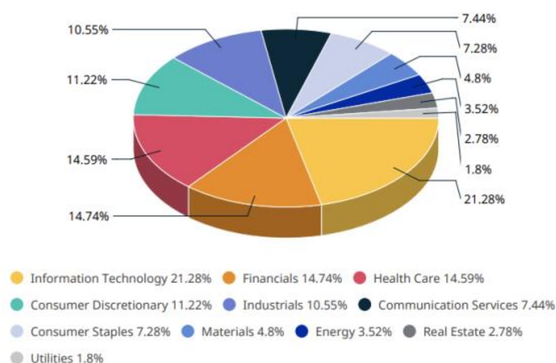
3. **MSCI Low Carbon Target Index:** The MSCI World Low Carbon Target Index, which parent index is the MSCI World Index, observes performances of large and mid-cap stocks in near 23 developed countries markets. The Index can be used as benchmark for institutional or retail investors who wish to manage potential risks associated with the transition to a low carbon economy. The index aims for a tracking error target of 0.3% (30 basis points) while minimizing the carbon exposure. By overweighting with specific methods those companies with low carbon emissions and those with low potential carbon emissions, the index reflects a lower carbon

exposure than that of the broad market. Carbon emissions data is directly provided by systems developed by MSCI.

Fig. 15 – Sector Breakdown and top ten constituents of MSCI World Indexes

MSCI World Leader Index

SECTOR WEIGHTS



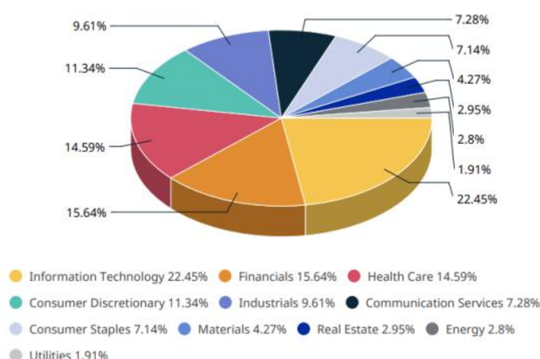
TOP 10 CONSTITUENTS

	Index Wt. (%)	Parent Index Wt. (%)	Sector
MICROSOFT CORP	6.56	3.29	Info Tech
ALPHABET A	2.21	1.11	Comm Srvcs
ALPHABET C	2.07	1.04	Comm Srvcs
NVIDIA	1.82	0.91	Info Tech
TESLA	1.72	0.86	Cons Discr
JOHNSON & JOHNSON	1.61	0.80	Health Care
VISA A	1.41	0.71	Info Tech
PROCTER & GAMBLE CO	1.27	0.64	Cons Staples
HOME DEPOT	1.24	0.62	Cons Discr
MASTERCARD A	1.19	0.60	Info Tech
Total	21.10	10.58	

Source: https://www.msci.com/documents/10199/f5942b0b-ae1c-4a4b-8d9c-98ffe0dd1878,

MSCI World Screened Index

SECTOR WEIGHTS

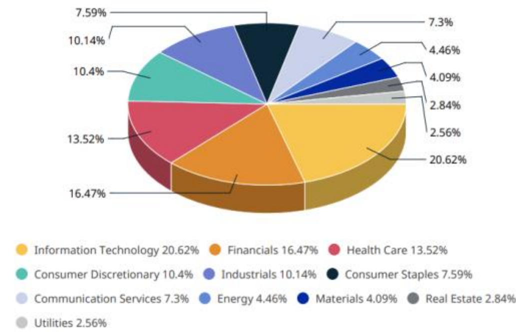


TOP 10 CONSTITUENTS

	Index Wt. (%)	Parent Index Wt. (%)	Sector
APPLE	4.70	4.34	Info Tech
MICROSOFT CORP	3.56	3.29	Info Tech
AMAZON.COM	1.92	1.77	Cons Discr
ALPHABET A	1.20	1.11	Comm Srvcs
ALPHABET C	1.12	1.04	Comm Srvcs
NVIDIA	0.99	0.91	Info Tech
UNITEDHEALTH GROUP	0.95	0.87	Health Care
TESLA	0.94	0.86	Cons Discr
JOHNSON & JOHNSON	0.87	0.80	Health Care
JPMORGAN CHASE & CO	0.83	0.77	Financials
Total	17.09	15.77	

Source: https://www.msci.com/documents/10199/db88cb95-3bf3-424c-b776-bfdcca67d460

MSCI Low Carbon Target Index



TOP 10 CONSTITUENTS

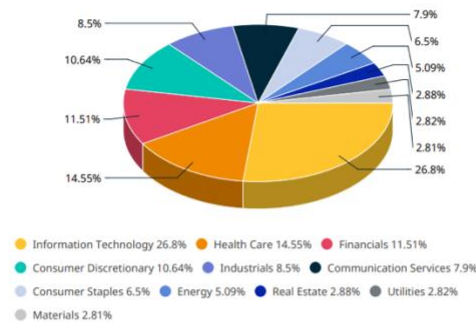
	Index Wt. (%)	Parent Index Wt. (%)	Sector
APPLE	4.39	4.34	Info Tech
MICROSOFT CORP	3.29	3.29	Info Tech
AMAZON.COM	1.78	1.77	Cons Discr
ALPHABET A	1.14	1.11	Comm Srvcs
ALPHABET C	1.04	1.04	Comm Srvcs
NVIDIA	0.92	0.91	Info Tech
TESLA	0.90	0.86	Cons Discr
JOHNSON & JOHNSON	0.85	0.80	Health Care
UNITEDHEALTH GROUP	0.84	0.87	Health Care
JPMORGAN CHASE & CO	0.76	0.77	Financials
Total	15.90	15.77	

Source:https://www.msci.com/documents/10199/f5942b0b-ae1c-4a4b-8d9c-98ffe0dd1878

3.4 – MSCI Regional sustainable indexes

MSCI also provides different regional indexes to track performances of most important firms of a region. In this category it is possible to find MSCI Europe Index as well as MSCI USA Index. The first is capturing the performances of the large and mid-caps equities in Europe, across the 15 most important European countries, covering nearly 85% of the free float adjusted market capitalization across the European market. Consistently, MSCI USA Index covers the performances of large and mid-cap equities in the United States market, reaching the 85% cover of the float-adjusted market capitalization. To develop sustainable indexes on regional basis, MSCI constructed sustainable USA and Europe related indexes starting from the basic regional indexes, such as MSCI USA and MSCI Europe. In general, MSCI USA Index presents a sector allocation which is very similar to others USA based indexes, having an important exposure over information technology, health care and financial sectors. The MSCI Europe index instead do presents completely different sector weightings. The complete sector breakdown is shown in fig. 16.

Fig. 16 – MSCI USA Index Sectors Breakdown and top ten constituents



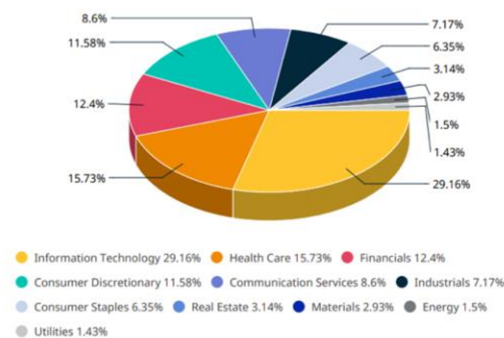
TOP 10 CONSTITUENTS

	Float Adj Mkt Cap (USD Billions)	Index Wt. (%)	Sector
APPLE	2,318.85	6.42	Info Tech
MICROSOFT CORP	1,755.73	4.86	Info Tech
AMAZON.COM	945.58	2.62	Cons Discr
ALPHABET A	592.64	1.64	Comm Srvcs
ALPHABET C	553.95	1.53	Comm Srvcs
NVIDIA	486.47	1.35	Info Tech
EXXON MOBIL CORP	483.49	1.34	Energy
UNITEDHEALTH GROUP	466.93	1.29	Health Care
TESLA	461.36	1.28	Cons Discr
JOHNSON & JOHNSON	429.66	1.19	Health Care
Total	8,494.67	23.51	

(source: https://www.msci.com/documents/10199/67a768a1-71d0-4bd0-8d7e-f7b53e8d0d9f)

MSCI USA parent index is used as benchmark for different sustainability indexes, among which there are the MSCI USA ESG Screened Index, MSCI USA ESG Leaders Index, which are the bigger for capitalization and number of constituents. MSCI USA ESG Screened Index accounts the performances of large and medium capitalization stocks of the several United States equity markets. The selection process of the index includes an ESG screening of the stocks selected; the requirements include not being involved with controversial, nuclear weapons, civilian weapons, tobacco, thermal coal activities and oil sands extractions. In addition, whichever companies violating United Nations Global Compact principles are directly excluded. The other sustainable index selected, the MSCI USA Leaders Index, replicates the performances of companies that present very high Environmental, Social and Governance scores relatively to their sector peers, basically adopting a Best-In-Class Method of selection between large and medium capitalized companies in the U.S. spectrum; the result is a diversified sustainability index based on relatively low tracking error to the underlying equity market of reference. The selection of the constituents and ESG scores data are based on MSCI ESG Research. The fig.17 and fig.18 shows the sector breakdown of those indexes and their top ten constituents.

Fig. 17 – MSCI USA Screened Index Sectors Breakdown and top ten constituents

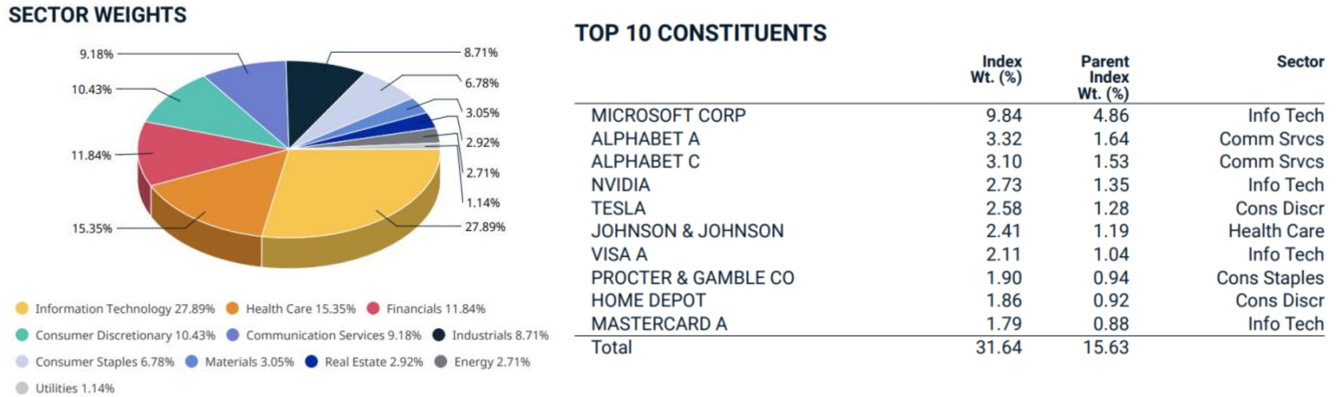


TOP 10 CONSTITUENTS

	Index Wt. (%)	Parent Index Wt. (%)	Sector
APPLE	6.99	6.42	Info Tech
MICROSOFT CORP	5.29	4.86	Info Tech
AMAZON.COM	2.85	2.62	Cons Discr
ALPHABET A	1.79	1.64	Comm Srvcs
ALPHABET C	1.67	1.53	Comm Srvcs
NVIDIA	1.47	1.35	Info Tech
UNITEDHEALTH GROUP	1.41	1.29	Health Care
TESLA	1.39	1.28	Cons Discr
JOHNSON & JOHNSON	1.29	1.19	Health Care
JPMORGAN CHASE & CO	1.24	1.14	Financials
Total	25.37	23.31	

(Source: https://www.msci.com/documents/10199/2ab50b69-1bd4-712e-c941-be569d26d678)

Fig. 18 – MSCI USA ESG Leaders Index Sectors Breakdown and top ten constituents



TOP 10 CONSTITUENTS

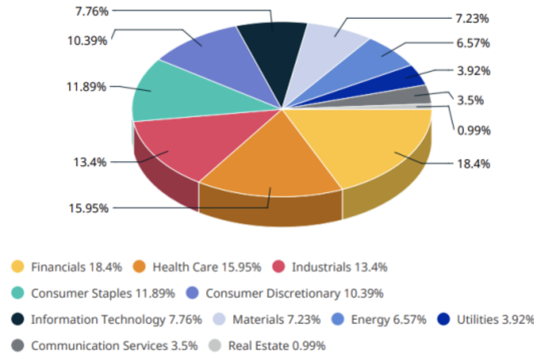
	Index Wt. (%)	Parent Index Wt. (%)	Sector
MICROSOFT CORP	9.84	4.86	Info Tech
ALPHABET A	3.32	1.64	Comm Srvcs
ALPHABET C	3.10	1.53	Comm Srvcs
NVIDIA	2.73	1.35	Info Tech
TESLA	2.58	1.28	Cons Discr
JOHNSON & JOHNSON	2.41	1.19	Health Care
VISA A	2.11	1.04	Info Tech
PROCTER & GAMBLE CO	1.90	0.94	Cons Staples
HOME DEPOT	1.86	0.92	Cons Discr
MASTERCARD A	1.79	0.88	Info Tech
Total	31.64	15.63	

Source: (https://www.msci.com/documents/10199/8cfbc6c0-b4c1-4ddf-a8f2-3c0ec1f38dd5)

The last peer included in the analysis regards the European region, which is indexed and benchmarked by MSCI Europe Index. This index is the equivalent of MSCI USA Index for Europe region, accounting the performances of large and medium capitalized companies in European territory, selecting securities among 15 developed markets of Europe; major exposures are from United Kingdom, France, Switzerland, Germany, Netherlands, but other countries included in the index are Portugal, Spain, Sweden, Finland, Ireland, Austria, Denmark and Belgium. Like U.S. regional index, the MSCI Europe is the parent index of different sustainable and ESG benchmarks, most importantly the MSCI ESG Screened Europe and the MSCI ESG Leaders Europe, which consistently with the US sustainable benchmarks, are the most capitalized and have higher number of constituents than others. Construction of those sustainable indexes follows the same rules described before for the US sustainable benchmarks. In synthesis, the Screened Index performs a general ESG screening for stock selection among the eligible universe, excluding all companies whose business is related with non-sustainable or harmful sectors and whichever company violating the UN Global Compact. The ESG Leaders Index instead performa a Best-In-Class selection of large and mid-cap EU companies with higher ESG ratings compared with same industry peers. Fig. 19 and Fig.20 represents sectors breakdown and top ten constituents for ESG and sustainable European Indexes.

Fig. 19 – MSCI Europe Screened Index Sectors Breakdown and top ten constituents

SECTOR WEIGHTS



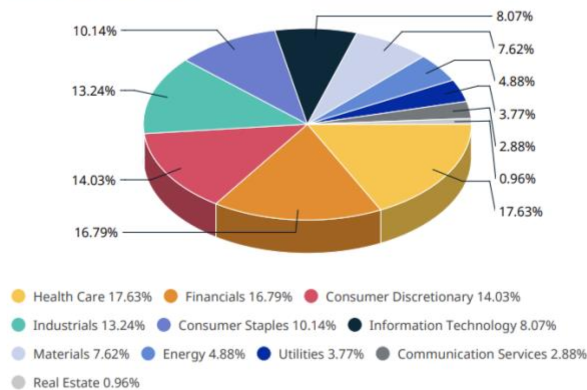
TOP 10 CONSTITUENTS

	Country	Index Wt. (%)	Parent Index Wt. (%)	Sector
NESTLE	CH	3.53	3.34	Cons Staples
ASML HLDG	NL	2.81	2.66	Info Tech
LVMH MOET HENNESSY	FR	2.54	2.41	Cons Discr
NOVO NORDISK B	DK	2.41	2.28	Health Care
ROCHE HOLDING GENUSS	CH	2.31	2.18	Health Care
SHELL	GB	2.24	2.12	Energy
ASTRAZENECA	GB	2.13	2.02	Health Care
NOVARTIS	CH	2.05	1.94	Health Care
TOTALENERGIES	FR	1.63	1.54	Energy
HSBC HOLDINGS (GB)	GB	1.55	1.47	Financials
Total		23.20	21.96	

(Source: https://www.msci.com/documents/10199/139bc6a5-fbdd-e6f0-f841-fcd0555e2e81#:~:text=The%20MSCI%20ESG%20Screened%20Indexes,%2C%20Thermal%20Coal%2C%20Oil%20Sands.)

Fig. 20 – MSCI Europe Leaders Index Sectors Breakdown and top ten constituents

SECTOR WEIGHTS



TOP 10 CONSTITUENTS

	Country	Index Wt. (%)	Parent Index Wt. (%)	Sector
ASML HLDG	NL	5.04	2.66	Info Tech
LVMH MOET HENNESSY	FR	4.55	2.41	Cons Discr
NOVO NORDISK B	DK	4.32	2.28	Health Care
ROCHE HOLDING GENUSS	CH	4.13	2.18	Health Care
ASTRAZENECA	GB	3.83	2.02	Health Care
TOTALENERGIES	FR	2.92	1.54	Energy
HSBC HOLDINGS (GB)	GB	2.78	1.47	Financials
UNILEVER PLC (GB)	GB	2.44	1.29	Cons Staples
SAP	DE	2.33	1.23	Info Tech
L'OREAL	FR	1.88	0.99	Cons Staples
Total		34.20	18.07	

(Source: https://www.msci.com/documents/10199/3fcf2394-2722-4bdd-be08-a7398cb45374)

3.4 – Performances of Sustainable Indexes

After having described the categories of sustainable and ESG indexes and their related benchmarks, it is interesting to observe their behavior of those indexes related to their benchmarks to find out how sustainable indexes perform with respect to benchmark indexes. Some preliminary considerations are needed. First, all the indexes selected are valued in American dollars ($) and the frequency of S&P500 datasets selected for the analysis is the daily range; this not only is important to have huge samples to analyze, but also to consolidate even more the results of the analysis performed. However, since there is not the availability of daily range for MSCI Indexes, the range of datasets related to MSCI Indexes is

monthly. Going back to the point after the needed considerations, the objects of the analysis are reported to and peer groups constructions are reported as follows:

Chart 1 - S&P Related Indexes

	Index Name	Benchmark
ESG Core Indexes	S&P 500 ESG S&P500 Sustainable Screened S&P500 Elite	S&P500 Traditional
ESG Thematic Indexes	S&P Global Water S&P Global Clean Energy S&P North American and Europe Clean Energy	S&P Global BMI

Regarding instead MSCI related indexes, the framework to analyze is the following:

Chart 2 – MSCI World Related Indexes

	Index Name	Benchmark
ESG Core Indexes	MSCI World Leader MSCI World Screened MSCI Low Carbon Target	MSCI World

Chart 3 – MSCI U.S. Related Indexes

	Index Name	Benchmark
MSCI US Indexes	MSCI USA ESG Screened Index MSCI USA ESG Leaders	MSCI USA

Chart 4 – MSCI U.S. Related Indexes

	Index Name	Benchmark
MSCI Europe Indexes	MSCI Europe ESG Screened MSCI Europe ESG Leaders	MSCI Europe

After having defined and described the objects of the analysis, the first step was to download the whole datasets of the historical adjusted closing prices of the indexes, form S&PDJ and MSCI databases respectively, from which it is possible to derive the financial returns. The financial returns are calculated as follows:

$$Financial\ Returns\ (t1)\ = \frac{Index\ Value_{t1} - Index\ Value\ _{t0}}{Index\ Value_{t0}}$$

The calculation of net returns series for each index and its parent allows to build the performances samples that will be tested, observing the behavior of the sustainable indexes compared with their own benchmark. The period of datasets is 10 years, from the beginning of 2013 until the end of 2022; it is reasonable to state that a 10-year period is sufficient to be able to draw a conclusion about the financial performance of an index. At this regard, based on net returns calculated from all the data series, those four main measures are calculated, specifically:

1. Expected Return, which is the mean of each the net returns series.
2. Variance, which is the expectation of the squared deviation of the expected returns le from its mean. It measures the level of variability of the sample.
3. The Standard Deviation, which is the square root of the variance, and gives an immediate indication about how much dispersed the data respect to the expected return is.
4. The Sharpe Ratio, which is a very used key indicator for stock selection, is computed to measure the portfolio's outperformance per unit of the portfolio's volatility. All else being equal, portfolios with higher excess returns or lower volatility will show higher Sharpe Ratios, and vice-versa. Considering a single asset portfolio, it is possible to state that the greater a portfolio's Sharpe ratio, the better its risk-adjusted-performance. The classic formula for calculating the Sharpe ratio is: [175]

$$Sharpe\ Ratio = \frac{\mathrm{R}_p - \mathrm{R}_f}{\sigma_p}$$

Where R_p is the expected return of the single asset portfolio, R_f the risk-free rate of return, and σ_p the standard deviation of the portfolio returns. However, in this case, where indexes are being analyzed and not stocks, it is reasonable to negligee the risk-free rate, which usually is the rate of return of the 10-year

[175] Elaboration from: https://corporatefinanceinstitute.com/resources/risk-management/sharpe-ratio-definition-formula/

T-Bond, since indexes do not incur the market risk of failing contrary to stocks; this implies that the ratio can be calculated for indexes as:

$$Sharpe\ Ratio = \frac{R_p}{\sigma_p}$$

Lastly, to provide an immediate visual instrument to evaluate the performances of indexes and their parents, a hypothetical growth of 10.000 is presented for each peer group. A widely used instrument in financial reports and in funds factsheets, basically, this is a graph that represent the index returns starting from the initial period of analysis basing the representation on an initial value of 10.000 $, aiming to simplify as much as possible the visualization of the performances of different equity securities in only one graph. As introduced at the beginning of the chapter, the goal is to observe if there is statistically relevant difference between portfolios which follows sustainable and ESG indexes rather than replicating the performances of the non-ESG general benchmarks and which between the non ESG or ESG strategy was preferred during the ten-year period analyzed.

Chart 5 - Comparisons of S&P Core Indexes Peer Groups (7.491 Observations)

RETURNS (Daily)	S&P500	S&P500 ESG	S&P500 Sust. Screened	S&P500 Elite
Expected Return	0,0433%	0,0453%	0,0472%	0,0455%
Variance	0,0124%	0,0124%	0,0129%	0,0130%
St. Dev.	1,1114%	1,1149%	1,1359%	1,1407%
Sharpe	3,8995%	4,0623%	4,1539%	3,9849%
Annualized 10Y Returns	11,91%	12,52%	12,86%	12,59%

Observing the parameters obtained analyzing the first peer group dataset, it is immediately visible how values are very close to each other, even if total net returns are slightly in favor of the S&P500 Sustainable Screened Index, which consequentially exhibit a higher reward related to its intrinsic risk. Since parameters are so similar, *ceteris paribus*, the higher Sharpe reflect a higher total net return. This situation was expected, given that sectors' breakdown and constituents of indexes were very similar. A possible explanation might be that the screening process may have admitted some good performers present in parent index without excluding some others very good performers less caring about stricter ESG practices.

The higher elevated performance of the Screened Index is also reflected in the graph of the hypothetical 10.000 growth, as follows:

Fig. 21 – 10.000 growth of S&P Core Indexes

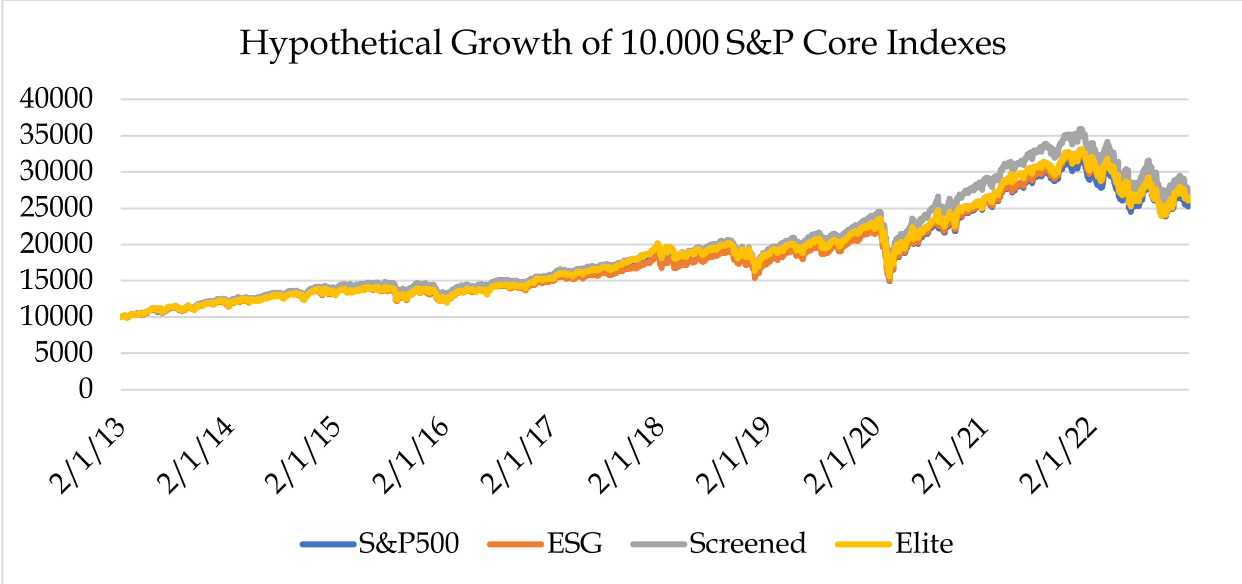


Chart 6 - Comparisons of S&P Alternative Indexes Peer Groups (7.491 Observations)

RETURNS (Daily)	S&P Global BMI	S&P Global Water	S&P Clean Energy
Expected Return	0,0151%	0,0272%	0,0392%
Variance	0,0095%	0,0094%	0,0224%
St. Dev.	0,9766%	0,9677%	1,4982%
Sharpe	1,5442%	2,8107%	2,6154%
Annualized 10Y Returns	8,10%	10,19%	12,81%

In this peer group the parameters resulting from the analysis are more heterogenous, in line with the fact that those Thematic Alternative indexes provides exposures on different sectors. The high spike which sustainable energy sector enjoyed in 2021 and clearly visible in the graph of performances. In addition, it is visible that the S&P Global BMI in the COVID period experienced a shortfall before the sustainable

indexes. However, like the peers before, the best performances in total net returns of ten years are achieved by a sustainable index, the S&P Clean Energy.

Fig. 22 – 10.000 Growth of S&P Alternative Indexes

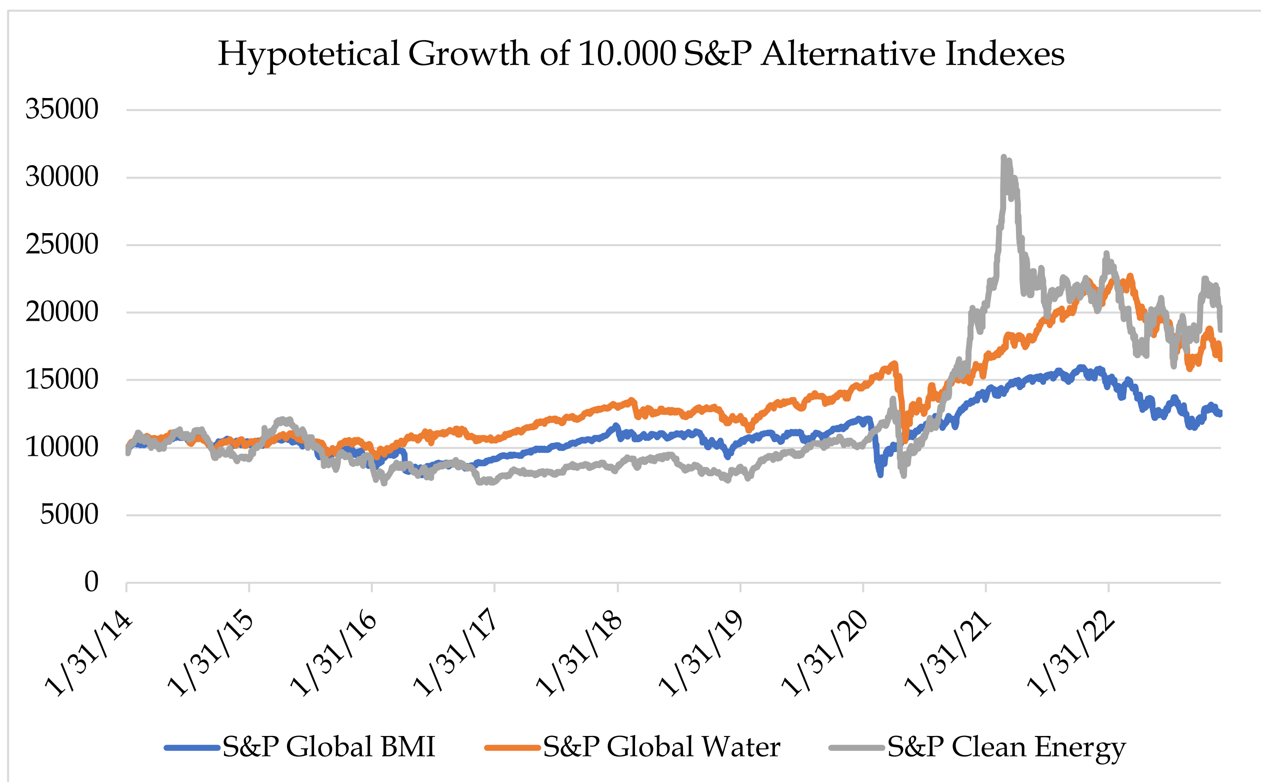


Chart 7- Comparison of MSCI World Indexes (476 Observations)

RETURNS (Monthly)	MSCI World	Low Carbon	Esg Screened	Esg Leader
Media	0,9982%	0,6885%	0,7124%	0,6868%
Variance	0,1547%	0,1768%	0,1775%	0,1711%
St. Dev	3,9331%	4,2044%	4,2132%	4,1362%
Sharpe	25,3795%	16,3744%	16,9099%	16,6041%
Annualized 10Y Returns	9,64%	8,01%	8,06%	8,01%

Here, the peer group analyzed is the MSCI World related one. Data shows inevitably that among this peer the ESG and sustainable generic indexes were not able to reach the performances of the parent index, which is able to keep a lower variance and standard deviation paired with higher expected returns. This combination of indicators is basically suggesting that the result seems clear, ESG Screened and ESG Leader Indexes were outclassed by far from their parent index.

Fig.23 – 10.000 growth of MSCI Indexes

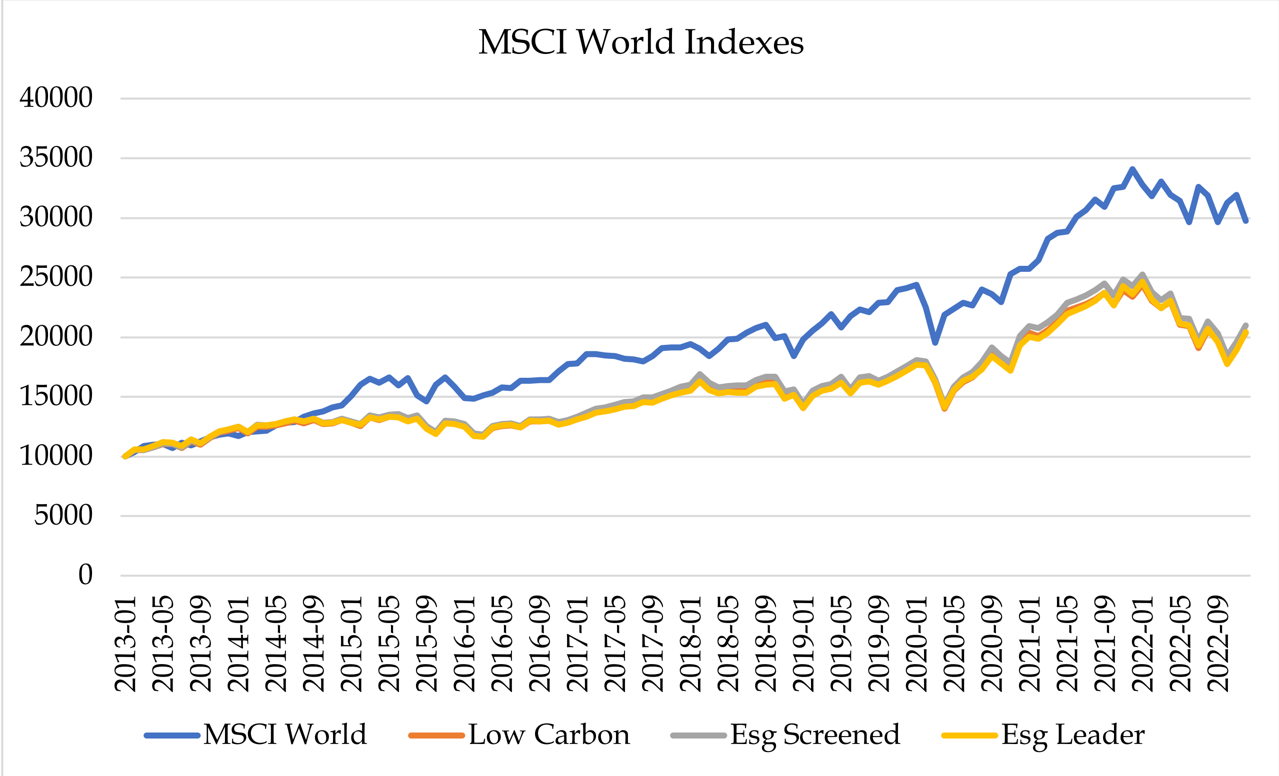


Chart 8 – Comparison of MSCI USA Indexes (363 Observations)

RETURNS (Monthly)	MSCI USA	MSCI ESG Screened	MSCI ESG Leaders
Expected Return	0,9737%	1,0043%	0,9598%
Variance	0,1837%	0,1871%	0,1781%
St. Dev	4,2857%	4,3256%	4,2201%
Sharpe	22,7197%	23,2177%	22,7445%

Annualized Returns 10Y	8,53%	8,58%	8,51%

In the peer groups of U.S. related indexes the differences observed among the benchmark and the ESG and sustainable counterparts seems minimal. However, the MSCI ESG Screened Index shows an higher monthly expected returns and an higher Sharpe ratio respect to the benchmark and respect to MSCI ESG Leaders. The MSCI ESG Screened best performance may suggests that in the U.S. case, exclusions based on ESG screening did perform better than the sample tracked by the MSCI USA and the sample tracked by MSCI USA Leaders. Fig.24 represent the hypothetical 10.000 growth of USA Indexes.

Fig. 24 – Hypothetical 10.000 Growth of MSCI USA related indexes

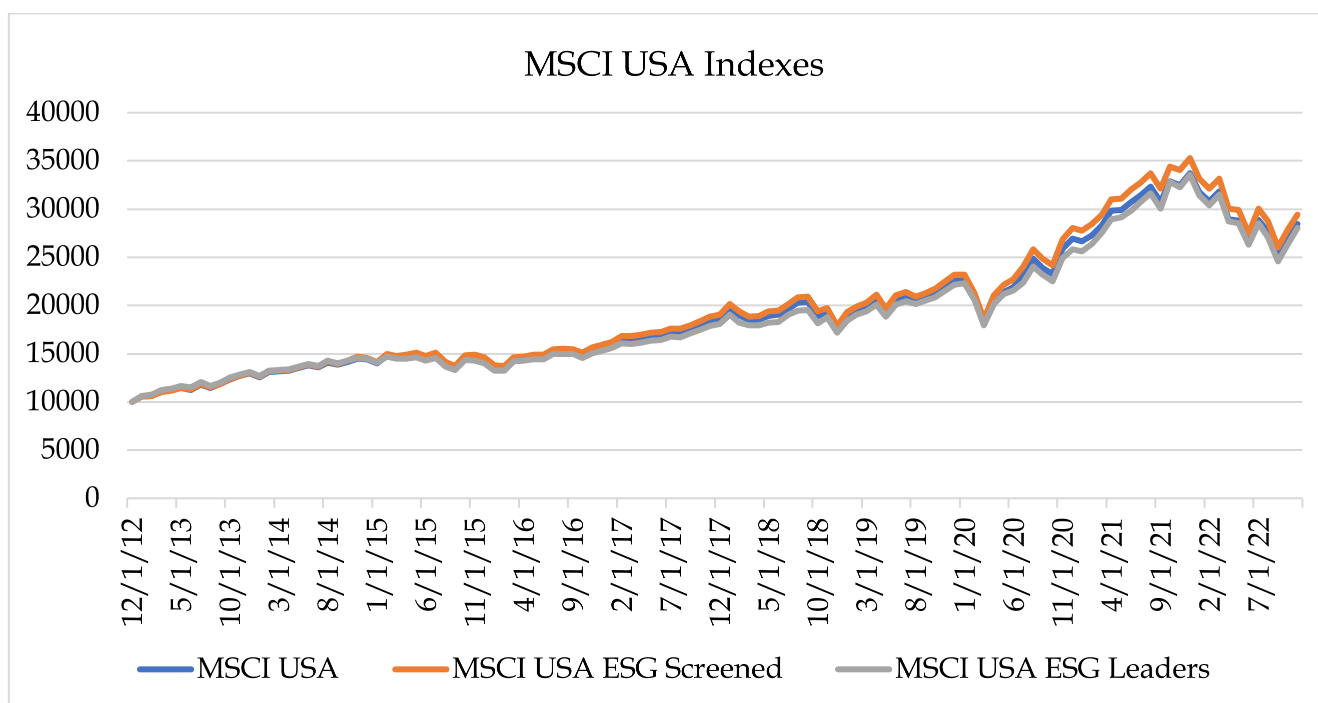


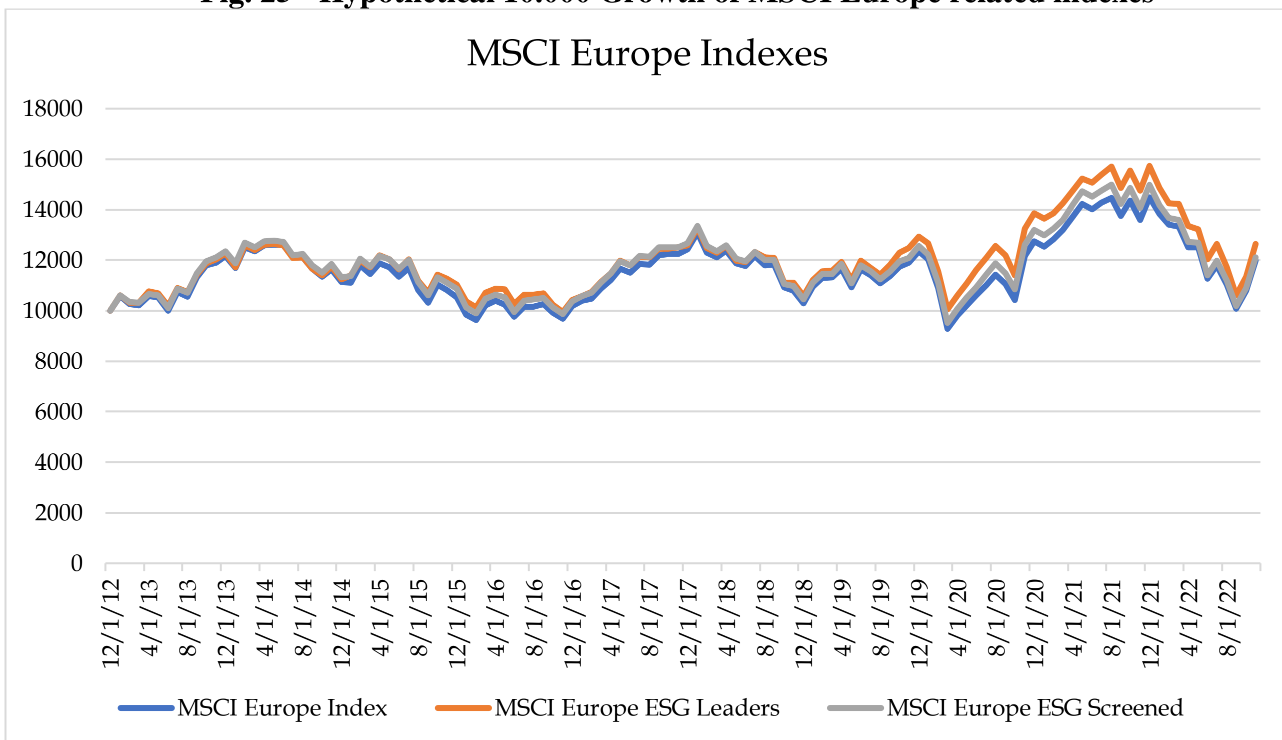
Chart 9 - Comparison of MSCI Europe Indexes (363 Observations)

RETURNS (Monthly)	MSCI Europe	MSCI ESG Leaders	MSCI ESG Screened
Expected Return	0,2616%	0,3023%	0,2708%

Variance	0,2195%	0,2123%	0,2188%
St. Dev	4,6856%	4,6075%	4,6771%
Sharpe	5,5830%	6,5613%	5,7889%
Annualized 10Y Returns	6,53%	6,79%	6,59%

The expectations for the results about the analysis of the European peer group was that ESG and sustainability related indexes outperformed the MSCI Europe benchmark, since European Union is the region more concentrated about ESG themes and characteristics, allocating more resources in regulatory frameworks constructions and imposing stricter rules about ESG disclosures for companies. The fact that both ESG related indexes performed better than the general benchmark may suggest that excluding through ESG screening and, even better, perform a Best-In-Class selection did increase the overall value of the portfolio over the analyzed time horizon.

Fig. 25 - Hypothetical 10.000 Growth of MSCI Europe related indexes



Conclusions

After having observed the behavior of S&P500DJ and MSCI indexes comparison between sustainable indexes and their parents, the main conclusion is that for the ten-year period analyzed 8 sustainable indexes over 12 analyzed did perform better than their benchmark. The graph analysis seems to suggest that after the COVID-19 shock performances of sustainable and ESG indexes starts to slightly diverge more from the benchmark in a positive direction, with the only exceptions of S&PGlobal Water and the MSCI World related indexes; the latter started to diverge significantly from ESG indexes from the end of 2014. Observing the sectors breakdowns, in most cases the sustainable and ESG indexes do not differs very much from the parent in weightings (except the cases of Thematic indexes, which are more specific). A valid consideration to be made is that most of ESG indexes tends to underweight or exclude fossil fuels and overweight the information technology sector, the latter in last five years outperformed and the other underperformed. [176]In addition, top ten constituents are very similar, this may indicate that those high and mid-cap firms included in the indexes are robust on ESG scorings. However, data analyzed suggests that overall, ESG screening and Best-In-Class selection from Leaders sustainable indexes did perform better than their benchmark, ending in higher values at the end of the ten-year period.

Chapter 4 – ESG Equity Framework

Introduction

Since the beginning of the paper, it has been highlighted multiple times how ESG-related product masses under management are constantly increasing, especially in last years, where the participation in sustainable financial product has been supported not only by natural demand but was also alimented by strong public opinion about climate change dangers and from supranational and institutional authorities. It is natural then to observe an important rise of ESG products such as sustainable and ESG funds, and analysts are confident that this trend will continue to grow over next years, carried also by sustainable goals and the structured normative which will enter in force with full power in next few years (taxonomy's evolution, SFDR and CSDR implementation). The sustainable framework seems to suggest that, in the comparison between USA and the European Union, the latter is the one that is adopting a stricter regulation about

[176] Source: https://braggfinancial.com/esg-investing-help-or-hype/#:~:text=When%20comparing%20passively%20managed%20funds,annual%20expense%20ratio%20of%200.03%25.

sustainable finance and duty for asset management companies and institutional investors. [177] Accordingly, the European capital market represents the first global market for the diffusion of sustainable assets, in fact, out of $ 35 trillion of sustainable assets, near 80% of the totals are in Europe and U.S.A, so these two actors dominate this market (Global Sustainable Investment Review, 2021). In addition, an important share of sustainable asset management products in European territory are held by American asset managers; the highest shares are held by BlackRock, Goldman Sachs, JP Morgan, and Fidelity respectively, whose combined masses together are near to 600 billions of assets under management (AUM).[178] This statistic includes both active equity managed funds, which involves an active management that follows specific strategies overseen by fund's managers, and exchange traded funds (ETF), funds that follows a passive strategy, replicating as much as possible their benchmark index, usually given a tracking error allowance. In complex, the report published by the independent organization Global Sustainable Investments Alliance (GSIA) indicates that Unites States and Europe together, manage around 72% of all sustainable and responsible investments related assets; respectively the proportions of United States are around 48% of the totality, while in Europe is around 34% of the totality[179]. This chapter aims to analyze a sample of ESG and sustainable Equity Mutual Funds in the U.S. market, with the aim to draw some conclusions in regard to their performances respect with their benchmark and to confront the sample expenses ratios against the category averages.

4.1 - European Sustainable Funds: The Trends

Europe explicitly seek to promote net zero funds to meet net zero targets. At this regard, PwC reported in recent surveys that near to 72% of asset managers showed the intention to stop as much as possible non-ESG new funds keeping long-term view about sustainable shifts in asset management sector. [180] Moreover, not surprisingly, European regulatory action has recognized that it is necessary to enhance the institutional ownership and ownership concentration 'responsibilities', giving to institutional investors an additional task to oversee and support to take a proactive part in fostering the shift towards corporate

[177] See paragraph 1.7 for more informations
[178] Source: https://www.ishares.com/it/investitori-professionali/it/prodotti/etf-investments#/?productView=all&esgsuit=60522%7C60523%7C60525%7C60524&pageNumber=1&sortColumn=totalFundSizeInMillions&sortDirection=desc&dataView=esgMetrics; https://am.jpmorgan.com/gb/en/asset-management/per/investment-themes/esg/;
[179] Source: http://www.gsi-alliance.org/wp-content/uploads/2021/08/GSIR-20201.pdf
[180] Source: https://www.reuters.com/markets/europe/european-fund-managers-set-go-all-esg-survey-2022-06-27/

sustainability and favoring the transition to a net-zero economy. (Strine Jr, 2020)[181]. Additionally, as also explicitly acknowledged by the European Commission, the magnitude of gross investment required to impact climate changes dangers and avoid future most important consequences for financial stability 'is well beyond the only capacity and power of the public sector'. Hence, 'a total alignment and collaboration of public and private sector are essential for the development of a sustainable financial market. (European Commission, 2021)[182]. As introduced in previous chapters, the European framework is probably the most careful ESG and sustainable finance regulations; the institution of specific regulations such as SFDR, Taxonomy regulation, CSDR is a strong indicator of this claim. Also, the growth trend of ESG AUM in Europe is indicating an important rise over past few years; data suggests an incremental growth of about +300% from 2019 to 2020 and +71% from 2020 to 2021 period. This last huge increase is also an indirect effect of the implementation of the SFDR Regulation[183], which entered into force during the first quarter of 2021. In addition, equity is the main preferred ESG product for funds, counting for around 64% of the sustainable equity in EU territory[184]. The AUM of ESG dedicated funds in European territory is divided as such:

Chart 1 - Asset Managers in EU with higher ESG AUM (data in billions/€)

Asset Manager	AUM	Nationality
Amundi	*307*	*France*
BlackRock	*287*	*USA*
BNP Paribas	*176*	*France*
Swedenbank	*146*	*Sweden*
Goldman Sachs	*120*	*USA*
JP Morgan	*109*	*USA*
Eurizon	*107*	*Italy*
UBS	*93*	*Switzerland*
Pictet	*85*	*Switzerland*
Fidelity	*84*	*USA*
Allianz	*78*	*Germany*
DWS	*75*	*Germany*
Nordea	*73*	*Denmark*

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[181] Strine LE (2020) Jr Stewardship 2021: the centrality of institutional investor regulation to restoring a fair and sustainable American economy. U Pa Inst for Law & Econ Research Paper No. 20–55, 2020, Columbia Law and Economics Working Paper No. 633.

[182] Source: https://eur-lex.europa.eu/resource.html?uri=cellar:9f5e7e95-df06-11eb-895a-01aa75ed71a1.0001.02/DOC_1&format=PDF

[183] For more details see paragraph 1.7

184 Source: https://www.alfi.lu/getattachment/d590f0cc-8141-402e-9df2-bff575382dbe/european-sustainable-investment-funds-study-2022.pdf

Schroders	*66*	*UK*
Robeco	*65*	*Netherlands*

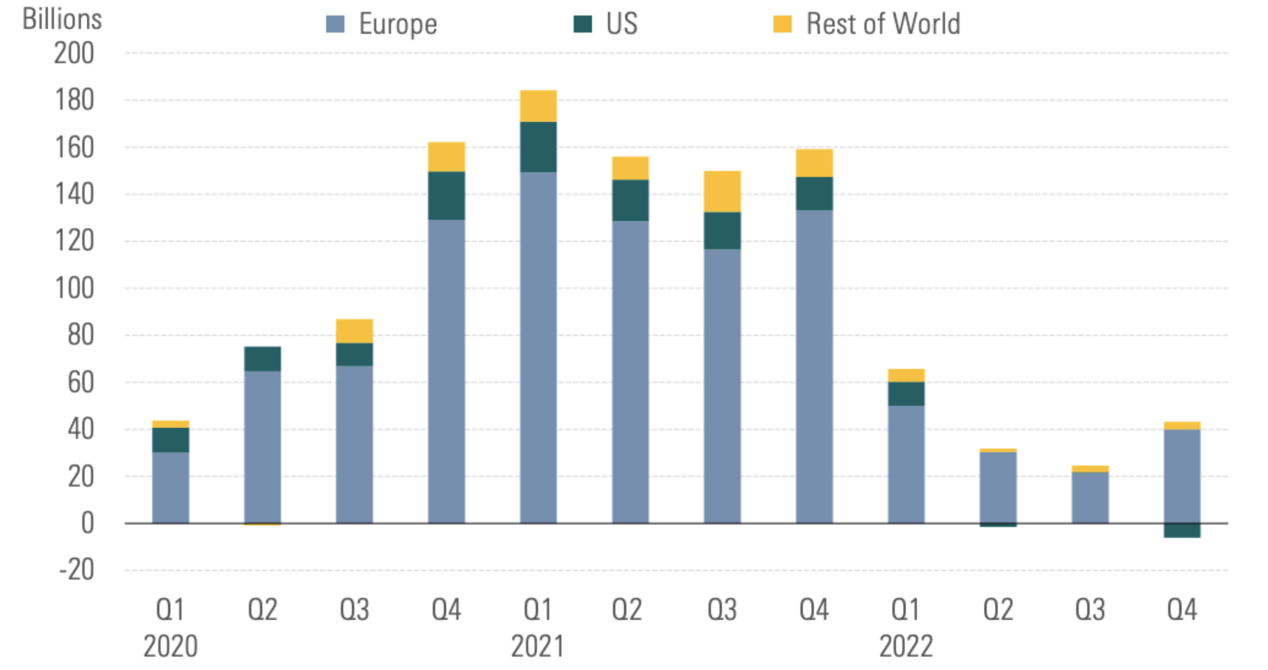
Source: Morningstar Sustainalitics at 30/06/2022

It is important to point out that, even if the data about the growth of ESG labeled funds registered important increases after the releases of SFDR regulation, it is impossible to track down the real numbers about brand new ESG funds and sustainable finance products; in fact it is near to impossible to distinguish the newborn ESG products from the refurbished funds, since many asset managers found themselves in the situation where a rebranding in sustainable direction was needed. At this regard, there is an important study conducted by Morningstar, which studies this exact "rebranding "phenomenon and its effects on sustainability performances in rebranded funds. In 2018, the study analyzes 988 European-based funds after the sustainability rebranding, which usually adds some sustainability keywords in their names. The result of this study shows how in most cases those rebranded funds were able to increase their ESG score in short time; however, on the long run, most of those funds were not able to reproduce good ESG behaviors compared to those funds that were instituted as sustainable since their inception. Morningstar experts studied the exposition of rebranded ESG funds on some critical sectors, such as weaponry, fossil fuels, tobacco and thermal coal, all sector considered as potentially harmful and often object of exclusion in ESG screening processes. Evidence from this report shows how rebranded funds tends to keep higher stakes in their portfolios in these sectors than sustainable funds category in the long run, even if in the short period there is a strong swing towards a more sustainable behavior. [185] This difference between refurbished and newborn sustainable funds was highlighted even more in February 2022, when Morningstar decided to carefully perform a more complete review of all legal and sustainability related disclosures of self-declared sustainable funds. The result was a remotion of around 1.200 funds with combined assets value of $1,4 trillion from the list of sustainable products. This action was coherent at that time, since SFDR regulation was just introduced and general rules were foggy since regulators were working on regulatory framework; to prepare the correct expectations for the market, this de-enlistment was definitely a move in support of building best practices for ESG asset management. Principally, the removed funds came out from the Light Green Category, as known as Art.8 Funds, which definition is ambiguous still today, since it is indicated for funds which are "promoting" sustainable environmental or social features, given that the G factor is not dependent by the fund itself but by the firm. The situation was also highlighted by David Barmes, a senior economist, he said: "The European rules lack precision and clarity, so it should be no surprise if asset managers are overrating the sustainability credentials of their funds"[186] Coherently, with the enter in force of SFDR in 2021, it was possible to observe an increase of ESG AUM in Europe, especially during the period 2020-2022, which registered an increment of 23%

[185] Elaboration from: https://www.morningstar.it/it/news/231667/fondi-basta-cambiare-nome-per-essere-sostenibili.aspx
[186] Source: https://www.ft.com/content/9cf8c788-6cad-4737-bc2a-2e85ac4aef7d

of inflows in ESG related funds and products, passing from 2,6 billions of December 2019 to 3,2 billions of June 2022. [187] Consistently, trends about the huge growth of inflows in sustainable products are in favor of Europe for sure, as reflected in Fig. 1:

Fig 26. – Flows in Sustainable Funds divided by areas

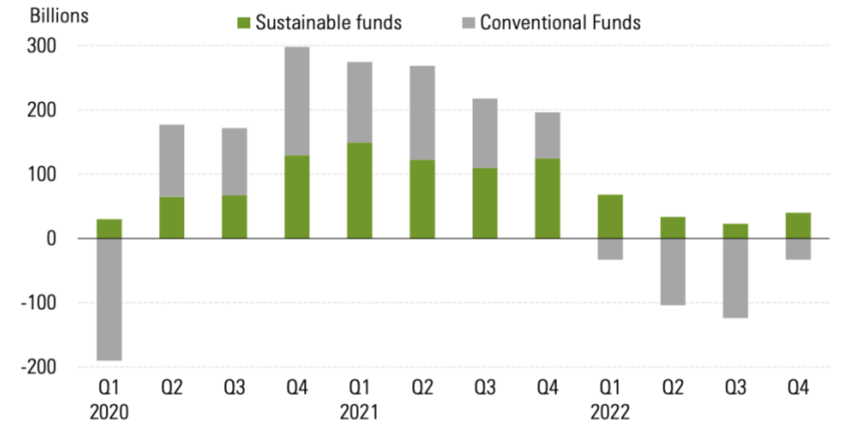


Source: Morningstar Direct

After a solid growth during 2020, in the 2021 levels of inflows maintained high regarding Europe. However, in 2022 was registered a huge decline in the first quarter, the whole Europe sustainable market registered an 88% increase in inflows after three quarters of decline. During the last quarter of 2022, European investors invested 40 billion into sustainable products, even if the financial market conditions were not positive. Additionally, it is possible to observe the net inflows which European investors destined to sustainable products, with the comparison of inflows received from conventional funds:

[187] Source: Morningstar European Funds Report, 2022

Fig. 27 – Sustainable Funds Flows vs Traditional Funds Flows



Source: Morningstar Direct, at 31/12/2022

After an important outflow from the first period of 2020, probably due the shock provoked by COVID-19, conventional inflows maintain a good level until the shortfall at the beginning of 2022 due Ukraine-Russia war. At the contrary sustainable funds' inflows seem to be maintained positive even in shock period, indicating an interest among the investors also in problematic periods.

Regarding European sustainable funds performances, the literature is widely open, but it interesting to observe how the European Securities and Markets Authority (ESMA), published the results of the analysis conducted regarding the performance of actively managed equity UCITS relative to their prospectus and market benchmark indices, between 19 February 2020 and the end of June 2020, during the COVID-19 first wave. The results shed light on equity fund performance by type of management, especially during a period of stress. In synthesis, there was a strong market shortfall on the first part of the period, followed by a fast recovery and then stabilization. The framework offered an opportunity to test and possibly accept the study hypothesis that active equity UCITS outperform their benchmarks during stressed market conditions. However, the main findings show that the sample of funds considered active funds, net of ongoing costs, did not on average outperform their related benchmarks. Data analyzed showed that more than half of the active UCITS analyzed underperformed their benchmarks during the stressed period, between 19 February and 31 March, when COVID-19 stroked the first time, and more than 40% after the stress period, which is between April and June. Evidence showed that only funds categorized as the highest-rated class consistently outperformed the benchmarks. For the rest of the funds analyzed, the difference between the actively managed funds and their benchmarks was zero in best cases, negative in

worst cases. (ESMA, 2022)[188]. This evidence can be relevant, since it may indicate that high-rated sustainability funds are able under certain condition to have higher tolerance of risks that are difficult to account, and then resist better to shocks, such as COVID-19. In addition, another suggested consideration that the ESMA study may indicate is the relationship between strong ESG scores with better overall performances; this specific topic is being debated and studied in literature, however evidence are mixed, also due the fact that sustainable funds are increasingly become important in last few years. Developing regulations and growing interest in sustainable products will surely have an impact, but only future years will consolidate the answer about the question of ESG performances.

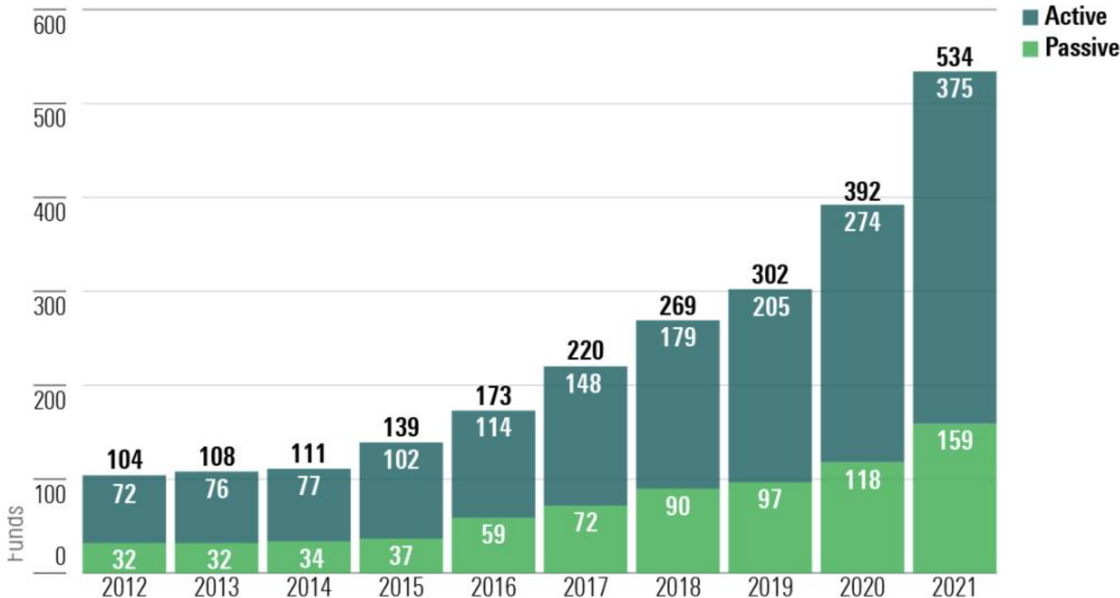
4.3 - Sustainable USA Funds: Trends

Unlike the European ESG framework, which is more regulated and controlled, the U.S. ESG framework lacks from this point of view. First, the normative system in U.S. is not nearly at the level of Eurpean SFDR, since as today there are many differences among different states, among which some exibit anit-ESG positions. The framework of sustainable funds in USA is suffering from different factors that are affecting the demand of this type of product in the U.S. market. This is reflected in the cut that U.S. sustainable funds saw in the fourth quarter of 2022 of about $ 6,5 billions. [189]The only inflows seen during 2022 is in the first quarter, where sustainable funds gained around $ 10 billions. After this gain, sustainable funds lost $ 1,6 billion right after in the second quarter and only gained near to $ 459 million in the third quarter. The peak of inflows was observed during 2021, specifically in first quarter. Evidence indicate that this behavior is mostly driven by the general market environment, considering that the negative result of 370 billions of outflows from mutual funds, registered in 2022, was the worst ever registered since 1993. Another reason that partially justify the outflows may be the energy sector performance. In fact, in 2022, the energy sector performed best around S&P 500 sectors, gaining an outstanding result: +66%. At the same time, other sectors in which ESG equity tends to be more exposed at, such as communication services, consumer discretionary, and information technology, which did perform badly during 2022, influencing the performances of ESG funds. Additionally, even if Wall Street in general was quick in reacting to ESG, regulators of US market were not. In the U.S. framework, there was also a political factor to consider, since with Trump administrations all the sustainable investments improvement in regulatory framework were hindered by the former administration action through Security Exchange Commission

[188] Source: https://www.esma.europa.eu/press-news/esma-news/actively-managed-funds-fail-outperform-benchmarks-during-market-stress
[189] Source: Global Sustainable Funds Flows, Q4 2022

(SEC) and the Department of Labor (DOL). However, the actual administration of President Biden did start to reverse those action and is putting in place new initiative to foster the market of sustainable products, two of the most important being accelerating the processes to use ESG criteria on retirement funds, and the request for information for climate risks and disclosures, which may lead to a mandatory disclosure on critical ESG issues.[190] Trends in asset management assets under management on the territory are on a good level even for individual retail, in fact in 2020 the SIF report identified $4.6 trillion in ESG assets managed for individual retail or high-net-worth clients, up from $ 3 trillion in 2018. The trends of ESG and sustainable funds universe in US during the last ten years are in clear increment, how shown by the fig.28:

Fig.28 – Sustainable Funds Number in US over the last ten years



(Source: Morningstar US Funds Landscape, 2022)

4.4 Analysis of USA ESG Equity Funds

It is interesting to point out if the major and most important ESG US active funds were able to keep the track of S&P500 in last ten years, which is considered one of the most important indexes in the USA Large Cap world, and in past 10 years was one of the best passive performers. At this regard, the aim of this paragraph is to explore the behavior of ESG United States Equity Funds, in particular ones which adopt as one of the benchmarks the S&P500. How was seen in chapter 2, there are several valuations and

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[190] Source: http://www.gsi-alliance.org/wp-content/uploads/2021/08/GSIR-20201.pdf

considerations to consider an investment sustainable or not. To build the sample for the analysis, a system of rules was followed, to screen as much as possible, the analysis universe from which the objects were chosen. In particular, in order to construct the sample other rules were applied:

1) The product is explicitly indicated as sustainable product according to Morningstar ESG Ratings;
2) The product scores at least 4 sustainability point out of 5 on Morningstar based rating (at 31/12/2022), being considered in the top tier peers' group in ESG Ratings according to Morningstar ESG ratings database at the time of analysis;

Those sets of rules, acting as a screening, was imposed to be sure to select the products selected for the analysis were both highly ESG based and as much comparable as possible with the S&P500 benchmark. However, after the first selection, another 3 levels of screening were performed, which are:

3) The asset under management is invested in USA equity with a minimal ratio of 95% of the total aum of the fund;
4) The ESG strategy is indicated in the prospectus.
5) At least include in the sample the top 5 USA ESG Active Funds for AUM;
6) Pick the Funds which performance was on average better than other peers in the 10 years period.

The results of those constraints done by exploiting the screening tool of Morningstar Sustainability portal ended up in 36 equity mutual funds, which are:

Chart 10 – Sample (data in million/$)

Ticker	Name	Total Asset	Investment Syle	Benchmark 1	Benchmark 2
ALGZX	*Alger Responsible Investment Z*	*69,50*	*Large Growth*	*S&P500*	*Russell 1000 Growth*
AMAGX	*Amana Growth Investor*	*3517,00*	*Large Growth*	*S&P500*	*Russell 1000 Growth*
AMIGX	*Amana Growth Istitutional*	*3517,00*	*Large Growth*	*S&P500*	*Russell 1000 Growth*

AVEGX	*Ave Maria Growth*	*8,21*	*Large Growth*	*S&P500*	*Russell 1000 Growth*
BCAMX	*Brown Advisory Sust. Growth*	*6225,00*	*Large Growth*	*S&P500*	*Russell 1000 Growth*
BIAWX	*Brown Advisory Sust. Growth*	*6100,00*	*Large Growth*	*S&P500*	*Russell 1000 Growth*
BTSMX	*Boston Trust SMID Cap*	*581,87*	*Mid-Cap Blend*	*S&P500*	*Russell Mid Cap*
CCVAX	*Calvert Small Cap A*	*2873,00*	*Small Blend*	*S&P500*	*Russell 2000*
CSIEX	*Calvert Equity A*	*6493,00*	*Large Growth*	*S&P500*	*Russell 1000 Growth*
BIRAX	*BlackRock Sustainable Adg*	*12000,00*	*Large Blend*	*S&P500*	*Russell 1000 Growth*
CSXAX	*Calvert US Large Cap Core*	*4130,00*	*Large Blend*	*S&P500*	*Russell 1000 Growth*
DESAX	*DWS ESG Core Equity*	*189,61*	*Large Blend*	*S&P500*	*Russell 1000 Growth*
DFSIX	*DFA Sustainability Core 1*	*5213,60*	*Large Blend*	*S&P500*	*Russell 1000*
DSEPX	*Domini Impact Equity*	*876,91*	*Large Growth*	*S&P500*	*Russell 1000 Growth*
DTCAX	*BNY Mellons Sust. US Equity*	*449,20*	*Large Blend*	*S&P500*	*Russell 1000 Growth*
JHJIX	*Jhancock ESG Large Cap*	*138,54*	*Large Blend*	*S&P500*	*Russell 1000 Growth*
JIIGX	*JP Morgan US Sustainable Leaders*	*196,28*	*Large Blend*	*S&P500*	*Russell 1000 Growth*
LCTSX	*Clear Bridge Sustainability Leaders*	*145,93*	*Large Blend*	*S&P500*	*Russell 1000 Growth*
NBSTX	*Neuberger Berman Sust. Equity*	*1344,00*	*Large Blend*	*S&P500*	*Russell 1000 Growth*

NEXTX	*Shelton Sust. Equity Inv.*	*204,77*	*Mid-Cap Growth*	*S&P500*	*Russell 1000 Growth*
NWCFX	*NW Large Cap Growth ESG*	*639,72*	*Large Growth*	*S&P500*	*Russell 1000 Growth*
PARMX	*Parnassuss Mid Cap*	*6463,00*	*Mid-Cap Blend*	*S&P500*	*Russell 1000 Growth*
PARWX	*Parnassuss Value Equity Inv.*	*4950,00*	*Large Value*	*S&P500*	*Russell 1000 Value*
PGWAX	*Virtus Silvant Focused Growth*	*838,00*	*Large Growth*	*S&P500*	*Russell 1000 Growth*
PIODX	*Pioneer A*	*6924,00*	*Large Blend*	*S&P500*	*Russell 1000 Growth*
PNOPX	*Putnam Sustainable Leaders*	*5144,00*	*Large Growth*	*S&P500*	*Russell 1000 Growth*
PRBLX	*Parnassuss Core Equity Inv.*	*25143,00*	*Large Blend*	*S&P500*	*Russell 1000 Growth*
PRILX	*Parnassuss Core Equity Ist.*	*25143,00*	*Large Blend*	*S&P500*	*Russell 1000 Growth*
PXGAX	*Impax US Sust. Economy*	*260,30*	*Large Blend*	*S&P500*	*Russell 1000 Growth*
REQAX	*Russell Investments Sust. Equity*	*199,63*	*Large Blend*	*S&P500*	*Russell 1000 Growth*
RESGX	*Glenmade Resp. ESG US Equity*	*22,90*	*Large Blend*	*S&P500*	*Russell 1000 Growth*
TADFX	*Transamerica Sust. Equity*	*296,60*	*Large Value*	*S&P500*	*Russell 1000 Value*
TICHX	*TIAA-CREF SC Eq. Advisor*	*6139,00*	*Large Blend*	*S&P500*	*Russell 1000 Growth*
USLIX	*Jhancock US Global Leaders*	*2289,00*	*Large Growth*	*S&P500*	*Russell 1000 Growth*
VFTNX	*Vanguard FTSE Social Index I*	*12774,00*	*Large Blend*	*S&P500*	*Russell 1000 Growth*

WSEFX	Boston Trust Walden Equity	260,00	Large Blend	S&P500	Russell 1000 Growth

(Source: Morningstar, as 31/12/2022)

The sample produced indeed contains the most important USA ESG Funds, most important being Parnassus Core Equity family with 25,143 billion under management and Vanguard FTSE Social Index I with around 13 billion under management. Main investing strategies goes to Large Growth to Large Blend with some exceptions which focus on Mid-Cap Blend and Mid-Cap growth. The benchmark reported in Morningstar reports is indeed S&P500. After having defined the objects of analysis, the historical monthly performances were downloaded with the time reference that goes from 31 December 2012 to 31 December 2022, a full ten-year range. Differently to shares, which performances are based on mere price, that is often immediate, fund's performances depend on Net Asset Value variations over time. The formula of NAV is reported as follows:

$$Net\ Asset\ Value_t\ (Price\ of\ a\ Mutual\ Fund\ at\ time\ t) = \frac{Total\ Assets_t - Total\ Liabilities_t}{\text{Shares Outstanding}_t}$$

where total assets represent the investments in equity or securities in general of the fund, the liabilities are all the internal costs, which can be operative or financial costs, and the shares outstanding are the numbers of shares that are trading in the market or that are being placed if the fund is closed.

All NAV funds' series were downloaded and then calculated the series of returns; similarly, as previous chapter indexes' returns:

$$Fund\ Returns\ (from\ NAV)\ (t1)\ = \frac{NAV_{t1} - NAV_{\ t0}}{NAV_{\ t0}}$$

From return series, which are around 3.600 entries, were calculated expected returns, variance, standard deviation, and the Return/Risk factor (simplified Sharpe). Moreover, an additional indication to better understand the performance comparison between the benchmark and the active fund. The results are as follows.

Chart 11 – Overall Performances of the Sample

Ticker	*Expected Monthtly Return*	*Var.*	*Std.Dev*	*Return/Risk*	*Diff. S&P Perf.*	*Diff. Russell Perf.*
ALGZX	*0,51%*	*0,36%*	*6,02%*	*8,45%*	*-0,41%*	*-0,65%*
AMAGX	*0,74%*	*0,22%*	*4,69%*	*15,81%*	*-0,04%*	*-0,36%*
AMIGX	*0,70%*	*0,23%*	*4,84%*	*14,41%*	*-0,04%*	*-0,33%*
AVEGX	*0,46%*	*0,28%*	*5,27%*	*8,80%*	*-0,39%*	*-0,64%*
BCAMX	*0,67%*	*0,19%*	*4,39%*	*15,18%*	*-0,34%*	*-0,44%*
BIAWX	*1,09%*	*0,23%*	*4,80%*	*22,70%*	*0,20%*	*-0,01%*
BTSMX	*0,64%*	*0,22%*	*4,71%*	*13,56%*	*-0,16%*	*-0,47%*
CCVAX	*0,46%*	*0,27%*	*5,18%*	*8,81%*	*-0,41%*	*-0,65%*
CSIEX	*0,63%*	*0,22%*	*4,73%*	*13,36%*	*-0,23%*	*-0,38%*
BIRAX	*0,57%*	*0,24%*	*4,90%*	*11,59%*	*-0,14%*	*-0,54%*
CSXAX	*0,86%*	*0,20%*	*4,49%*	*19,04%*	*-0,03%*	*-0,25%*
DESAX	*0,40%*	*0,28%*	*5,27%*	*7,56%*	*-0,80%*	*-0,71%*
DFSIX	*0,91%*	*0,21%*	*4,60%*	*19,70%*	*0,02%*	*-0,20%*
DSEPX	*-0,36%*	*0,46%*	*6,80%*	*-5,24%*	*-1,13%*	*-1,41%*
DTCAX	*0,25%*	*0,28%*	*5,31%*	*4,68%*	*-0,64%*	*-0,80%*
ESGU	*0,24%*	*0,25%*	*5,05%*	*4,76%*	*-0,71%*	*-0,84%*
JHJIX	*0,88%*	*0,23%*	*4,79%*	*18,46%*	*-0,09%*	*-0,23%*
JIIGX	*0,52%*	*0,34%*	*5,81%*	*9,02%*	*-0,25%*	*0,23%*
LCTSX	*0,90%*	*0,32%*	*5,68%*	*15,92%*	*0,16%*	*-0,07%*
NBSTX	*0,11%*	*0,28%*	*5,28%*	*2,09%*	*-0,77%*	*-0,91%*
NEXTX	*1,19%*	*0,45%*	*6,72%*	*17,65%*	*0,42%*	*0,13%*
NWCFX	*0,26%*	*0,39%*	*6,22%*	*4,23%*	*-0,67%*	*-0,79%*
PARMX	*0,48%*	*0,18%*	*4,20%*	*11,33%*	*-0,55%*	*-0,59%*
PARWX	*0,71%*	*0,28%*	*5,33%*	*13,38%*	*-0,22%*	*-0,36%*
PGWAX	*0,42%*	*0,34%*	*5,87%*	*7,20%*	*-0,61%*	*-0,64%*
PIODX	*-0,01%*	*0,26%*	*5,12%*	*-0,17%*	*-0,91%*	*-1,06%*
PNOPX	*0,50%*	*0,29%*	*5,41%*	*9,22%*	*-0,43%*	*-0,57%*
PRBLX	*0,42%*	*0,16%*	*4,01%*	*10,36%*	*-0,55%*	*-0,63%*
PRILX	*0,42%*	*0,16%*	*4,01%*	*10,37%*	*-0,55%*	*-0,63%*
PXGAX	*0,34%*	*0,23%*	*4,83%*	*6,97%*	*-0,66%*	*-0,71%*
REQAX	*0,20%*	*0,22%*	*4,69%*	*4,27%*	*-1,08%*	*-0,84%*
RESGX	*0,64%*	*0,28%*	*5,28%*	*12,13%*	*-0,32%*	*-0,42%*
TADFX	*-0,50%*	*0,35%*	*5,90%*	*-8,46%*	*-1,33%*	*-1,47%*
TICHX	*0,64%*	*0,27%*	*5,22%*	*12,35%*	*-0,37%*	*-0,49%*
USLIX	*0,43%*	*0,26%*	*5,12%*	*8,34%*	*-0,46%*	*-0,64%*
VFTNX	*0,95%*	*0,20%*	*4,50%*	*21,02%*	*0,04%*	*-0,11%*

WSEFX	*0,69%*	*0,18%*	*4,25%*	*16,21%*	*-0,13%*	*-0,37%*
Russell 1000	*1,10%*	*0,22%*	*4,70%*	*23,48%*	*0,00%*	*0,00%*
S&P500	*0,92%*	*0,18%*	*4,26%*	*21,58%*	*0,00%*	*0,00%*

(Source: Elaboration on Yahoo Finance data)

The framework is clear, higher return/risk factor along with other financial fundamentals, such as expected returns and standard deviations, indicates that most only two funds out of 30 were able to perform better than the S&P500 benchmark. This is indicated by higher Simplified Sharpe Ratio (which is a valid indication, since the exposition of those funds are near to 100% equity, so no debt products is involved in evaluation), which only for the two cases of Vanguard FTSE Social Index I (VFTNX) and of Brown Advisory Sustainable Growth (BIAWX). The result is also consolidated by watching the column of the average difference between funds performances and S&P500 ones, even if in this case there are two more overperformers, the Shelton Sustainability Investor Fund (NEXTX), and Clear Bridge Sustainability Leaders Fund, whom however do not beat S&P500 in terms of returns/risks due a higher than average (peers) standard deviation. Outside that, the only two cases in which the difference is a positive number, indicating that on average the funds' performances were higher than the S&P500 ones) are the two active funds cited before. However, it is important to point out that not all those funds performed badly, they simply, on average, underperform the S&P500 benchmark. To show the difference between bad and good performances, here are reported the 10y cumulative difference on expected returns in respect with the benchmark, and 10 year gross value growth of the indexes :

Charts 12 – 10y Sustainable Equity Funds Data

Ticker	*10 YearDiff/Russell*	*10 Year Diff. S&P*	*10Y Gross Growth*
ALGZX	*-40,29%*	*-28,89%*	*27,35%*
AMAGX	*-36,77%*	*-21,66%*	*112,76%*
AMIGX	*-33,17%*	*-17,37%*	*1,12%*
AVEGX	*-56,28%*	*-44,56%*	*48,46%*
BCAMX	*-42,18%*	*-26,77%*	*97,86%*
BIAWX	*-3,37%*	*19,68%*	*220,57%*
BTSMX	*-36,38%*	*-20,89%*	*87,93%*
CCVAX	*-51,46%*	*-29,81%*	*46,89%*
CSIEX	*-50,50%*	*-37,77%*	*55,29%*

BIRAX	*-48,91%*	*-40,41%*	*72,09%*
CSXAX	*-27,63%*	*-8,02%*	*146,56%*
DESAX	*-61,70%*	*-48,86%*	*35,54%*
DFSIX	*-19,80%*	*-2,36%*	*160,31%*
DSEPX	*-85,10%*	*-81,25%*	*-49,69%*
DTCAX	*-65,03%*	*-55,09%*	*20,79%*
ESGU	*-51,90%*	*-41,35%*	*9,15%*
JHJIX	*-18,02%*	*-18,41%*	*81,89%*
JIIGX	*5,87%*	*-6,47%*	*9,85%*
LCTSX	*-7,75%*	*-10,09%*	*95,12%*
NBSTX	*-70,15%*	*-59,93%*	*7,86%*
NEXTX	*5,97%*	*31,64%*	*208,08%*
NWCFX	*-63,63%*	*-54,73%*	*7,79%*
PARMX	*-52,79%*	*-39,36%*	*67,14%*
PARWX	*-21,23%*	*-15,43%*	*104,19%*
PGWAX	*-56,64%*	*-46,47%*	*40,89%*
PIODX	*-74,99%*	*-67,66%*	*-9,80%*
PNOPX	*-52,15%*	*-40,22%*	*58,25%*
PRBLX	*-56,07%*	*-42,53%*	*60,68%*
PRILX	*-56,04%*	*-42,50%*	*60,73%*
PXGAX	*-57,53%*	*-45,76%*	*28,51%*
REQAX	*-67,05%*	*-57,14%*	*19,33%*
RESGX	*-31,93%*	*-18,29%*	*51,96%*
TADFX	*-86,07%*	*-80,89%*	*-45,18%*
TICHX	*-35,38%*	*-23,04%*	*43,39%*
USLIX	*-55,75%*	*-44,90%*	*48,31%*
VFTNX	*-15,12%*	*9,39%*	*191,27%*
WSEFX	*-27,29%*	*-20,51%*	*115,48%*
Russell[191]			*166,60%*
S&P500	*0,00%*	*0,00%*	*169,21%*

(Source: Elaboration on Yahoo Finance and Morningstar data at 31/12/2022)

Overall performances are positive, without counting the disastrous behavior of DSEPX, PIODX and TADFX Funds, which performed really bad; the important fact to point out is that the majority of those active funds were not able to outperform the S&P500 during the ten-year period between 2012 and 2022. Over performances, which in the samples are below the benchmark's ones, it is interesting to observe how the sample behaves in terms of funds costs. The general ratio which is widely used as an indication to

[191] Averages of Russell indexes, however each fund was compared with its specific benchmark

evaluate costs of a fund is called expense ratio, and it is the annual fee that all funds, including ETF, and Active managed funds charge to the holders of fund's shares. In practice, the expense ratio is expressed as a percentage, which will be deducted from the fund's average net assets each fiscal year and follows a daily basis accrual. This ratio includes some generic administrative funds costs, and management and administrative fees; also, in most cases included all that costs directly related on assets in portfolio. Expense ratio does not account all the expenses though, in fact usually transaction fees, brokerage costs and initial or deferred sales charges are not accounted in the expense ratio. A good indication for expense ratio is that it generally it follows economies of scale, meaning that if the fund's asset is small expense ratio can be quite high, due the fact that the fund must pay its expenses from a small asset base; this implies that usually the expense ratio should be smaller when net asset of the fund gets higher, because expenses are spread over a wider base. [192] Recent trends show how the expenses for investing in a fund is being cheaper than 20 years ago, in fact research shows how from 2000 to 2020 the expense ratio payed by the investor drastically diminished from 0,93% to 0,41%, generating a huge flow of savings for funds investors. [193] About ESG and sustainable funds, though, some evidences are reporting that investor which chose to participate in a sustainable fund may incur with high frequency to pay a "greenium", like a premium costs on average expense ratio and others fee. A Morningstar study conducted in 2020 reported that the weighted average expenses for environmental, social and governance funds which are categorized as sustainable or ESG are higher in respect to their traditional peers (0,61% vs 0,41%). [194] These steeper levels of fee charged often are not translated in bigger returns, neither to better ESG scores in general. Also, according to Ycharts, which studied nearly 4900 mutual funds and ETF through MSCI, average-weighted expenses ratios in complex were indicating superior charges of fees for funds indicating sustainability references in their names in the US equity funds market. Furthermore, the research indicates also that funds that possess asset class with higher-than average ESG scores charged lower costs rather than the other funds with sustainability keywords in their names.[195] This tendency was also observed in the study conducted by El Ghoul and Karoui (2020), indicating that also increase in inflows and significant rise in portfolio turnover were observed. A relevant factor that surely induced some of those funds to change names and include sustainability references are the new rules proposed by the Security Exchange

[192] Elaboration from: https://www.morningstar.com/invglossary/expense_ratio.aspx
[193] Source: https://www.planadviser.com/morningstar-finds-esg-funds-expensive-conventional-funds/
[194] Source: https://braggfinancial.com/esg-investing-help-or-hype/#:~:text=When%20comparing%20passively%20managed%20funds,annual%20expense%20ratio%20of%200.03%25.
[195] Source: https://get.ycharts.com/resources/blog/esg-mutual-funds-etfs-fees-expense-ratios/#:~:text=For%20equity%20and%20allocation%20funds,funds%20with%20subpar%20ESG%20Scores.

Commission during the 2022, which indicates that for all self-declared sustainable funds now is mandatory to publish ESG considerations and factors in prospectus, aiming to start constructing and implementing stricter rules about ESG financial products and clear indications for disclosures[196].

To verify at which level the expense ratios of the sample are attested, the data about adjusted expenses ratio were observed, and compared with the fee level of their specific funds sector (Large Cap, Mid Cap ecc).

The comparison between the sample fund Adjusted expenses ratios and a comparison between their sectors is reported:

Chart 13 – Sustainable Equity US Funds Adjusted Expenses Ratio and Fee Levels

Ticker	*Adjusted Expenses Ratio*	*Adjusted Expenses Ratio Sector*	*Fee Level (based on quantile)*
ALGZX	*0,95%*	*0,65%*	*High*
AMAGX	*0,91%*	*0,81%*	*Above Average*
AMIGX	*0,64%*	*0,69%*	*Below Average*
AVEGX	*0,90%*	*0,81%*	*Above Average*
BCAMX	*1%*	*0,81%*	*Above Average*
BIAWX	*0,78%*	*0,81%*	*Average*
BTSMX	*0,75%*	*0,84%*	*Below Average*
CCVAX	*1,19%*	*1,24%*	*Below Average*
CSIEX	*0,91%*	*1,03%*	*Below Average*
BIRAX	*0,73%*	*1,03%*	*Low*
CSXAX	*0,49%*	*1,03%*	*Low*
DESAX	*0,80%*	*1,03%*	*Low*
DFSIX	*0,18%*	*0,69%*	*Low*
DSEPX	*1,09%*	*1,03%*	*Above Average*
DTCAX	*0,95%*	*1,03%*	*Below Average*
JHJIX	*0,87%*	*0,69%*	*High*
JIIGX	*0,34%*	*0,62%*	*Low*
LCSTX	*1,20%*	*0,81%*	*High*
NBSTX	*1,03%*	*0,81%*	*High*
NEXTX	*1,16%*	*0,99%*	*Above Average*
NWCFX	*0,56%*	*0,62%*	*Below Average*
PARMX	*0,96%*	*0,99%*	*Average*

[196] For more details: https://www.sec.gov/news/press-release/2022-92

PARWX	*0,88%*	*0,81%*	*Average*
PGWAX	*0,93%*	*1,03%*	*Below Average*
PIODX	*1,06%*	*1,03%*	*Average*
PNOPX	*0,99%*	*1,03%*	*Average*
PRBLX	*0,82%*	*0,81%*	*Average*
PRILX	*0,61%*	*0,69%*	*Below Average*
PXGAX	*0,70%*	*1,03%*	*Low*
REQAX	*1,28%*	*1,03%*	*High*
RESGX	*0,85%*	*0,81%*	*Average*
TADFX	*0,74%*	*0,62%*	*High*
TICHX	*0,25%*	*0,81%*	*Low*
USLIX	*0,88%*	*0,69%*	*High*
VFTNX	*0,12%*	*0,69%*	*Low*
WSEFX	*1%*	*0,69%*	*High*

Chart 14 – Distribution of Sustainable Equity funds costs per quantiles

Quantile	N. Of Funds
High	8
Above Average	5
Average	7
Below Average	8
Low	8

The data about Adjusted expenses ratios of the sample are not indicating a clear path, the evidence in fact the results are mixed, including similar numbers for expenses ratios qualified as high in respect to the peers' sector and for expenses ratios qualified as Low or Below Average.

Conclusions

The frameworks about sustainability funds are complex, in main recent years the largest inflows were captured by the European and US territory, and they together combined manage more than 80% of the total ESG AUM. In the last quarter of 2022, large inflows of ESG funds conveyed in European based funds, while U.S. sustainable funds exhibit a trend of negative flows, after an entire period of positive inflows but in decline. Regulatory frameworks in the US about asset managers is not as developed as the European one, the SEC is trying to foster sustainable investments through apposite regulations, after a

period in which U.S. tended to negligee the argument of sustainability and ESG. The performances observed from the sample constructed of sustainable equity U.S. funds may suggests that over the period analyzed the performances of those funds were mostly inferior in respect to their benchmarks; this result is in line with multiple number of research that reports how mostly active managed funds on a long-time (usually ten-year period is enough) were not able to beat the market, even if trends showed both the presence of important inflows for sustainable funds and also a positive trend regarding the number of sustainable funds issued. Then, expenses ratio as a measure of costs were analyzed, with the expectation that the sample may resemble the behavior described in Morningstar research, indicating the presence of a "greenium" in the expenditures for sustainable funds investors. However, the data available from the sample is not able to indicate a clear indication, with 13 funds that do present at least above average costs and 16 that instead are charging lower costs respect to sectors average.

Final considerations

This paper starts from the very beginning, introducing the history of the sustainable and responsible investments from the beginnings; the Quackers first exclusions during the 1700, passing from the sermons of John Weasley to the troubled nineties period, in which the first true signals of sustainable investments can be found. The last part of the first chapter describes the European attempt on regulatory framework and the action plan to improve ESG regulations, with a particular focus on United Nations initiatives for companies, states and for important market actors such as institutional investors and asset management companies. The second chapter resumes the importance of sustainable finance as a powerful instrument to slow down environmental impacts of human activity and to foster and develop the financial system towards a low emission-based system. At the same time, it was shown some considerations that the sustainable investments imply for financial institutions need to face, such as the integrations of the ESG factors in the production processes, deriving from the development of the corporate social responsibility concept; then the definitions of ESG ratings and the structured process that usually rating agencies use for their evaluations, even if most of the times valuations form different rating agency may vary a lot. At the end of the second chapter, all ESG investment strategies were described along with relative strength and weaknesses. The third chapter introduces some of the most relevant and used sustainability indexes and their ten-year performance is compared; results shown that eight indexes out of twelve outperformed their benchmark overall, creating in these cases a higher value for the investor which decided in past years to opt for investing in those specific sustainable indexes products. The last chapter introduces the situation

of fund inflows in European territory and in U.S., which both combined account for more than 80% of sustainable assets under management. In Europe the situation seems more robust since it also can rely on more structured and evolved regulation which U.S. struggled to reproduce still today. In EU the stream of inflows for sustainable products has been significantly higher each year until 2022, due Ukraine-Russia war, experiencing the highest levels of inflows during the boom of 2021. The U.S. sustainable market instead seems to be more cautious about adopting ESG indications, so a sample of Active Mutual Equity Funds was constructed basing on sustainability and relevance rules to observe the performances of past ten-years against the benchmarks. Results shown that most sustainable equity funds analyzed failed to outperform their benchmark indexes, the result is consistent with the side of literature explicating that on average, active managed funds are incapable of beating the market. In addition, the expenses ratios of the samples were reported and analyzed in order to see if there was evidence of an "extra" charge over the average of each relative fund sectors. The results of the sample are inconclusive in showing a clear difference, but most of them did report lower or an under average expense ratios in respect to their sector averages. In conclusion, the sustainable finance world will surely grow stronger in next years, as also macrotrends indicates, due the necessity to reduce the human activities' impact on the disastrous effects of climate changes. Upcoming years will provide stronger ESG data and with high probability a more standardized regulatory system among developed countries. Trends indicates that most probably ESG and non-financial sustainable reports are going to increase, surely helping a system that grants the transparency that ESG features need, to be valid and not exploited for convenience, as sometimes happens with greenwashing or rebranding phenomena.

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