Impact investing for climate change

By AICCON – Italian Association for the Promotion of the Culture of Co-operation and of Nonprofit

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Introduction

"At the World Bank Group we will use our financial capacity to help tackle climate change. We will innovate and bring forward new financial instruments. We will use our knowledge and our convening power. We will use our evidence and data to advocate and persuade. In short, we will do everything we can to help countries and communities build resilience and adapt to the climate impacts already being felt today and ensure that finance flows to where it is most needed. Our response to the challenge of climate change will define the legacy of our generation. The stakes have never been higher."

Dr. Jim Yong Kim

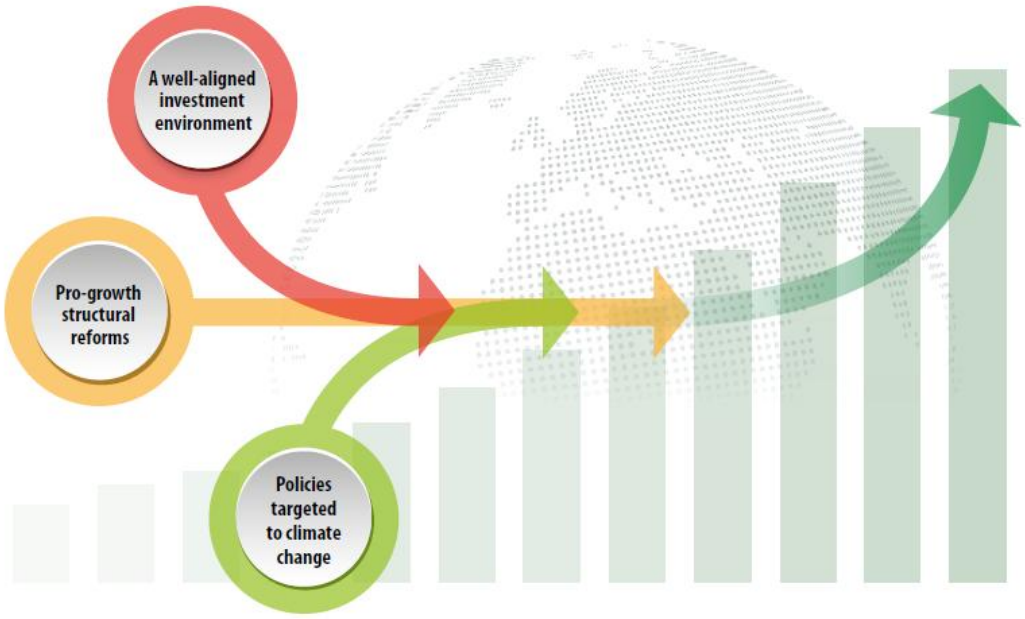
President, World Bank Group (2014)

Some years ago, the big issue of climate change seemed a dissertation topic for top-end scientists that, at time, could be perceived as catastrophist, just as directors of apocalyptic films. Since then, the climate situation has been worsening, but, concomitantly, the strategies and work aimed at curbing and reversing this phenomenon have been growing at the same pace.

Today, however, private citizens, political citizens and/or entrepreneurs/investors can contribute, with their behaviours and their business and financial strategies, to an actual turning point and to deeply transforming the economic model of growth and development. This awareness has considerably developed in Italy, where – according to a survey carried out by Schroders in 2017 – the majority of respondents adopt behaviours aimed at contributing to a shift towards a more sustainable society: 79% is careful about waste reduction and separate collection, 63% buys local products, 60% takes account of his/her ecological footprint in making decisions on mobility and home energy consumption [Schroders, 2017].

As maintained in a report recently issued by the Organization for Economic Co-operation and Development [OECD, 2017], policies on climate changes are key for development and growth, as are structural reforms and environmental investments. The combination of these three elements is crucial to promote inclusive and sustainable growth, contributing to the increase in market competition and fostering access to employment and the improvement in people's skills.

Figure 1. – Essential elements for a policy framework that is efficient in fostering growth



Source: OECD (2017)

Therefore, along with policy makers, the finance sector can give - and is giving - a considerable contribution. Finance that protects the environment and supports the social fabric could necessarily become the finance of the future and, maybe, also of the present.

In the wake of the Paris Agreement, the concern for climate changes has become a driver, new "green" financial products have started to be used and climate bonds continued to be in high demand. Finally, pension funds from all over the world are demonstrating that they consider sustainable investments as critical factors for long-term investments and are increasingly asking for their investment to be supplemented with environmental, social and governance (ESG) elements. Evidence of this is the first report on ethical and sustainable finance in Europe, which has estimated that this sector accounts for a total of Euro 715 billion worth of assets, close to 5% of the EU gross domestic product.

However, even though finance plays a key role in addressing climate changes, most players involved are less than transparent in reporting the impact of their investments. This is the reason why this document focuses on impact finance, which includes investing in businesses, organizations and funds that operate with the goal of achieving a measurable, positive social impact alongside and a financial return [Social Impact Investing Task Force, 2015]. Impact investing stands out for the investor's express intention to generate social and/or environmental impacts; moreover, the investor must be motivated by an expected financial return. The flexibility of the expected rate of return may come below the average market level or in line with it. Therefore, very briefly, we are speaking of external investors that invest capital, which is remunerated based of the measurement of the generated impact.

Impact finance is becoming more and more important in Europe, as stated in the recent interim report published in July 2017 by the European High Level Expert Group on sustainable finance, during the international "*One Planet Summit*" on 12 December. In Italy, the interest in this topic is also growing: participation in the G8 *Social Impact Investment Force* (2014) and the creation of the *Social Impact Agenda* (2016) are two big steps in this direction. Moreover, institutional investors and banks are paying constant attention to this topic. As regard the climate change challenge, a lot still needs to be done in terms of impact investing tools and supporting metrics, both at a domestic and at a European level. The report gives an overview of the metrics and indicators used, along with some significant cases.

1. Finance for the environment: a fast-growing market

Within the scope of the will to change the human development model, we believe that finance is an important driver that, having the power to steer economic and industrial choices, plays a key role that could also be useful in protecting the planet in several aspects, such as: procurement and the type of energy used, water, waste, land fertility. All these aspects, which seem mainly related to natural sciences, have become a crucial pivotal point for the economic, political and social agenda of the third millennium. Indeed, climate and, specifically, the warming of planet Earth, have become a social issue that requires attention and strong commitment in order to reach a turning point. This shall start from economic and financial giants, go through small and medium enterprises, public administrations in the widest meaning, all the way to individual people. It is mankind *modus operandi* itself that has caused this situation, especially through energy production and the emission of "climate-altering" gases in the atmosphere, first of all carbon dioxide. Once in the atmosphere, also through consumption of business-as-usual fuels, these gases act as a thermal blanket wrapping up the earth and retaining heat, the so-called "greenhouse effect". On top of this, there are other human actions that worsen the matter, such as deforestation; therefore, making a complex issue simple, we could say that, rather than "mitigate" the effect of carbon dioxide purifying the atmosphere, we let carbon have free action.

This means that, starting from present and future investments, we need to become aware of the situation and to address it in a resilient way, ensuring that the cost of transition to a less polluting production model becomes an opportunity and a long-term investment.

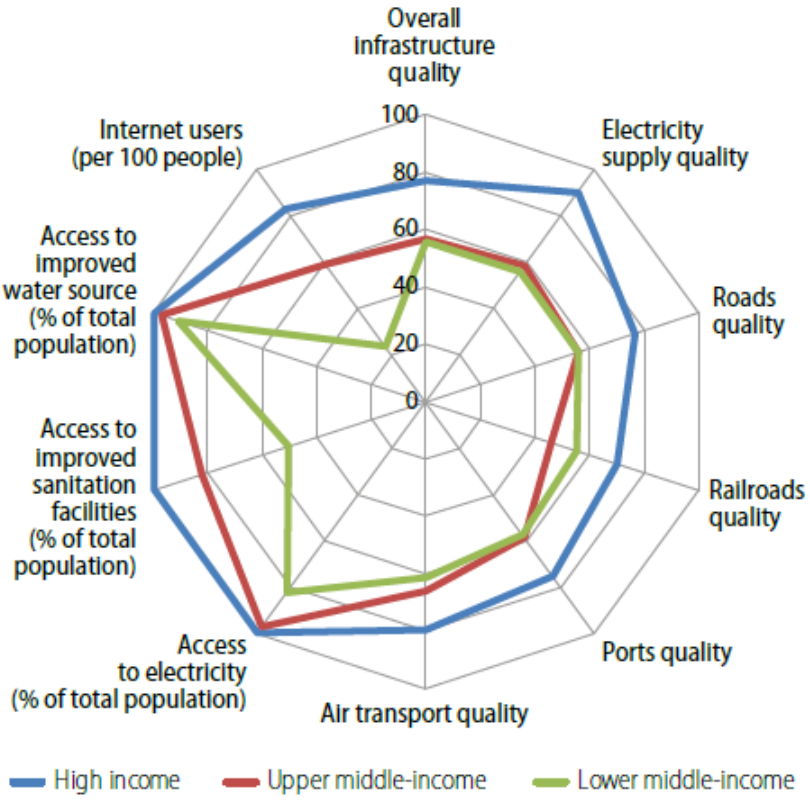
An important principle guiding environmental investments impacting on climate changes concerns corporate production processes, including different uses of raw materials, energy procurement, as well as the upgrading of infrastructure and organizational models. Investments steered by these factors aim at correcting the inertia of the economic model and, thus, fostering increased respect for the environment and nature, and ensuring that risks (physical, technological, legal, reputational and social risks) associated with climate warming are forecast and mitigated in advance.

Developing Countries require a separate line of reasoning. Indeed, these Countries have contributed to global warming to a limited extent, exactly because of their lower development. However, it would be advisable to try and channel their growth directly towards an ecologically sustainable model, with a concomitant commitment by developed Countries to be accountable for and work to change their economic model based on Co2 and on "climate-altering" factors. Support to this approach has been given by the Global Commission on the Economy and Climate that, with its flagship project "The New Climate Economy", was set up to help governments, businesses and society make better-informed decisions on how to achieve economic prosperity and development while also addressing climate change. This project was commissioned in 2013 by the governments of Colombia, Ethiopia, Indonesia, Norway, South Korea, Sweden and the United Kingdom. The Commission has operated as an independent body and, while benefiting from the support given by partner governments, has been given full freedom to reach its own conclusions. The 2016 report, in general, states that the Global South will use approximately two thirds of global infrastructural investments (about USD 4 trillion a year) to build new sustainable infrastructure "skipping" the inefficient, tentacular and polluting systems of the past. Developing Countries need infrastructure to improve access to basic services, to steer development and to meet the needs of peoples and of a fast-growing middle class. In the meantime, advanced economies must replace and update their long-neglected systems for energy transmission and distribution, water and sewer pipes, mass transport systems and other infrastructure.

Infrastructure quality, along with the subsequent access to basic services, is closely related to a Country's development level and it changes significantly based on average income (Figure 2). The OECD has estimated that USD 95 trillion worth of investment in infrastructure (energy, transport, water and

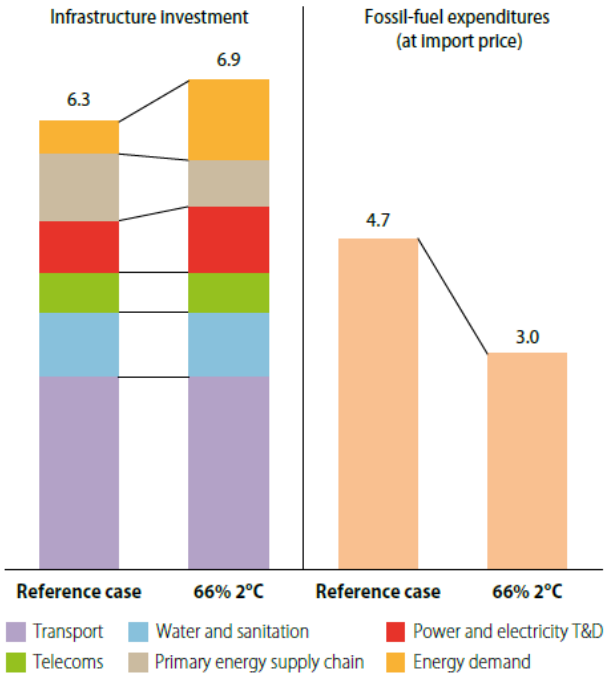
telecommunications), i.e. approximately 6.3 trillion a year – without taking account of any possible future investments and policies by governments in order to mitigate climate changes. The transport sector accounts for 43%, the energy one for 34% of required investments, of which 60-70% concerns emerging economies (Figure 3).

Figure 2. – Quality of infrastructure conditions and access to basic services in G20 Countries broken down by income class



Source: OECD (2017) on data of the WEF (2015) and World Bank (February 2017 access)

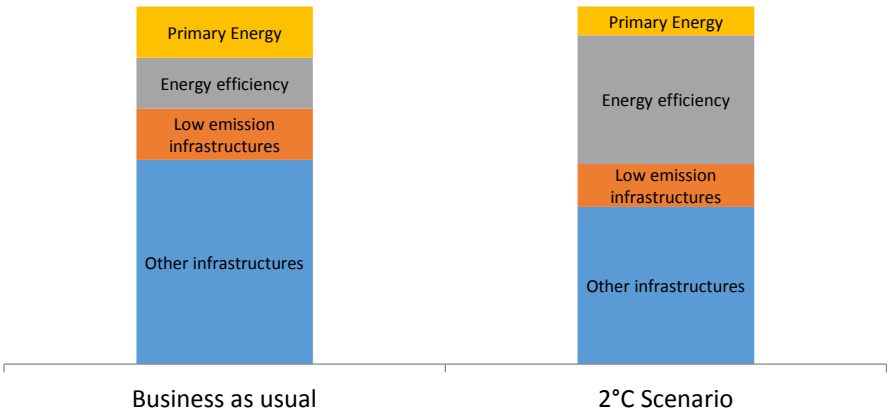
Figure 3. – Required investments in infrastructure and fossil fuel expenditure 2016-2030 trend (trillions of Dollars, 2015)



Source: OECD (2017), on data of IEA (2016 and 2017), OECD (2012), McKinsey (2016), Booz Allen Hamilton (2007), OECD (2006)

It has been estimated that, in order to transform the energy sector, investments in oil, coal and gas have to decrease by about one third by 2030, with a concomitant and proportional increase in investments in renewable energy, if the global average temperature increase is to remain below 2°C (Figure 4).

Fig.4. – Distribution of investments in order to transform the energy sector by 2030[1]



Source: Bhattacharya et al., 2016; Global Commission on the Economy and Climate, 2014

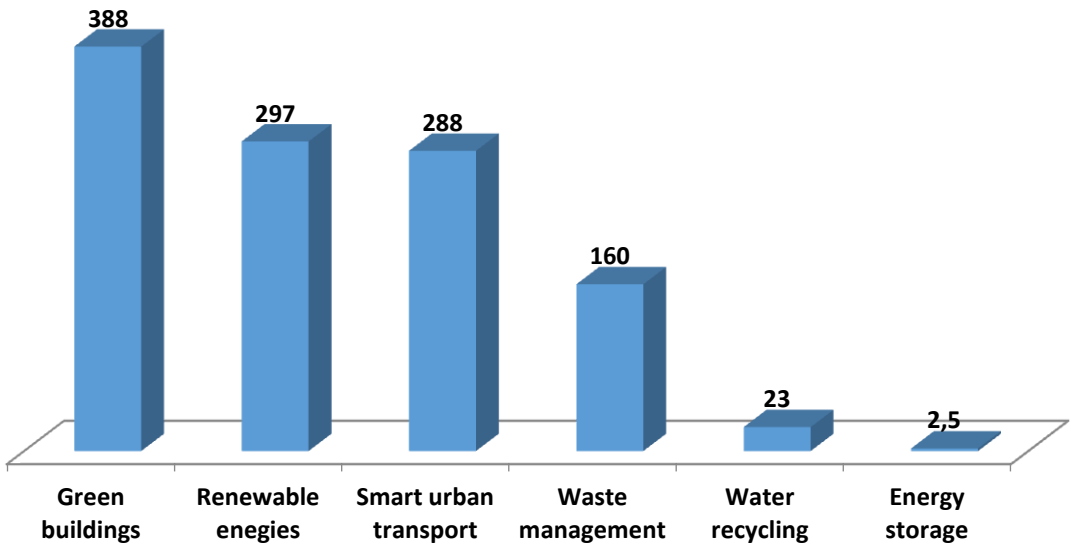
Moreover, the 2017 report by the IFC (International Finance Corporation of the World Bank) has estimated that, in order to achieve the Paris Agreement targets[2], from today to 2030, over **23 trillion dollars worth of potential investments in 21 big emerging markets will be required.**

[1] Primary energy: oil, gas and coal extraction; Energy efficiency: buildings, energy and transport; Low carbon emission basic infrastructure: renewable energy, nuclear energy, low carbon emission transport (for example, light railways and rapid transit systems for town buses), climate-proof water and sanitation services, including some adaptation infrastructure (e.g. dams and protection against floods); Other central infrastructure: standard water/sanitation services, carbon-intensive transport (e.g. roads), energy production and telecommunications.

Along with Governments, businesses and hundreds of local administrations have undertaken ambitious commitments as regards the environment and are investing in low carbon emission solutions. In 2016, 190 of the 500 Fortune companies reported USD 3.7 billion worth of savings achieved thanks to the efforts made to move to renewable energy sources and energy efficiency. **Involving the private sector in climate-smart investments will be essential to achieve the Paris Agreement targets** [International Finance Corporation, 2017a and 2017b]. Even though global annual investments in projects regarding climate changes are over 1 trillion Dollars (and growing), the *New Climate Economy* initiative has estimated that the world must increase the present investments - to 6 trillion Dollars a year - between today and 2030 - just to meet the global infrastructure requirements [New Climate Economy, 2017].

Two thirds of these investments are needed in low- and medium-income countries that have achieved an increasing portion of the gross world product (GWP) since 1990. Not only big economies such as China and India grow at a fast rate, but also many smaller Countries in Asia, Africa and Latin America. This means that nearly all forecast economic growth - and the related increase in greenhouse gas emissions - is expected to be generated by developing Countries. Businesses are looking for innovative solutions in order to reduce greenhouse gas emissions and to make a profit in sectors such as renewable energy, Climate-smart agriculture (CSA), green buildings and sustainable transport, generating employments and making cities cleaner, healthier and more resilient [International Finance Corporation, 2017a and 2017b]. **Today, the combined markets in the sectors below are worth more than $1.1 trillion** (Figure 5).

Figure 5 – Global investments on environmental projects (billions of Dollars)



Source: International Finance Corporation, WB, 2017

In **2016**, the global capacity for renewable energy generation increased by 9%; an increase that has quadrupled since **2000**. For the **second year in a row**, renewable energy accounted for more than one half of new added energy generation worldwide. Solar power is becoming less and less expensive must faster than expected: the prices of photovoltaic (PV) modules have decreased by 72% since 2009 and experts have forecast another 67% decrease by 2040.

[2] In order to reach climate-neutrality by the end of the century, the key points of the Paris Agreement its action plan include reducing emissions, also through the commitment of local governments, keeping the average increase in the world temperature well below 2°C and the aim is to limit such increase to 1.5°. In Paris, Governments agreed to come together every five years to transparently report on what is being done to achieve the set targets and to set more ambitious ones as required by science. Moreover, the Agreement acknowledges the importance of addressing the losses and damage associated with the adverse effects of climate changes through cooperation, assistance and set monetary investments.

Wind power is also making good progress in terms of costs and performances. The supply and use of electric power are becoming a community-based decentralized business, especially in Africa and Asia, where communities use smarter energy combining small-scale solar powers and batteries. Electric vehicles are also becoming more and more popular, whereas battery costs continue to decrease: down by 73% since 2000 and by 50% since 2014.

This fast growth is expected to continue, for example **Bloomberg New Energy Finance has forecast 6 trillion Dollars worth of new investments** in wind and solar power between today and 2040. Electricity world markets will be fully remodelled with wind and solar power that will be the two leading energy generating sources, vs. fossil fuels that will have less than one-third capacity. Nearly one half of global investments in the new energy capacity up to 2040 will be in Asia and in the Pacific, with 4 trillions of trillions in China and India.

Tab.1. - Forecast for the 2030 – 2040 period in terms of investments in renewable energy

	2030	2040
Prices of PV modules		-67%
New investments in wind and solar power– Trillions USD		+6
New investments in wind and solar power in China and India – Trillions USD		+4
Water and sanitation services – Trillions USD	+13	

Source: International Finance Corporation, WB, 2017

The markets of successful climate enterprises are on the increase: In 2015, investments in energy-efficient buildings at a global level came to USD 388 billion, increasing by 9% vs. the previous year.

While up to now, this investment has been fully made in developed Countries, fast-increasing urban populations in Countries such as China and India are going to account for most of the new growth. At present, heating, wind power and energy-saving air conditioning represent a global market worth $76 billion. Businesses and cities are cooperating to develop urban infrastructure facilities that generate low carbon emissions and are resilient, in order to provide people with sustainable transport, water and waste management services. In the next ten years, several billions of dollars will be invested in transport infrastructure, with many investment opportunities for businesses, including electric vehicles, BRT[3], light metro and multimodal transport, as well as logistics.

Waste global market is already worth $154 billion and is expected to double in value by 2020, whereas water and sanitation services are going to require investments for over $13 trillion between 2016 and 2030. Businesses are cooperating with local governments in order to offer low-carbon water saving systems, as well as waste-to-energy plants. Climate-smart agriculture also represents a fast-growing market, because food producers are striving to meet the increasing demand regarding modern and sustainable diets. Between 2004 and 2013, global investments in the agri-food sector tripled in value to over $100 billion. Climate-smart agricultural practices are gaining ground, while businesses are trying to meet the combined challenge of food safety and climate changes.

The government action is speeding up the development of this market. As already stressed, addressing climate change requires large-scale economic transformation, with important changes in the energy system, industrial processes, heating and cooling, transport systems, urban infrastructure, use of land and consumers' behaviours. Countries have implemented over 1,200 laws on climate changes vs. 60 twenty years ago. Now, renewable energy sources are directly subsidized in over 150 Countries.

The implementation of Nationally Determined Contributions (NDC), introduced as part of the Paris Agreement, is going to speed up the market of climate-friendly solutions. Several Countries are beginning to pursue these goals, focusing on the creation of a favourable climate for private investments, which translates in induced bankable projects for investors.

[3] Bus rapid transit (BRT) is a term that describes a wide range of public transport systems using buses, also self-driven, on preferential lanes.

1.1. Institutional investors

For a complete overview of the global scenario, we are providing a snapshot of the situation regarding **institutional investors.** They hold USD 100 trillion worth of assets under management and are a potential source of new capital that is essential for sustainable infrastructure funding (Table 2). Institutional investors are banks and insurance companies, pension funds and hedge funds, collective investment schemes, sovereign wealth funds and endowment funds; they raise capital to invest in assets that may be securities, real estate or other tangible assets, such as infrastructure. Yet, institutional investors have not always been important investors in infrastructure, for several reasons. Surveys of large pension funds, conducted by the OECD, suggest that less than 1% of their asset allocation in 2015 went to direct equity investment in unlisted infrastructure [New Climate Economy, 2017]. On the other hand, other surveys show that the average allocation of institutional investors across the entire infrastructure investor universe stands at 6.4% [Preqin, 2015].

Sometimes, there is a series of major obstacles to investment in green infrastructure: the uncertainty in the political scenario and/o insufficient political support, a lack of adequate financial vehicles favouring liquidity, risk-return profiles and need for aggregation of investors; on top, also a lack of objective information and quality data on transactions and underlying risks. Moreover, some institutional investors - such as pension funds or insurance companies - often have legal restrictions as regards the asset classes they may invest in.

Table 2. - Overview of institutional investors' assets under management (AUM), 2015

Institutional investors	Assets Under Management (US$)	Current investment in infrastructure for/broken down by investment in infrastructure	Present investment in emerging markets and in developing economies
OECD Institutional Investors	80 trillion	On average, 1% implies US$ 800 billion. The leading investors may hold 5% -10%	An estimated 10% total, but very low in infrastructure
Institutional investors in emerging markets	5 trillion	On average, less than 1%. 0.5% implies US$ 25 billion	High percentage
Sovereign Wealth Funds	4 trillion	Not very clear: 2% would imply US$ 80 billion	Relatively high
Other global institutional capital (assets or wealth)	20 trillion	The assumed 1% average implies US$ 200 billion.	Very small

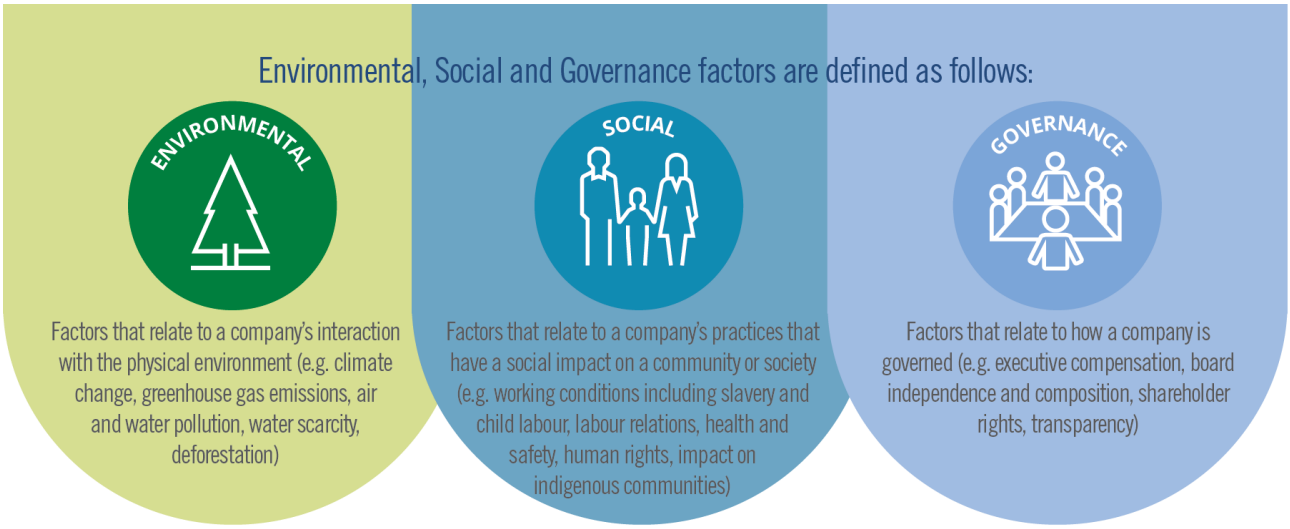
Source: World Bank Finance & Markets, PPIAF, 2015.145, from NCE report 2016

1.2. Sustainable Responsible Investing

Sustainable Responsible Investing (SRI) is an investment approach that takes account of environmental, social and governance factors (ESG, Figure 6) in portfolio selection and management. Based on a definition coined within the Italian Sustainable Investment Forum (*Forum per la Finanza Sostenibile* or FFS) in 2014, SRI means "an investment strategy over a medium-long time horizon, which, in assessing businesses and institutions, combines financial analysis with an analysis of environmental, social and good governance factors, in order to create value for investors and for society as a whole[4].

[4] http://finanzasostenibile.it/attivita/definizione-di-investimento-sostenibile/

Figure 6 - Environmental, social and governance factors



Source: Principles for Responsible Investment (2017)

They can be subdivided in different types:

1. **Exclusion of securities from the investable universe**: the exclusion from a fund or portfolio of certain sectors, companies or practices, based on ESG specific standards;
2. **Selection of Best-in-Class securities**: investments in sectors, businesses or projects that are selected based on better ESG performances vs. the industry competitors;
3. **Regulatory screening**: Investment screening based on the minimum standards laid down by international regulations;
4. **ESG integration**: systematic and explicit inclusion by investment managers of environmental, social and governance factors in their financial analysis;
5. **Sustainability themed investments**: investments in sustainability-themed businesses (such as renewable energy, clean technology or sustainable agriculture);
6. **Impact investing**: investments "made into companies, organizations, and funds with the intention to generate a measurable, beneficial social or environmental impact alongside a financial return";
7. **Hard engagement and shareholder activism**: in practice interaction with the company on sustainability matters and exercise of voting rights given by the equity investments held. This is a long-term process, aimed at improving the company behaviour and at increasing its transparency.

Today, many professional investors apply at least some non-financial assessment approaches to their portfolios, even though this is not sufficient to be classified as SRI or to meet the requirements of a specific strategy. The different categories of SRI strategies can be applied individually or together [Micilotta F., 2017].

According to the 2016 report prepared by the Global Sustainable Investment Alliance[5] [Bloomberg, 2016], global sustainable investment assets continue to increase, even though at a slower pace than in previous years. **At the beginning of 2016, global sustainable investments came to USD 22.9 trillion**, vs. 18.3 trillion in 2014, up by 25%[6]. Nearly all regions have posted increases in SRI assets over total assets under professional management, with the highest increase in Australia and New Zealand (Table 3).

[5] The Global Sustainable Alliance is a cooperation group of sustainable investment organizations from countries and regions around the world which have joined forces to expand investment practices that incorporate environmental, social, and corporate governance (ESG) principles worldwide.
[6] Before, global sustainable investment assets had increased by 61% between 2012 and 2014.

Table 3. - Breakdown of the 2014-2016 increase in SRI assets by region (values in billions of dollars)[7]

Region	*$ 2014*	*$ 2016*	*Growth %*	*% (CAGR)*
Europe	10,775	12,046	11.7	5.7
United States	6,572	8,723	32.7	15.2
Canada	729	1,086	49.0	22.0
Australia/New Zealand	148	516	247.5	86.4
Asia excluding Japan	45	52	15.7	7.6
Japan	7	474	6689.6	724.0
Total	**18,276**	**22,890**	**25.2**	**11.9**

Source: GSIA, 2016

Of the different sustainable investment strategies, the most substantial, at a global and European level, is the exclusion of securities from the investable universe (USD 15 trillion), followed by "ESG integration" (USD 10.4 trillion) and "shareholder activism" (USD 8.4 trillion).

Table 4 - 2014-2016 increase in SRI strategies (values in billions of dollars)

Strategy	*$ 2014*	*$ 2016*	*% Growth*	*% CAGR*[8]
Impact investing	101	248	146	56.8
Sustainability themed investments	137	331	140	55.1
Best-in-class-screening	890	1,030	16	7.6
Regulatory screening	4,385	6,210	42	19.0
Shareholder activism	5,919	8,365	41	18.9
ESG integration	7,527	10,369	38	17.4
Exclusion of securities	12,046	15,023	25	11.7

Source: GSIA, 2016

In Europe, total resources committed to responsible and sustainable investment strategies increased by 12% between 2014 and 2016 coming to approximately USD 12 trillion (Table 5). Regulatory screening is the second SRI approach with over USD 5.6 trillion worth of assets and a 40% rate of growth since 2014.

Table 5 – SRI in Europe

Strategy	*2014 $*	*2016 $*	*2014–2016 % growth*
Exclusion of securities	7,470.81	11,064.15	48.1
ESG integration	2,071.04	2,884.52	39.3
Shareholder activism	3,570.76	4,654.35	30.3
Regulatory screening	3,960.84	5,545.67	40.0
Best-in-class-screening	385.37	537.78	39.5
Sustainability themed investments	64.27	158.32	146.3
Impact investing	22.09	107.18	385.1
Total	10,774.61	**12,039.57**	**11.7**

Source: GSIA, 2016

[7] Asia 2014 assets, excluding Japan, are given in USD at the exchange rates in force at the end of 2013. All the other 2014 assets, as well as all 2016 assets, have been translated into USD at the exchange rates in force at the end of 2015.
[8] *CAGR = Compound Annual Growth Rate*

Impact investing is the fastest-growing strategy (385%), even though with a somewhat modest amount of assets (USD 107.2 billion). In Europe, SRI strategies are increasingly overlapping (Table 6), with investment vehicles using more than one. Consequently, in percentage terms, the SRI grand total increased by less than 12 percent across all the component strategies. Impact investing is followed by sustainability themed investments increasing by 146%, where renewable energy and energy efficiency are the main investment categories.

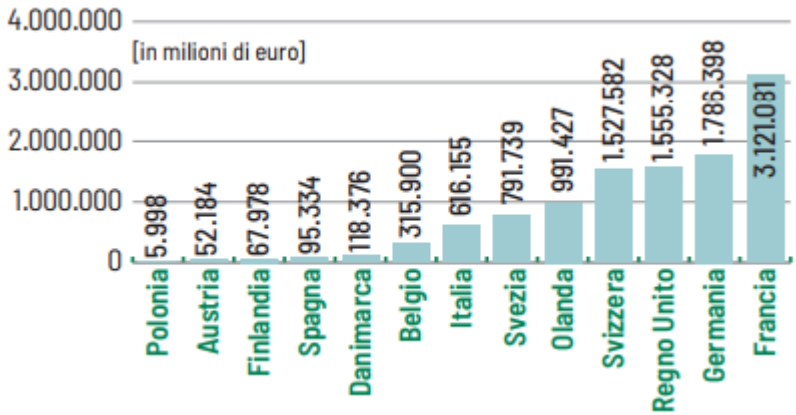
BOX 1 – SHAREHOLDER ACTIVISM: PENSION FUNDS ON CLIMATE

(Taken from the First Report "Ethical and sustainable finance in Europe")

At the end of 2014, some Italian pension funds led by the Cometa fund, the biggest in its category at a domestic level, have launched a campaign to exercise pressure on the banks they had equity investments in on the climate change issue. The 14 funds involved were coordinate by Assofondipensione and could start the first collective engagement action in Italia in order to make the banks disclose the information on the impacts generated by their business and investments on global warming. This action was carried out in cooperation with Vigeo, the ethics rating agency that, on this occasion, contacted 40 international banks based in North America, Europe, Japan and Australia. "23 banks replied and the most exhaustive answers were those given by Australian and European ones", said the Vigeo analyst, Stefano Ramelli, to the Il Sole 24 Ore, reporting the lack of interest in this theme shown by American and Japanese banks. The Italian newspaper reported "The most exhaustive answers concerned the inclusion of climate risk in risk management processes". "Many answers were received also on green products and services sold to customers. One bank only has exhaustively replied on climate risk reporting to stakeholders and as few as four banks provided clear information on the quantity of CO2 emissions generated by their customers" [Cavallito M., Isonio E., Meggiolaro M., 2017].

According to study made by Eurosif in 2016, France on its own accounts for over 1/4 of the total value of responsible investments in Europe amounting to Euro 3.1 trillion. Germany ranks second (1.8 trillion) before the United Kingdom (ranking third with 1,555 billion) and Switzerland (ranking fourth with 1,528 billion). Responsible investments in Italy, which ranks 7th, are worth approximately Euro 616 billion, up by about 64 billion vs. 2013 (Figure 7).

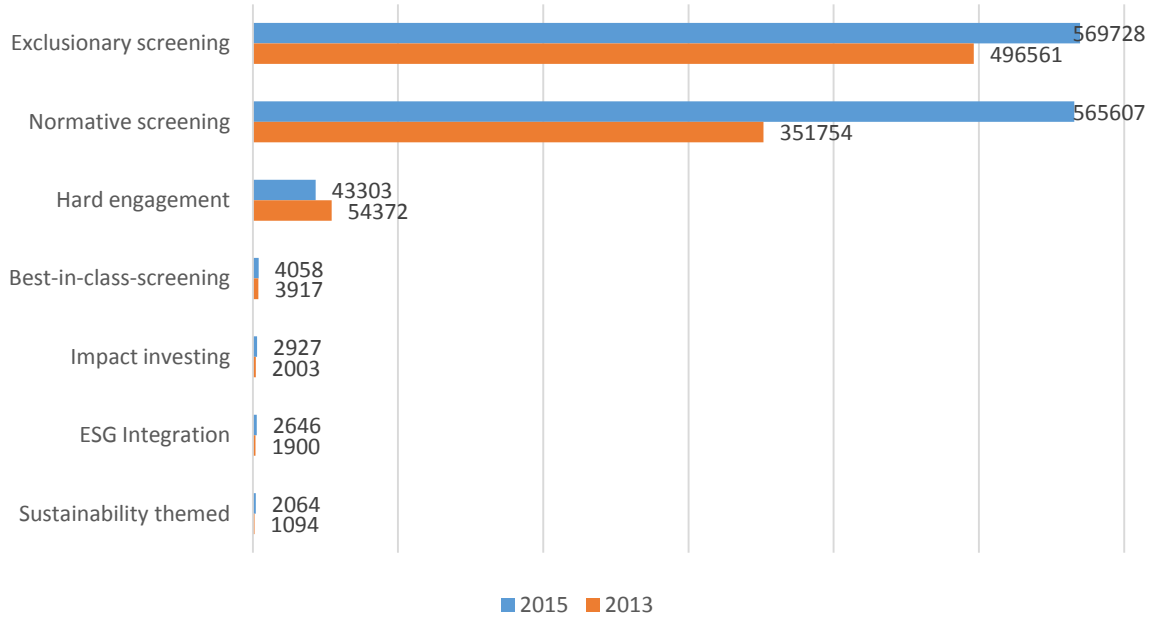
Figure 7. – SRI investments in Europe (millions of Euro)



Source: processing by Cavallito, Isonio, Meggiolaro, 2017 of Eurosif 2016 data

Exclusion of securities (+15% between 2013 and 2015) and regulatory screening (+61%) are by far the most common strategies in the Italian market. Shareholder activism ranks third, a sector that decreased by 20% with the value of assets down from Euro 54.4 to 43.3 billion. Investments made with other strategies showed variable growth (Sustainability themed investments up by +89%, Impact investing up by +46%, ESG Integration up by +40%, Best-in-class-screening up by +4%) but their weight on the marker remains quite marginal (Figure 8) [Cavallito M., Isonio E., Meggiolaro M., 2017].

Figure 8. – Breakdown of the increase in ESG assets in Italy by used standards (billions of Euro)



Source: Eurosif 2016

In general, based on the data of *Schroders Global Investor Study 2017*, the importance attached to responsible investments in our Country is decidedly increasing: 72% of the Italian sample in the study stated that sustainable investing is today more than relevant than five years ago. It is no coincidence that, based on the same study, 55% of Italian investors has increased the capital allocated to sustainable investment funds [Schroders, 2017].

In the wide-ranging market of responsible investments, worth noting is the activity of **ethical funds**, namely financial vehicles that belong to the family of collective investment schemes and stand out for their "investment policy that bans the purchase of certain securities and/or favours the purchase of securities based on criteria other than that of maximum expected return" [Assogestioni, 2003]. At the end of 2016, this segment was controlled by five players able to cover 90% of the Italian market with their funds (Table 6) [Cavallito M., Isonio E., Meggiolaro M., 2017].

Table 6. – The Italian market of ethical funds

BANK	*ASSETS*	*MARKET SHARE*
Etica Sgr	€2,922 Mln	48%
Bnp Paribas	€919.6 Mln	15%
Eurizon Capital	€901.5 Mln	15%
Ubi Banca Group	€443.3 Mln	7%
Pioneer Inv.	€334.7 Mln	5%
Others (10 groups)	€585.7 Mln	10%
TOTAL	**€6,107.4 Mln**	**100%**

Source: Etica Sgr, processing of Assogestioni data as at 30 December 2016

2. Sustainable development goals and the 2030 Agenda

The 2030 Agenda for Sustainable Development a plan of action for people, planet and prosperity, signed in September 2015 by the governments of the 193 UNO Member States. Its core consists of **17 Sustainable Development Goals** (SDGs) structured in a wide-ranging action plan for a total of 169 Targets to be achieved (Figure 9). The Sustainable Development Goals seek to build on the Millennium Development Goals (MDGs) and include new areas, such as climate change, income inequality, innovation, peace and justice, among other priorities. They tackle the root causes of poverty and unite us together to make a positive change for both people and planet. The main difference vs. MDGs is that, this time, the private sector is the true protagonist, with its ability to contribute to the achievement of these very ambitious goals [Micilotta F., 2017].

The Sustainable Development Goals officially came into force on 1 January 2016 and will guide the world in its way forward in the next 15 years: indeed, the Member States have committed to achieved the Goals by 2030.

Figure 9. – Sustainable Development Goals

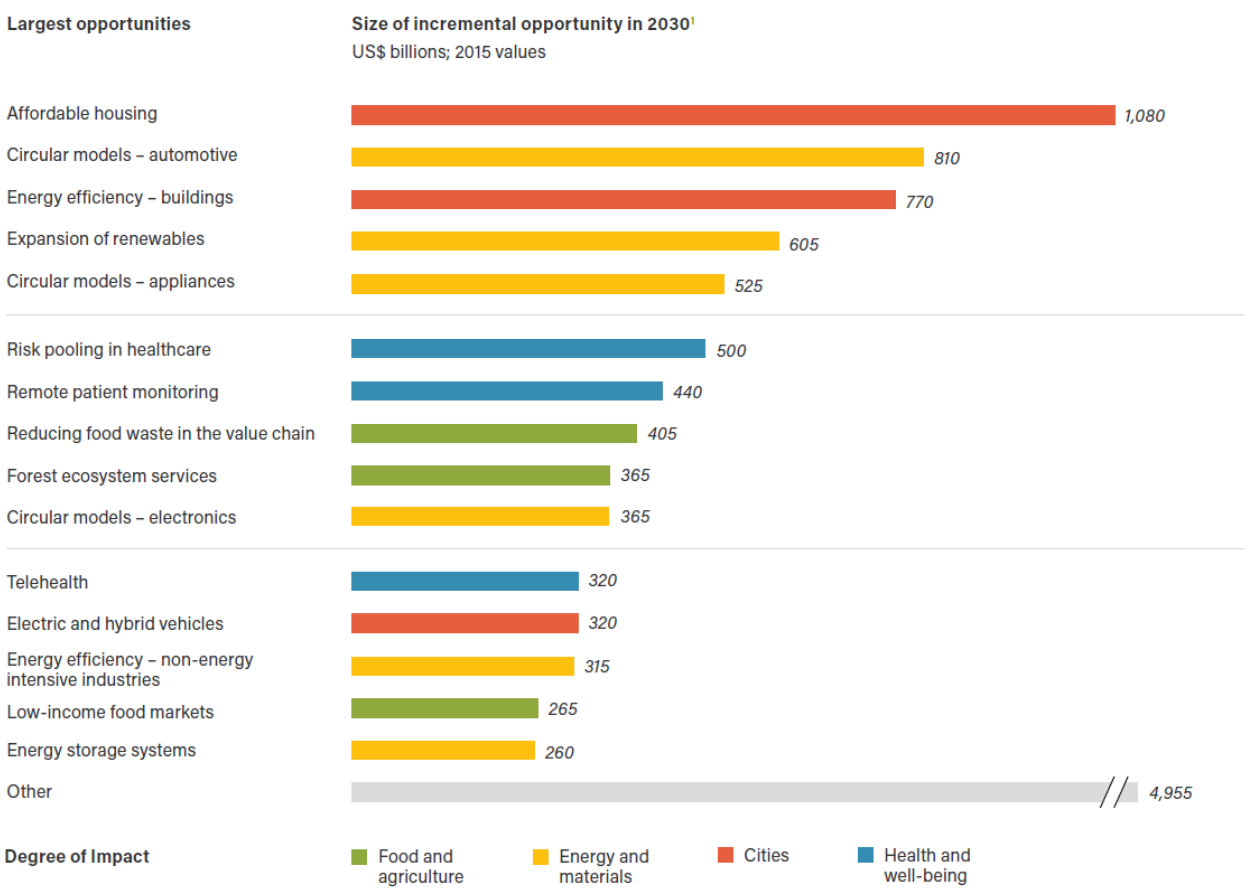
Some SDGs specifically regard the environment: Goal No. 2 Zero Hunger deals with food waste, Goal No. 6 Clean Water and Sanitation, Goal No. 7 Affordable and Clean Energy, Goal No. 11 Sustainable Cities and Communities, Goal No. 12 Responsible Consumption and Production, Goal No. 13 Climate Change deals with taking action to combat climate change, Goal No. 14 Life Below Water and Goal No. 15 Life on Land. The implementation of the above-listed Goals regarding the environment would generate significant advantages and it would be the basis to achieve many other SDGs. For instance, the goal of decreasing food waste by one half could reduce carbon emissions by 1,65 GtCO2e a year, generate about USD 500 billion worth of savings a year and curb the increase in global demand for food [FAO, 2017]. Shifting to circular economy models for fast-moving consumer goods could generate opportunities worth over USD 3 trillion by 2030 [Ellen McArthur Foundation, 2013]. The International Energy Agency (IEA) has estimated that further energy efficiency measures could reduce global final energy consumption by almost 11% in 2030. Based on weighted average prices of energy, this would amount to an impact of USD 1.45 trillion [IEA, 2015]. The International Renewable Energy Agency (IRENA) has estimated that renewables could provide

45% of power generation worldwide by 2030 - which amounts to USD 605 billion a year worth of revenue increases for renewable energy generators vs. the business-as-usual scenario [IEA, 2014]. This important achievement would reduce emissions by 4,8-5,6 GtCO2e a year. As regards the cost of adapting to climate changes, UNEP has estimated that, by 2030, USD 140-300 billion worth of investments will be required to adapt to a world temperature warmer by 2 degrees Celsius vs. pre-industrial levels [UNEP, 2016]. Replacing inadequate homes and buildings will generate construction expensed amounting to USD 8.4-10.3 trillion.

In order to achieve the SDGs, within the UN, the Business and Sustainable Development Commission (BSDC) was set up and launched in January 2016, in order to speed up this market transformation and to drive the world transition towards a more flourishing and sustainable economy.

The private sector will be crucial to achieve the Sustainable Development Goals, has a potential of USD 12 trillion and could create nearly 380 million jobs in 2030 (over 10% of the forecast workforce) [Business and Sustainable Development Commission, 2017]. Indeed, the four industrial economic systems analyzed by the BSDC (Food and Agriculture, Cities, Energy and Materials, Health and Well-being) can play an important role in achieving the 169 targets of the SDGs. The investment required to capitalize on these opportunities amounts to approximately USD 4 trillion a year: the most part would be absorbed by the Cities economic system – and especially by the necessary expansion in supply of accommodations requiring a global annual investment of approximately USD 1.1 trillion; the renewable energy segment is also highly capital intensive, with an estimated annual increase in investments of over USD 300 billion. Even though these investment costs are high, sustainable investments of over USD 20 trillion are already under management at a global level, and this asset pool is fast growing in size: it accounts for 30% of total assets under management at a global level, vs. 21% in 2012.

Figure 10. – Sizes in billions of dollars of the business opportunities to achieve the SDGs in the four macro-economic systems analyzed by the BSDC (values 2015)



Source: Business & Sustainable Development Commission (2017)

Urbanization is a key driver for economic growth; however, it also entails several challenges, such as: inclusion, the environment, efficiency, health and cultural heritage. It has been forecast that, in the next twenty years, the increasing world population will concentrate in urban areas. The growth of cities entails considerable environmental challenges: about 2 million hectares of land, three quarters of which agricultural land, a year could be consumed. Moreover, cities entail challenges in terms of health: urban air pollution is set to become the main environmental cause of premature mortality worldwide by 2050.

The energy sector could be worth over USD 4.3 trillion in 2030, with investments in: implementation of circular economy models in the automotive, appliances and electronic sectors; increased penetration of renewable sources in energy production; improved efficiency of steel for final use.

2.1. The use of SDGs in the financial world

The Sustainable Development Goals are perceived by the finance industry players as a potential reference framework for social impact measurement, management and reporting. SDGs play a role also in the investing process; some impact investing funds, as reported below, use SDGs to measure performances.

However, the use of SDGs for business impact reporting is not widespread. In order to address this challenge, the UN Global Compact[9] and the GRI[10] have set up the "Reporting on SDGs" body: a multi-stakeholder Corporate Action Group with the task of promoting corporate performance reporting also based on the Sustainable Development Goals. This project aims at using the GRI standards (the most used sustainability reporting standards in the world) and the ten principles of the UN Global Compact[11] to allow businesses to include the SDG reports in their existing processes. Principles for Responsible Investment (PRI) are the platform partners, to increase the value of information on corporate sustainability for the financial community.

According to Eurosif latest report [Eurosif, 2017], impact investing has proved to be the most effective sustainable and responsible investment (SRI) strategy to achieve the Sustainable Development Goals, since it has proved the fastest one and the one associated with important events, such as the United Nations Climate Change Conference (COP21).

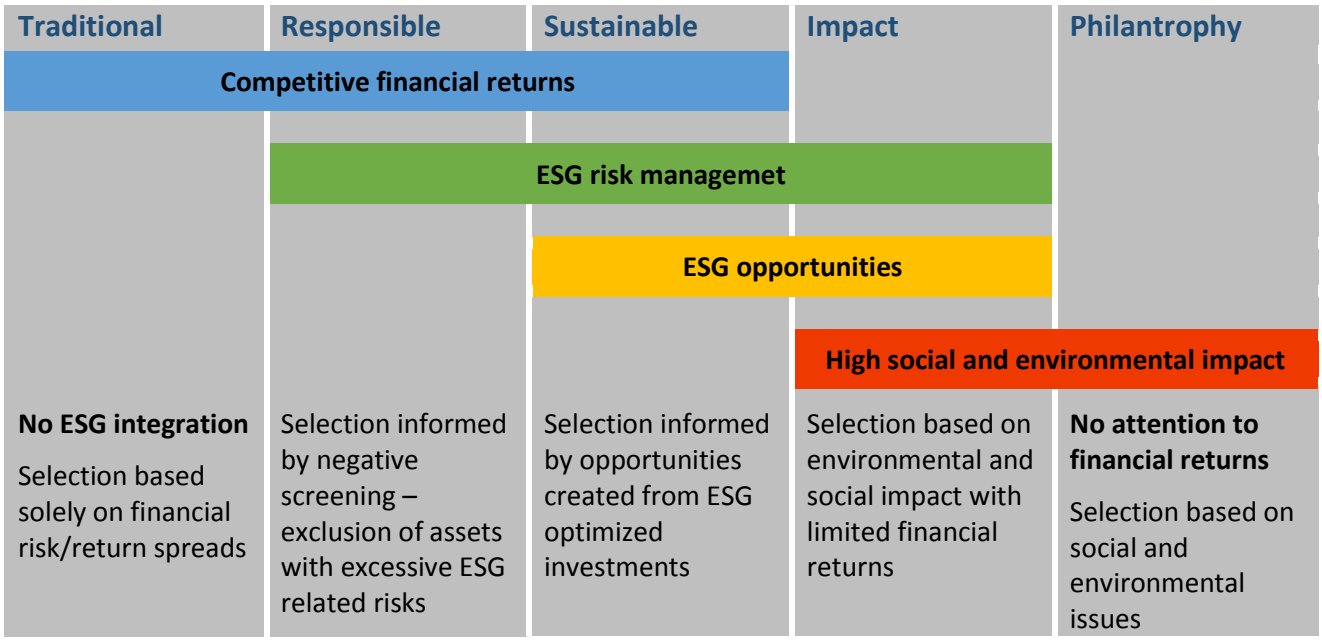
[9] www.unglobalcompact.org
[10] www.globalreporting.org
[11] Specifically, 3 out of the 10 principles of the UN Global Compact regard the environment:

- Principle 7: Businesses should support a precautionary approach to environmental challenges;
- Principle 8: undertake initiatives to promote greater environmental responsibility;
- Principle 9: encourage the development and diffusion of environmentally friendly technologies.

3. Impact investing: state of the art and impact measurement tools

Impact investing consists in investments aimed at generating measurable social and/or environmental impacts, together with financial return. The proactive intentionality with which investors pursue the social goal, along with a financial return, is the very feature that makes this new investment generation different from the Sustainable Responsible Investing approach. As seen, this approach is generally based on the use of screening systems able to prevent investments from being made in businesses with negative or insufficient environmental, social and governance impacts. However, the enterprises that benefit from SRI investments have a "traditional" core business and, as such, different from the social and environmental improvement that steers impact investing. Among investment types, impact investing is in between the so-called "financial first" strategies and philanthropy (impact only) [Italian Sustainable Investment Forum (Forum per la Finanza Sostenibile or FFS), 2017] (Figure 11). Therefore, the distinguishing feature of impact investing is that it is designed on social impact goals to be achieved; it is structured with impact measurement models and it is made sustainable through a link between achieved impact goals and return on the invested capital [Social Impact Investing Task Force, 2015].

Figure 11. – Investment taxonomy



Source: data re-processed by Forum per la Finanza Sostenibile and taken from Eurosif 2012, European SRI Study

The literature on impact investing tends to focus on financing social projects (affordable housing, care of elderly people and education opportunities); however, investors are increasingly interested in creating environmental impact [Global Impact Investing Network, 2017], through investments in different industries, such as clean technology, green building, land reclamation, biodiversity preservation and sustainable forestry.

Analysts have remarked the increasing demand by the market for products and services that have positive effects, rather than simply limiting damage [Conservation Finance Alliance, 2014] – i.e. products and services that "make the world a better place" [Social Impact Investment Taskforce, 2015]. Impact investing could contribute to meet such demand by supporting these products without giving up return. Financial

return on socially responsible investments is comparable to conventional investments [Humphrey, Lee & Shen, 2012; Revelli & Viviani, 2015]; on the other hand, some studies give examples of even better financial returns than conventional investments [Aktas, de Bodr & Cousin, 2011; Chan &Walter, 2014].

The European Union has long been trying to implement policies supporting sustainable and responsible investments A step in this direction is the European Commission plan on capital markets[12] that points out the role of "well-informed investment decisions" in contributing to the achievement of the 2030 goals set by the EU policy on climate and energy and the EU commitments on SDGs. Specifically, the plan identifies green bonds as an instrument able to steer capital to sustainable investments.

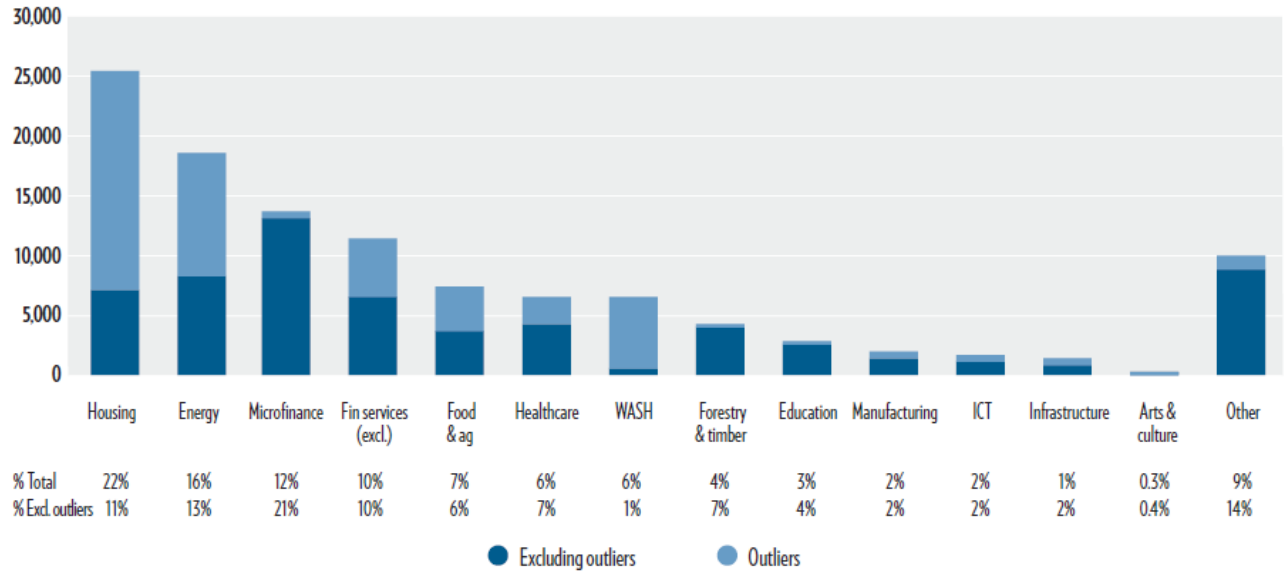
Moreover, in 2013, the Social Impact Investment Taskforce was set by G8 and has now become the Global Social Impact Investment Steering Group[13] and whose members include 13 countries plus the EU. This Group is working to increase momentum by promoting a unified view of impact investment, facilitating knowledge exchange and encouraging policy change in national markets.

3.1. Impact investing market

The size of the impact investing market has not yet been measured. However, some studies have contributed to a preliminary picture of the increase in this sector, its heterogeneity and trends.

Every year, the Global Impact Investing Network (GIIN) presents the results of a survey conducted on a sample of impact investors; the 2017 survey involved 209 organizations. It is pointed out that these data do not give a full overview of the sector, since private investors are not included. The survey reported a market size in 2016 of **USD 114 billion**, up by 48% vs. 2015. Having regard to the breakdown by sector (Figure 12), it can be seen that energy projects are second only to investments in the housing sector. Moreover, 39 respondents expressed interest in increasing the allocation to the energy sector in 2017.

Figure 12. – Breakdown of impact investing *Assets Under Management* by sector[14]



Source: GIIN, 2017

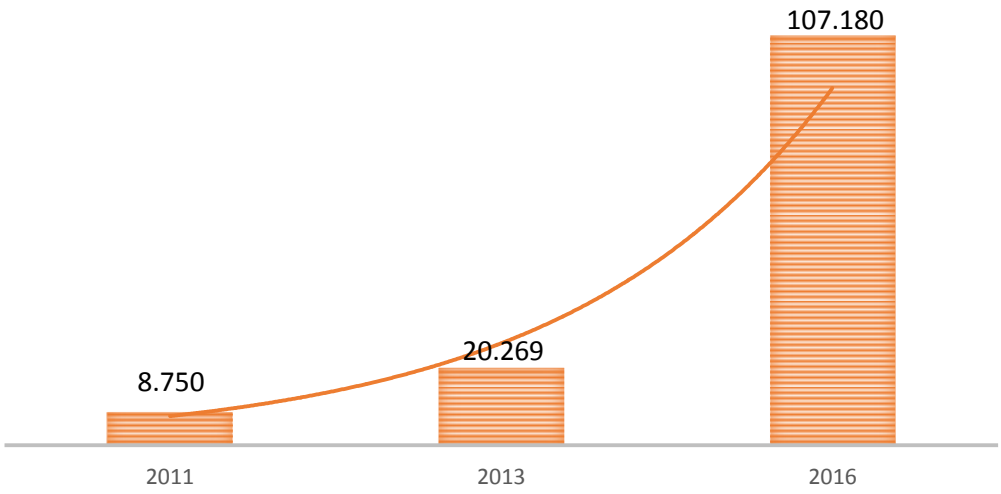
As regards invested assets, overall **205 respondents put USD 22.1 billion in nearly 8 thousand impact investing transactions in 2016**. For 2017, these respondents planned to increase their invested capital by

[12] https://ec.europa.eu/info/business-economy-euro/growth-and-investment/capital-markets-union_it
[13] www.socialimpactinvestment.org
[14] Where "other sectors" include services, waste management, tourism, transport and multi-sector investments. The whole sample consists of 208 investors for a total of USD 113.7 trillion.

17%, i.e. up to USD 25.9 billion and to increase the number of transactions by 20%. As regards the 114 respondents that completed the survey both in the previous and in the current year, the reported invested capital amount and the number of transactions between 2015 and 2016 increased by 15% and 3%, respectively.

As mentioned above, the market increasing trends have continued also in Europe, where, between 2013 and 2016, the increase came to 385% (Figure 13).

Figure 13. – *Impact investing in Europe* (millions of Euro)



Source: Eurosif 2017

Having regard to the Italian market, impact investing has developed quite recently and is still not common, despite the growing interest shown by financial players and several implemented instruments (Figure 15). Moreover, as better reported in Box 3, in our Country impact investing has recently been finding momentum, with a wave of new public and private instruments.

Figure 14. – Evolution over time of impact investing in Italy

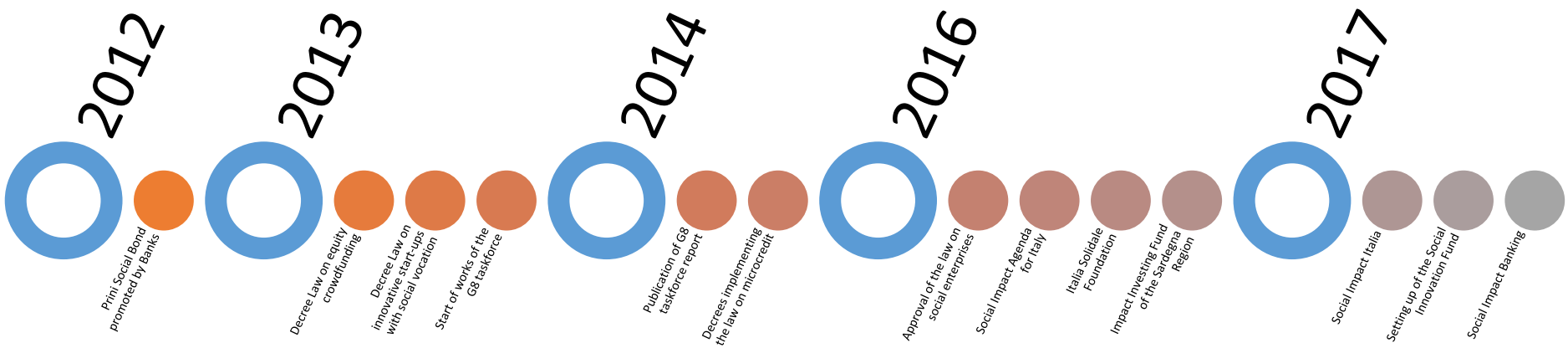
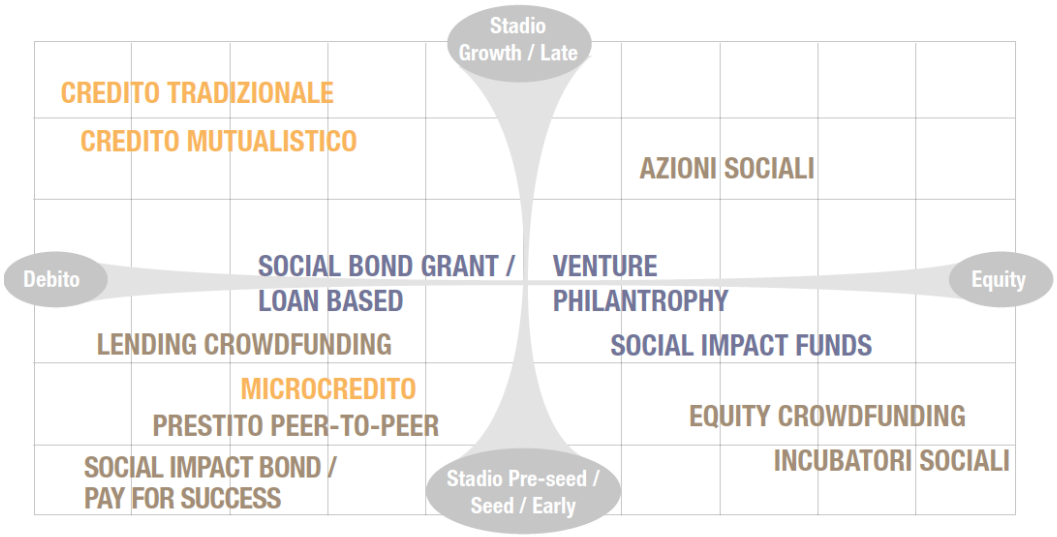


Figure 15. – Impact investing instruments in Italy



Source: Social Impact Investing Task Force, 2015

BOX 2 – *SOCIAL IMPACT BONDS*

Social impact bonds have the purpose of providing long-term funds to social impact projects. This type of instrument originated in the United Kingdom, where the debate on social projects led to the incorporation of a special intermediary, i.e. Social Finance Ltd. This entity collects funds to finance government projects through bonds, the profits from which are subject to the achievement of social improvements. The intermediary (in this case *Social Finance Ltd*.) can raise funds on a large platform of investors and, in many cases, it can assess whether the project performed well. In case of social projects, assessing performance may be very difficult, but quantitative **indicators** can be found.

For instance, the first one of these projects financed in the United Kingdom was the rehabilitation of offenders sentenced to less than 12-month imprisonment. Effective rehabilitation generates two-fold advantages for society, not only in terms of better quality of life, but also in terms of lower public expenditure for prisons. The project will be rated as successful if, in 2016, the crime rate of the prisoners within the programme decreases by 7.5%. In this case, the investors that have subscribed the bonds will have a return. If the project is not successful, the bonds will have no return.

This type of financial instruments has quickly spread to the United States (the Obama administration decidedly encouraged their use), where they are called “Pay-for-Success Bonds”. The Harvard Kennedy School - Social Impact Bond (a technical assistance workshop) is conducting research on how governments could promote social innovation and provides *pro-bono* technical assistance for efficient implementation of Pay-For-Success Bonds.

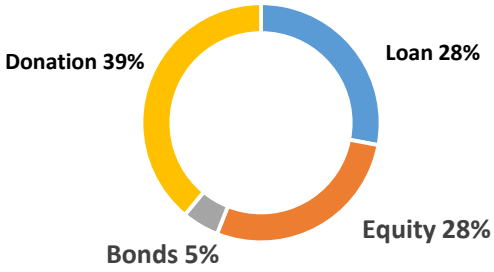
Little went on in Europe in this regard until 2014. Conversely, Italy is one of the exceptions: in 2011, UBI Banca started to issue social bonds to finance Third Sector projects. Again on a European level, a German initiative is worth mentioning: the *Benckiser-Stiftung für Jugendförderung* Project aimed at making young people with bad school performances enter the labour market by issuing bonds called “Juvat” (Latin for "it works").

Given the many definitions of “social impact investing” in our Country, for the time being the data on investments cannot be aggregated [Tiresia, 2017]. According to the survey carried out by the Tiresia[15] research centre in 2016, the prevailing approach to impact investing in Italy is the philanthropic one, which does not provide for capital repayment. Conversely, considering instruments that provide for some financial return, debt instruments prevail and consist in bonds and credit lines (Figure 16). The survey has

[15] *Technology and Innovation REsearch for Social ImpAct*, think-tank on innovation, entrepreneurship and social investing promoted by the Politecnico University of Milan. http://www.tiresia.polimi.it/

pointed out that there are no instruments created specifically for this type of investments and that traditional instruments are used for asset allocation.

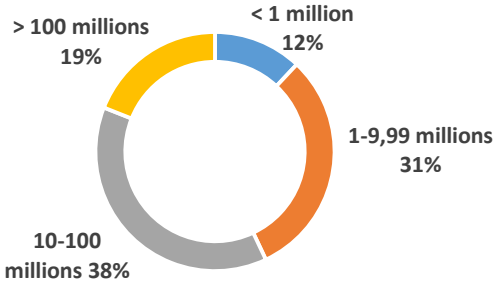
Figure 16. – Use of impact investing instruments in the Italian market



Source: Tiresia, 2017

For any comparison to the international market, the size of single investments is interesting. Most of the respondents in Tiresia survey, close to 70% of them, invest amounts ranging between Euro 1 and 100 million. Banking intermediaries are an exception, because their invested amounts exceed Euro 100 million (Figure 17). However, these figures are quite far from those in the global market.

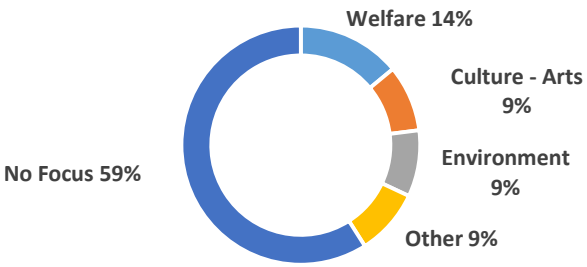
Figure 17. – Sizes of social impact investments in Italy (millions of Euro)



Source: Tiresia, 2017

In terms of sector, most Italian players state that they do no have a focus set beforehand, but their specialist skills have developed along with the investing activity evolution. Environmental themes account for 9% of social impact investments (Figure 18)

Figure 18. – Investment sectors of impact investors in Italy



Source: Tiresia, 2017

BOX 3 – *PAY-FOR-RESULT*

The contract layouts based on pay-for-result logics are new forms of support to policy making redesigning the operation and the principles that have long governed the Public Administration actions. In a pay-for-result contract, the customer does not buy a service but a result, based on which the return is calculated.

An example of this instrument is the *Contrat à impact social,* launched in France in 2016 to innovate and improve the provision of social programmes. Unlike SIBs, in this case, the reward to paid by the State in case of success is not calculated based on the generated savings for the Public Administration, but based on a transaction agreement by and between the parties to be laid down beforehand and proportional to the social impact generated. In this case, innovation lies in the mechanism to identify the need, which is reversed: it is no longer the State that is responsible for detecting needs and designing the social action to be undertaken or the funds to be put out for tenders, but it is the Third Sector that proposes an innovative strategy to solve social needs that are not being addressed. Private investors finance the project that is to be considered affordable enough to allow the invested money to be repaid and the reward from the State shall be granted only if the project is successful.

As regards **expectations**, they tend to be similar in Italy and worldwide: nearly all respondents in the GIIN report and in the Tiresia survey reported that their investments met or exceeded their expectations, in terms both of impact and of financial performance. At a global level, return expectations are higher for net capital and for debt and higher as regards investments in emerging markets than in developed markets. Moreover, most respondents in the GIIN report did not report significant risk events in 2016 (75%).

BOX 4 – NEW MOMENTUM IN IMPACT INVESTING IN ITALY

Between the end of November and 18 December 2017, the impact investing market of our Country came to a turning point. Three new instruments were launched to develop impact investing in Italy.

One was promoted by the Italian State and has led the way to **outcome funds at a national level**, i.e. financial instruments that, in rewarding social impacts - based on the social result achieved and measured (pay-for result) - can support innovation processes, promote public-private partnerships, increase the efficiency of welfare expenditure, enhance the role of social enterprises and raise resources in the philanthropic sector and in the business world. **In the 2018 Budget Law, an amendment was approved (to Article 1 paragraphs 118-*bis* and 118-*quinquies*) setting up the "*Fondo per l'innovazione sociale*" (Social Innovation Fund) with an endowment for 2018 of Euro 5 million and Euro 20 million for the two-year period 2019/20.** This fund "is intended for carrying out feasibility studies and for developing skills in public administrations based on achievable results and in order to foster and enhance social innovation in line with the European standards". With this type of outcome funds – allowing public-private partnership to be set up based on pay-for-result schemes - it is possible to consider the resources allocated to the specific purpose as not "taken away" from the Inland Revenue, but as generate by an inclusive and circular economic process within which financial advantages generated by more efficient and effective processes can be assessed, measured and reinvested [Giovanna Melandri for Vita Magazine, 20 December 2017].

The second instrument was presented at the end of November during the *Strategy meeting* in Luxembourg, the annual meeting between Cassa Depositi e Prestiti and the European Investment Bank Group: **Social Impact Italia** is an investment platform designed to develop the Italian inclusive investing market supporting social entrepreneurship. This platform can rely on **a total amount of Euro 100 million co-lent by FEI and CDP** in equal parts. The ultimate purpose of Social Impact Italia is to foster the entry of new players and social impact projects, as well as to consolidate and extend the existing ones, promoting the development of the target financial industry skills and investing considerable resources in order to boost a still poorly developed market, in terms of both sizes and number of players. In operational terms, the Platform action layout is intended for **investments in risk capital, aimed at achieving specific (social and economic) impacts** and focused on two main targets: funds and investment vehicles specializing in impact investing, with specific reference to social entrepreneurship; financial entities active in social lending and microfinance. The Social Impact Italia platform will identify potential investment opportunities assessing their overall profile, not only in terms of profitability and affordability, but also and especially in terms of social impacts generated by the underlying initiatives, which shall be periodically assessed based on specific impact indicators.

Finally, on 18 December 2017, the Unicredit banking group launched **Social Impact Banking,** a new programme with the objective of promoting activities with positive social impact, supporting individuals, microenterprises and social enterprises. Social Impact Banking focuses on the opening of **new credit lines**, on **sharing the Bank's financial and**

corporate know-how with the communities and **on networking between organizations having the same positive social impact goals**, such as association for social promotion, trade associations, foundations and public institutions. Social Impact Banking will develop on three action lines: a) **microcredit**, i.e. provision of credit, know-how and support to microenterprises that often have no access to traditional banking products and services, assessed based on their ability to create inclusion and increasing employment; b) **Impact Financing**, provision of products and services (for an amount of Euro 100 million) to for-profit and non-profit enterprises operating not only to maintain their project affordability, but also to meet social needs, such as boosting and promoting inclusion, measuring the achieved impact and rewarding it based on a pay-for-success scheme; c) **financial education and inclusion**, aimed at increasing financial awareness and fostering entrepreneurial spirit in schools.

3.2 Impact measurement: assessment metrics

Impact measuring is crucial in impact investing. Social Impact Assessment means "the qualitative and quantitative assessment, in the short-, medium and long-term, of the effects of the activities carried out on the target community vs. the set goal" [Italian Law No. 106/2016, Article 7, paragraph 3].

Perhaps, the most obvious reason to measure impact is to understand the social or environmental effects of an investment after its implementation. However, scholars have pointed out several other reasons for measurement, since it helps steering the decision-making process in various phases of the investment procedure.

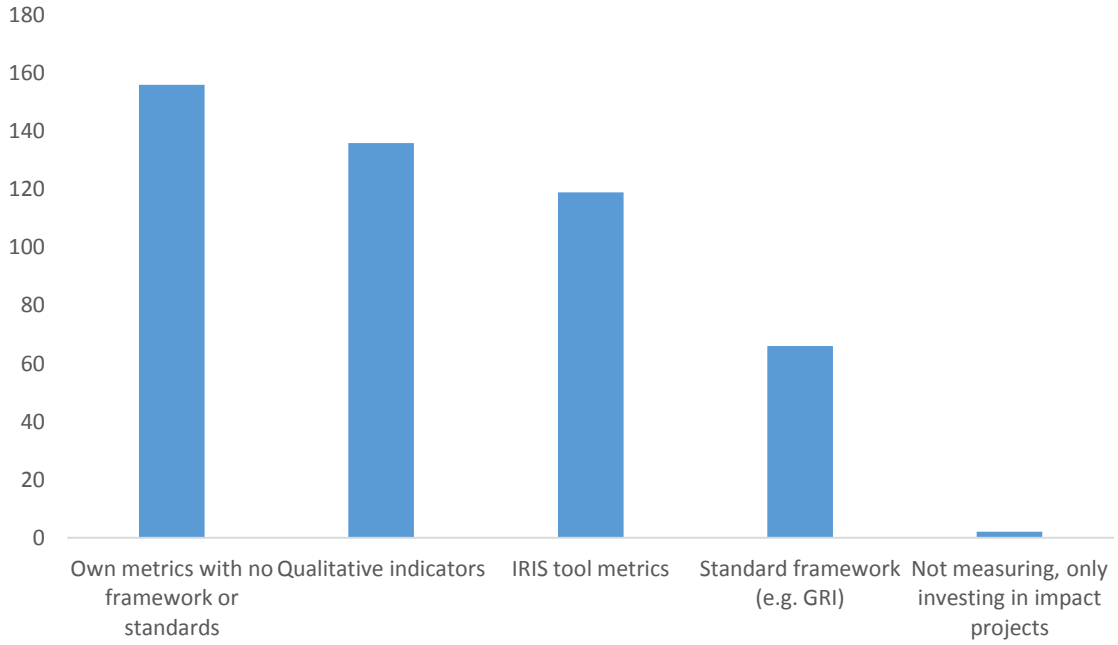
For example, So & Staskevicius (2015) pointed out four key measurement goals in their analysis of 20 impact investing practices.

PHASE	GOAL
BEFORE INVESTING	Estimating the impact in the due diligence phase
PLANNING	Selecting metrics and data collection methods for impact monitoring
MONITORING	Impact monitoring, for contributing to ensure success
AFTER INVESTING	Assessing effects and results

Therefore, besides being a transparency indicator, impact measurement helps investors choose their investments (for example, selecting the enterprises with the best track records) and helps explain the reasons for the success (or failure) of an investment.

Over the years, the tools to measure the social and environmental impacts generated have become many, as have their classifications and systemization. The range of methods and tools is now very wide, since the parties interested in them are many and very inhomogeneous. Evidence of this is that most GIIN respondents said that they measure their social and/or environmental performances with **in-house developed metrics (75%)** or, however, that they use qualitative indicators only (Figure 19).

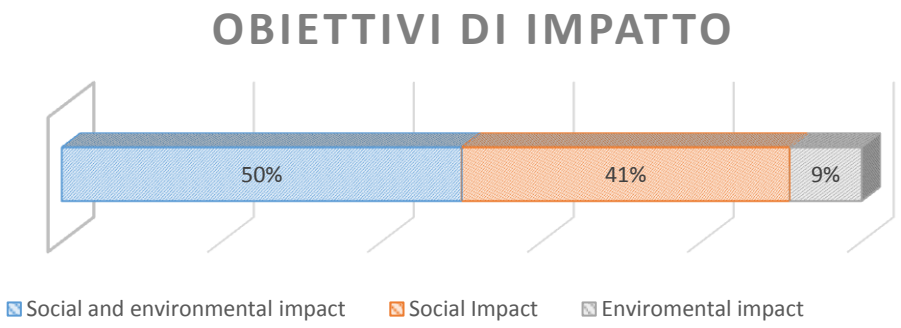
Figure 19. – Methods used to measure social and environmental performances



Source: GIIN, 2017

As regards impact goals, half of the investors aims at both **social and environmental** impact goals, while 41% focuses mainly on **social** impact ones and the remaining 9% mainly on **environmental** impact ones (Figure 20).

Figure 20. - Breakdown of goals by impact

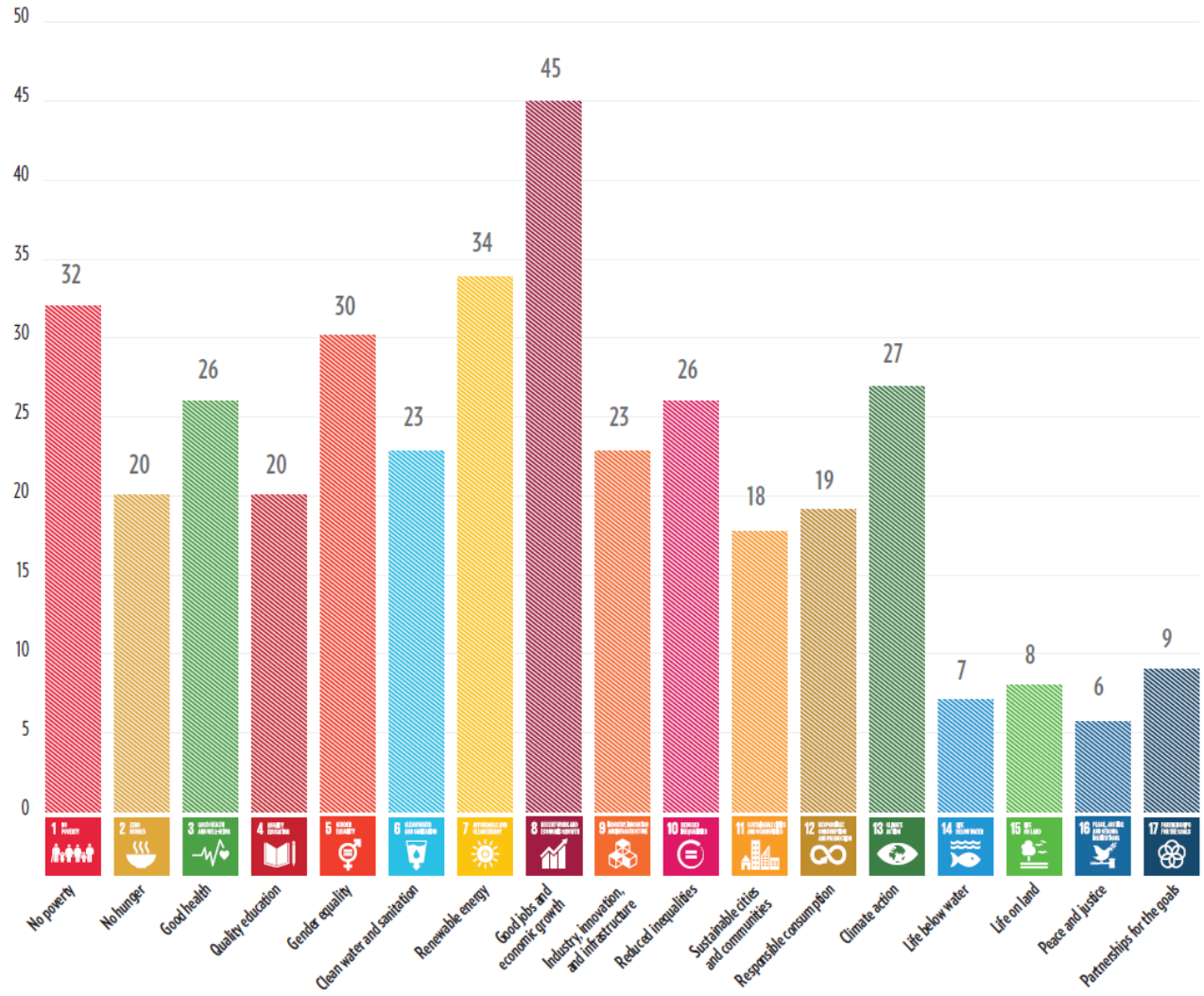


Source: Processing of data from GIIN 2017

Primary impact goals are different depending on the investor's strategies: investors that mainly look for returns below market rates are more inclined to take account also of social impact goals (61%). Moreover, 26% of impact investors that participated in the GIIN 2017 survey reported that they are very active in monitoring the performances of some (or all) of their investments regarding SDGs; another third of the respondents plans to do that in the near future[16] (Figure 21). They are especially focused on Goal 8 "Decent Work and Economic Growth", but also "Affordable and Clean Energy" and "Take urgent action to combat climate change and its impacts".

[16] The respondents focusing on emerging markets are more likely to monitor the performance of their investments in terms of SDGs, with 37% of them already doing so and 38% planning to do that in future. On the other hand, the respondents focusing on the market are less likely to address SDGs, with 56% not even planning it.

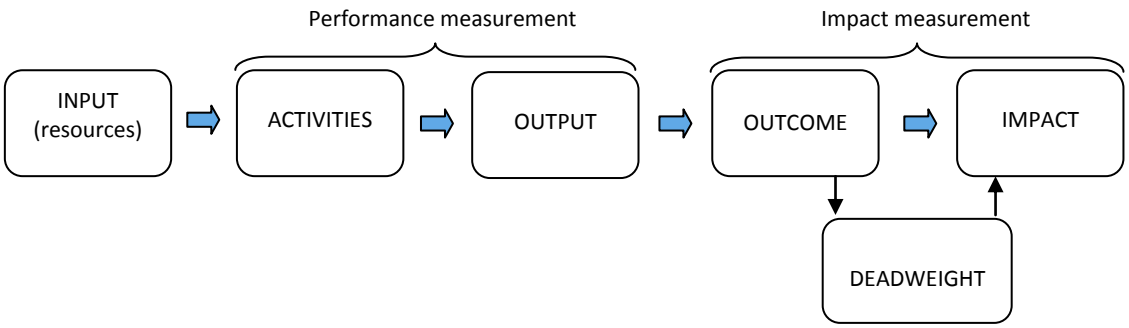
Figure 21. – Number of impact investors broken down by monitored SDGs, in absolute values



Source: GIIN (2017)

In order to understand the change made by an enterprise, the logic framework to be used is that regarding the so-called **Impact value chain** that gives a graphic representation of the various steps in the so-called Theory of Change (ToC; Figure 22)**.**

Figure 22. – Impact value chain



Source: AICCON (2015)

At a European and global level, there are different frameworks for measuring outputs, outcomes and social impact. To understand the differences and similarities of the many existing methods and tools, the starting point is the definition of input, i.e. assets, output, outcome and impact, based on which different sets of indicators can be structured.

Inputs are assets of various kings, such as money, skills, fixed assets or other, used in order to achieve the intended outcome [GECES, 2015].

Outputs are products, capital goods and services, more or less immediate, resulting from an action, an activity performed by an organization. Therefore, outputs can be defined as the results achieved in the short-term. Output indicators measure the quantity (and sometimes the quality) of the goods and services produced by an organization (output) and production efficiency, resulting from an action, a project or a programme that the organization implements [OECD, 1991], without extending to the action effectiveness that is taken into account in the outcome and in the impact [GECES, 2015].

On the other hand, outcomes are the effects in the medium- and long-term (from 3 to 10 years) achieved or presumably attributable to the action outputs. Therefore, they are results not directly attributable to the responsibility of a single action, but influenced also by other factors that, for this reason, are factors that are to be considered in designing indicators. This is the reason why outcome indicators can be structured at different levels: at a community, organization and programme level. Indicators at a community level measure, depending on the organization's scope of action, any changes in the conditions or well-being of the community of the families of the project beneficiaries. On the other hand, indicators at an organization and programme level measure the outcomes to the extent the organization, programme or any sub-programmes are responsible for them [Zamagni, Venturi & Rago, 2015].

The definition of impact is the most complex one, as is its measurement. Indeed, it is defined as "long-term sustainable change in the conditions of people or of the environment that the action has partially contributed to achieve, since it was influenced also by other exogenous variables." Therefore, impact indicators measure the quality and quantity of the long-term effects generated by the action; they describe any changes in the life of people and any development at a global, regional and national level, taking account also of the exogenous variables influencing it [OECD, 1991].

3.3 Internationally used impact measurement tools

Over the years, more and more tools have been identified to measure generated social impacts. In this regard, new impact measurement methods have been proposed by academics, as well as by international organizations (such as the United Nations, ILO, OECD), financial institutions, trade associations and single enterprises [Mulgan, 2010; Grieco *et al.,* 2014].

The tools described below have been identified starting from the need to report on approaches that are widely used in geographical terms (thus excluding methods used in limited geographical areas) and able to measure the outcomes and/or the generated impacts, also distinguishing between measurement in monetary and non-monetary terms [Zamagni, Venturi, Rago, 2015]. The tools were mapped focusing specifically on the most used ones and on those with a set of environmental impact indicators.

Table 7. – Tools analyzed in this chapter

Tool	Type of Indicators			Measurement in monetary terms	Source
	Output	***Outcome***	***Impact***		
B-Impact Rating System	☑	☑	☑	☐	http://trasi.foundationcenter.org/
Balanced Scorecard	☑	☑	☑	☐	http://svtgroup.net/
Dalberg Approach	☑	☑	☐	☐	http://svtgroup.net/
Ecological Footprint	☑	☑	☑	☐	http://trasi.foundationcenter.org/
Social Impact Assessment	☑	☑	☑	☑	http://svtgroup.net/
HIP Scorecard& Framework	☑	☑	☑	☑	http://svtgroup.net/
Social Return On Investment	☑	☑	☐	☑	http://trasi.foundationcenter.org/
Development Outcome Tracking System	☑	☑	☐	☑	http://trasi.foundationcenter.org/
GRI Sustainability Reporting Framework	☑	☑	☐	☑	https://www.globalreporting.org
Expanded Value Added Statement	☑	☑	☐	☑	http://socialeconomyhub.ca/content/social-and-environmental-accounting-expanded-value-added-statement-1
CDFI Assessment and Rating System	☐	☑	☑	☑	https://www.missioninvestors.org/news/cdfi-assessment-and-ratings-system-cars-highlighted-american-banker
Gamma Model	☑	☑	☑	☑	http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2381129
Methodology for Impact Analysis and Assessment	☑	☑	☑	☑	http://www.sibgroup.org.uk/impact/approach/
Impact Reporting and Investment Standards	☑	☑	☐	☐	https://iris.thegiin.org/

*The "**B-Impact Rating System**"* is a tool designed to measure an organization's social and environmental impact, through a procedure consisting of two parts: B-impact assessment and B-impact report. The first one consists of a set of questions (minimum 60, maximum 200) on five central aspects of the organization: leadership; employees; consumers; society; environment. The second part consists of a summary report (one page at the most) that the organization receives after completing the first part. This tool requires very short time (approximately 60-90 minutes) and can be used also by small and medium enterprises thanks to its low implementation costs.

The ***Balanced Scorecard*** is a tool analyzing the enterprise performances based on 5 key criteria: financial scope; customers; process; growth; social impact. For instance, by monitoring the organization in the portfolio, performances can be measured as regards: percentage growth in annual revenues; annual percentage growth in the number of beneficiaries; quality of the programme based on single investments. This tool gives a quite complete and flexible measurement.

The ***Dalberg Approach*** has been designed to measure the progress made by an organization toward the double-bottom line model, to examine the inputs used for every single project and the resulting outputs. Later, the outcomes are identified and connected to the respective outputs. The collected data are then used to compare the project to similar ones or to the previously identified standards.

*The '**Ecological Footprint*** is a tool that tries to measure the total biocapacity required to carry out an analyzed activity (by the population). The tool identifies a "global hectare", i.e. the quantity of land and water required by a person, a region, a Country to produce the resources that they consume. This tool identifies six main areas, namely: cropland; pasture land; fishing ground; forest land; built-up land; the area needed to absorb the carbon dioxide emissions. Every user (natural person or enterprise) is asked some questions based on which the use of his/her/its "global hectare" is calculated, along with the average use in the relevant State and the number of planets earth that would be required should every individual live in accordance with his/her standards.

HIP Scorecard& Framework is a tool designed to measure the impact generated by the enterprise, in human, social and environmental terms. The underlying idea is that higher human impact entails higher profit and, consequently, higher impact in the other two categories. This tool uses 5 criteria based on which it examines the organization's doing: health (wellbeing of the organization and of its members); affluence; respect for the land and for the environment; equality and, finally, confidence. Every organization is analyzed through interviews and surveys and is then given a score in each one of these categories. Later, this tool calculated to what extent the investment in human resources (and, thus, the increase in the human impact) generated higher profit in economic and social terms.

Social Return On Investment (SROI) is a procedure structured in order to understand, determine and manage the value of social, economic and environmental outcomes generated by an activity or organization. The procedure to calculate the SROI provides for measurement in monetary terms of costs, benefits and of any negative consequences of an activity, along with a report on the project effects. 7 principles are the pillars for correct implementation of this method:

1. Involve stakeholders;
2. Measure intended and unintended changes, both positive and negative;
3. Value what matters with the appropriate tools;
4. Only include what is material;
5. Do not over-claim (i.e. do not overestimate outcomes);
6. Be transparent in measuring;
7. Verify the result including third parties independent assurance.

This tool is used on a large-scale worldwide and is useful for both strategic planning and for communicating the generated social impact that could, in its turn, attract investments. Moreover, the SROI method can be used by investors themselves to compare different investment options and facilitate decision-making. This tool provides an exhaustive analysis of how value is created and it can attribute the generated social value and measure it in economic terms.

The ***Development Outcome Tracking System (DOTS)*** measures the impact of the investment made analyzing the financial, economic, environmental and social performances of the organization or of the financed activity. This tool identifies some sector-specific key performance indicators (KPIs) and uses them to analyze the outcomes obtained. Every organization is assigned a score from 1 to 6, with 1 meaning "Decidedly successful" and 6 meaning "Decidedly unsuccessful", in order for the various cases observed can be comparable to one another.

GRI Sustainability Reporting Framework. The Global Reporting Initiative (GRI) is an organization that promotes reporting between social enterprises in order to improve their transparency. It aims at establishing guidelines that provide organizations with reporting standards and principles. This initiative focuses on four areas: economic, environmental, social and impact.

The *Sustainability Reporting Framework*, prepared by GRI, consists of reporting guidelines, of the "sector guide" (regarding specific sectors of activity) and of other supporting documents.

Even though it does not issue a true impact index, this initiative is very well known and widely used worldwide and it amounts to a considerable step forward towards social reporting standardization.

Expanded Value Added Statement (EVAS) intends to supplement traditional financial reporting with an estimate of the economic added value generated by volunteers' activity (both social service activities and knowledge learnt by the volunteers) and an estimate of the impact on social cohesion. The ultimate goals is to have organizations reporting much more complete and representative information that covers not only the economic factor but also the social one. EVAS has the purpose of supplementing traditional accounting with economic, social and environmental figures that take account of and include a measure of the social impact generated by the organization.

The proposed format is very flexible and can be adapted to every organization's requirements based on its context of operation and on its internal structure. Even though this tool has still some issues regarding the impact estimate to be reported, it amounts to an important step forward towards the inclusion of social themes also in accounting.

CDFI Assessment and Rating System (CARS) was developed by Aeris, a US consultancy company, to measure the performances of the so-called *community development financial institutions* (CDFI), nonprofit funds that operate in areas such as environmental sustainability, food affordability, health and education, as intermediaries between investors and borrowers. CARS does not measure the actual impact but only the impact generated vs. the initially planned one; moreover, the measurement does not allow any comparison with that of other organizations, not even similar ones. This tool consists in asking 5 questions based on which the organization is rated from AAA to C. The analyzed elements are: consistency between applied strategy and mission; identification of adequate outputs and outcomes; data collection method used; data verification and interpretation; achievement of the pre-set goals.

Gamma Model, designed in the impact investing sector, it integrates the concept of social and environmental impact in the equation to calculate the return on an investment, thus obtaining the "gamma factor", i.e. a comprehensive measure of the social value generated by the investment.

This tool also proposes the use of social impact indicators as the inputs to create indicators of the social impact generated by an investment.

Methodology for Impact Analysis and Assessment (MIAA) - it measures the social impact generated by an organization using the change theory as its key pillar. This tool covers 2 analysis scopes: one investigates the organization's financial and operating performances, the second assessed the social and environmental impact generated. In addition, MIAA includes a mapping of organizations that are thus classified based on their geographical location, their sector, sizes, etc., and proposes a guide to select appropriate indicators containing a set of pre-defined metrics that can be adapted to an organization's specific features. Finally, this tool gives guidelines on impact reporting meant as communication by the organization to third parties of the outcomes.

The last tool considered, but certainly not the least important, is the ***Impact Reporting and Investment Standards (IRIS)***. This tool was developed by GIIN (*Global Impact Investing Network*), a nonprofit organization with the main purpose of increasing impact investing in terms of extent and effectiveness*;* it includes the main indicators used to measure social, environmental and economic impacts. It is an analysis tool whose main purpose is to develop a type of reporting allowing comparability between various entities. The analyzed organization or project are invited to follow a reporting structure that takes account of the factors given below:

1. Description of the organization;
2. Description of the final product;
3. Description of financial performances;
4. The impact of activities;
5. The impact of the product.

IRIS is used by approximately 5,000 organizations in 148 Countries for reporting their social and environmental performances. This format is widely used, also by SMEs, since it does not require experience in the sector and has low costs.

As regards the measurement of environmental impacts – as better explained in the New Ventures Mexico example - the indicators are classified in the following categories:

- Preservation of biodiversity;
- Energy efficiency;
- Preservation of natural resources;
- Pollution prevention and waste management;
- Sustainable energy;
- Sustainable use of land;
- Management of water resources.

4. Impact finance for climate changes: tools and international good practices

In the second part, we present five impact investing good practices implemented by different parties in different parts of the world in order to generate a positive impact on social and climate changes.

Good practices are a useful tool to understand the different approaches to impact measurement. We present **two tools and three specific cases**. As regards instruments, an in-depth analysis has been made of Climetrics Fund Rating - an instrument designed by Climate KIC, in cooperation with *Carbon Disclosure Project* and ISS Ethix Climate Solutions to allow investors to include climate impacts in their investment decisions – and the *Green Bond,* fixed-income securities intended to finance projects, enterprises and initiatives aiming at protecting the environment and fighting climate change. The international cases have been selected based on the different instruments used and geographical location. New Ventures México uses IRIS method and indicators, thus a standardized tool; Aavishkaar Indian Micro Equity Fund has developed an internal method; finally, the Seychelles Conservation & Climate Adaptation Trust uses the trust instrument.

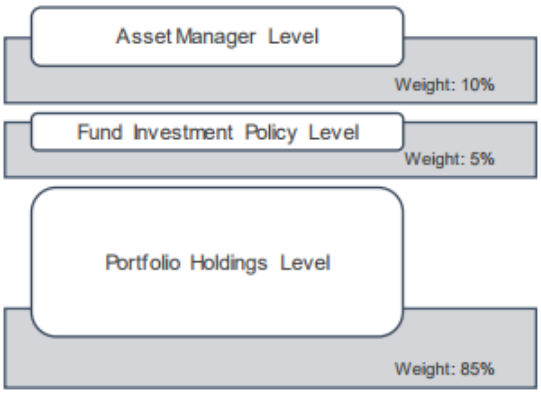
4.1. Climetrics Fund Rating

Climetrics is the first climate impact rating that is publicly available for investment funds; it was launched in July 2017 by Climate KIC, CDP and ISS-Ethix.
Climate KIC is the biggest private-public partnership promoted by the European Union with the purpose of addressing climate change through innovation to build a zero-emission economy. Climate KIC addresses climate changes through four priority themes:

- Urban areas,
- Use of the land,
- Production systems,
- Climate parameters and investing.

Climpax Fund Rating will be the first climate impact rating that is publicly available for investment funds in order to allow single investors to include climate change impacts in the selection of funds and in monitoring processes. It provides investors with a rating between 1 and 5 calculated based on multi-level method using CDP and ISS-Ethix data.
The rating cover over 55% of assets invested in equity funds currently sold in Europe, for a total amount of **Euro 2,000 billion**.
The funds are rated on three different levels, each one of which focuses on a different aspect of the value chain in the investment process (Figure 23). The main goal is the climate impact of the single companies in every fund, that is to say to assess the actual investment decisions made by the funds as regards their climate impact.

Figure 23. – Rating levels and respective weight in the assessment process



Source: Climetrics (2017)

Climetrics assesses the investment portfolio of a fund measuring every underlying company for its climate impact. Every company is assigned a score based on its carbon footprint and climate performances (Figure 24). While the carbon footprint is the present impact of a company in terms of greenhouse gas emissions, climate management performances consider also forward-looking elements, such as management methods and actions undertaken on climate change.

Figure 24. – Indicators to calculate the score of the single companies

Source: Climetrics (2017)

This method includes specific considerations for some industries. Companies with direct exposure to the extraction and production of fossil fuel are given a penalty, whereas companies in the utility and automotive industries are rewarded for applying the main low carbon technologies. The scores of the companies in carbon-intensive industries are re-weighted and, therefore, contribute to the portfolio final score to a larger extent. The applied method is summarized in figure 25.

Figure 25. – Climetrics Method

Source: Climetrics (2017)

Based on the obtained score, the rating is assigned in accordance with the table below.

Lowest 10%	🍃				
Next 22.5%	🍃	🍃			
Next 35%	🍃	🍃	🍃		
Highest 32.5%	🍃	🍃	🍃	🍃	
(Threshold criteria apply)	🍃	🍃	🍃	🍃	🍃

To calculate the Climetrics rating, at least 60% of the assets under management in a given portfolio must have a Climetrics company rating. The latest full Holdings data must be less than 12 months old.

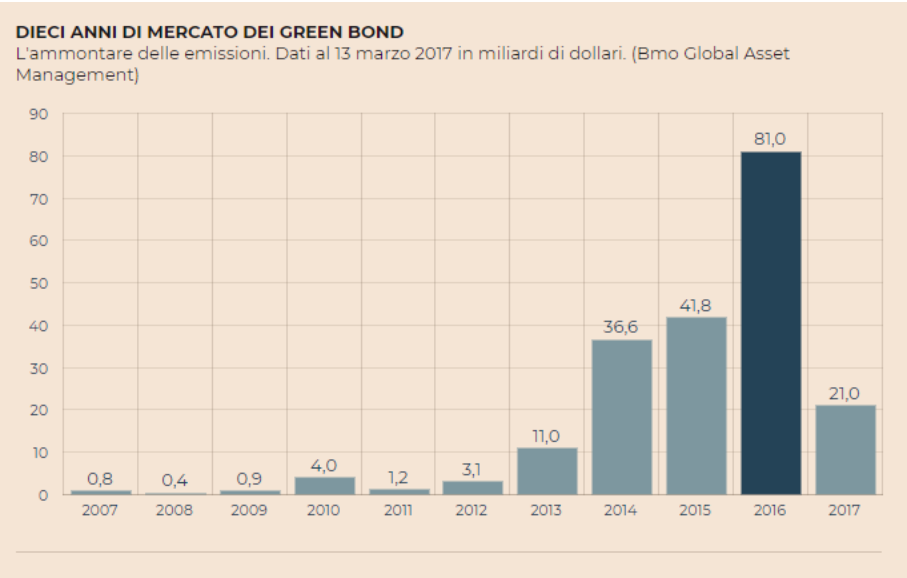
4.2. Green Bond

The issue of green bonds allows access to low cost capital intended to be invested in town projects fighting climate change. This financing flow may be difficult to achieve for many cities in developing Countries for many reasons: lack of knowledge on the development of green bonds, low solvency and scanty or no portfolios of green projects.

Green Bonds for Cities has developed a series of instruments to help cities to overcome these obstacles and to start new low carbon emission developments and upgrading of the existing infrastructure. *Green Bonds for Cities* is currently working with Mexico City, which plans to issue its first green bond - which would be the first ever issued by any South American city – by 2017. The city intends to allocate the proceeds to existing plans in order to extend its bus network, improve its water infrastructure and invest in low-emission buildings.

In 2016, the total value of green bonds issued globally came to Euro 81 billion, with a manifold increase vs. 2015. This trend is on the increase since, as at 13 March 2017, USD 21 billion worth of bonds had already been issued.

Figure 26. – Evolution in the green bond market



Source: Il Sole 24 Ore, 2017

Zurich Insurance alone has committed to invest Euro 2.2 billion in green bonds. However, only a small part of the money collected globally with green bonds, about 1.7%, has been allocated to city-based projects in developing and emerging economies.

In Italy, the «pioneer» in green bonds was Hera, a company based in Bologna, with its ten-year bonds amounting to Euro 500 million issued in 2014: this example was followed by Enel, at the beginning of this year, with bonds maturing in September 2024 for an amount of Euro 1.25 billion, listed on ExtraMOT PRO, the Italian Stock Exchange segment dedicated to green and social bonds. As the majority of other green bonds, those issued by Enel is reserved to institutional investors: for the time being, investing in this segment is possible only through one of the many funds that merchant banks have launched in recent years, or Etf. The latter may have a limit because of the limited liquidity on the market, due to which the task of replicating the reference index on green bonds may become complicated and burdensome [Cellino, 2017].

Some organizations have committed to prepare rules and metrics to monitor how money has been invested, these guidelines are called Green Bonds Principles (GBP). GBPs consist of four main components:

1. Use of Proceeds
2. Process for the Assessment and Selection of the project
3. Management of Proceeds
4. Reporting

The key point of green bonds is the use of proceeds from the bond issue in Environmental Projects (including other related and ancillary expenses, such as Research and Development ones), which shall be adequately described in the security legal documentation.

As regards the assessment and selection of the project, an issuer of green bonds shall clearly inform investors of:

- The environmental goals
- The processes with which the issuer determines how the projects are compatible with the Environmental Project categories
- The eligibility requirements for such Projects, including, where possible, exclusion criteria or any other process applied to identify and manage potential environmental and/or social risks associated with the Projects.

In terms of management of proceeds, net profits from green bonds, or an equivalent amount, should be deposited on a sub-account or transferred to a sub-portfolio or, however, to a system that is appropriately controlled and documented by the issuer in a formal internal process relating to financial and investment transactions in Environmental Projects made by the issuer.

Finally, issuers are required to prepare, keep and update information on the use of proceeds, which shall be updated on a yearly basis until full allocation, and also after, in case of any tangible developments. This should include a list of the Projects to which proceeds from green bonds have been allocated, as well as a short description of the Projects, of the allocated amounts and their expected impact. When confidentiality agreements, market considerations or a high number of underlying projects limit the granularity of the information that may be made available, the GBPs recommend to however make such information available in general terms or based on an aggregated portfolio (for instance, referring to the percentage allocated to certain categories of projects) [ICMA, 2017].

4.3. New Ventures México: communicating value and enhancing corporate strategy with IRIS

General data	
Financial performances (2012 revenue)	$13,846,153.84
m^3 of insulating glass sold in 2012	298,873
Full-time employees in 2012	207
Average annual pay in 2012	$6,003.00
Environmental performance of operations in 2012	
GHG emissions	2,631.55 metric tons of CO2e[17]
Freshwater withdrawn/lost in 2012	1,913.08 litres

New Ventures México (NVM), launched in 2000 as a partnership between the World Resources Institute and the Mexican Fund for the Conservation of Nature (FMCN), has become an independent organization providing support to small and medium enterprises (SMEs) that intend to reduce their social and environmental impact and extend their business.

NVM is the main social and environmental business driver in Mexico and it started on the intuition that, by directly teaching reporting methods and metrics to SMEs, it helps them to manage growth and to attract investors and new opportunities. Therefore, for them, impact measuring has become essential: determining what to measure, collecting and analyzing information and using the results in their decision-making and reporting process.

To measure its performances in supporting SMEs, NVM has used three basis measures:

- The number of SMEs in its programme;
- The number of jobs created and retained by the SMEs;
- The amount of investments it facilitated.

The SMEs involved have learnt how to define the scope of their operation and product impact, the goals and targets for performances and, therefore, to identify and select the appropriate IRIS metrics to measure progress towards their goals. NVM has chosen IRIS, given its harmonisation with other sector-specific metrics, making easy for participants to use a common and reliable source, despite their different impact goals.

In addition to teaching SMEs how to use performance data in business management, NVM also shows how to use impact data in marketing, communicating performances in order to influence investors and stakeholders. The SMEs, with NVM's help, prepare impact reports of few pages to point out the data on financial and impact performances in line with IRIS; these documents are crucial to communicate with investors (acquired and prospect).

The model uses 58 IRIS metrics; the table below shows the most significant ones.

[17] From electric power purchase (2,122,340 kWh), from shipment with trucks (8,175 tons, 178,815 km), and business trips using cars (19,200 km, assumed and used petrol from 2005 to date).

METRIC SET	METRIC
IMPACT GOALS	• *Mission* • Social impact goals • Environmental impact goals
PRODUCT DESCRIPTION	• *Target* • Product duration • Certification obtained • Product/service description
IMPACT OF THE PRODUCT	• units/volume sold • units/volume bought by vendor organizations • Organizations and type of vendors (local, SMEs, female entrepreneurs, WISEs, etc.) • Energy saving • Water saving • Prevented waste (hazardous and non-hazardous) • Energy produced • Sustainably farmed cropland
FINANCIAL PERFORMANCE	• Revenues collected • New investment capital
OPERATING IMPACT	• Employees and Board of Directors • Environmental management system • Energy purchased • Greenhouse gas emissions (direct, indirect, water use, management of waste water)

4.4. "Aavishkaar" India Micro Equity Venture Capital Fund

FUND SIZE	INR 594 million (between $10 million and $15 million, as changed over the fund life)
GEOGRAPHIC FOCUS	Rural India
SECTOR FOCUS	Agriculture; health; water and hygiene; education; information, technology communication
IMPACT AREAS	Approach for enterprise-based development to promote economic and entrepreneurial activity in rural India, providing risk capital and advisory support to starting enterprises. The target outcomes include the creation of local means of subsistence and product and services that reduce the vulnerability of low-income rural populations.
FINANCIAL PERFORMANCE	20% IRR (INTERNAL RATE OF RETURN) on investments and 13% IRR net of fees and commissions. Six full exits: three with IRR between 12% and 39% and three with equity discount. Two partial exits with 45% and 63% IRR and three write-offs.

The second case study that we propose is *Pacific Community Ventures*, a nonprofit financial institution engaged in the development of communities involving small enterprises. The case study, "Aavishkaar" *India Micro Equity Venture Capital Fund* (AIMVCF) is a fund set up by *Vineet Rai* in 2001 with the goal of improving the social and environmental conditions of Rural India. Indeed, the huge population living in rural India (estimated in approximately 700 million people) lives in a socially and environmentally underdeveloped context; in 2001, in this very context *Vineet Rai* set up Aavishkaar, with the goal of making equity investments in the starting phase of new young enterprises, to boost economic activity and improve

the quality of life in rural India, favouring impact investments, through social and environmental performances.

AIMVCF invested in many sectors and the team and the entrepreneurs involved chose and jointly monitored the metrics that were the closest to the positive social and environmental results generated by every company in the portfolio. Performances range from abatement of CO_2 emissions to increase access to healthcare, water supply, financial services and education.

Aavishkaar implemented new systems and processes during AIMVCF life to ensure that its mission be achieved and hired staff dedicated to the development and implementation of systems for the management of the social and environmental impacts of both Aavishkaar and its investees. The dedicated staff visits companies that may be included in the portfolio before investing and prepares exhaustive reports on significant social and environmental impacts and risks. In October 2013, Aavishkaar presented a new impact measurement tool called "*Prabhav*" ("Impact" in Hindi), which was developed by *Intellecap* in cooperation with *IFC* and *GIZ* (a German development agency) and "*designed to capture the contribution of impact funds in developing, sustaining and regulating the impact investing eco-system.*".

Prabhav was developed to monitor the approach of fund managers to obtain the impact, based on the assessment of the risks taken by impact funds, based on the location of investments, stage of investments and financial instruments utilized. While Aavishkaar first impact measurements included "snapshots" of the companies' social results, Prabhav measures also the investors' ones in terms of change before and after the investment. Therefore, this new tool is an important step towards a more rigorous measurement of the impact generated by Aavishkaar investments, rather than simply the aggregated social outcomes of the companies in its portfolio.

Aavishkaar specific features include its strong commitment to the initial verification of data and of the enterprise applying for a loan. During the due diligence process, Aavishkaar assesses the interrelation between business models and social impact. To be invested in, enterprises shall meet one or more of the requirements given below:

- The company's products/services must have an impact on those living in rural and underserved India;
- The company's products/services must reduce direct or indirect costs of the target population that, otherwise, would have to bear them to access such basic services;
- The use of the company's products must boost yields/efficiencies, which translates in higher income for the target population;
- The company's operations must generate an increase in the employment rate in a geographical area with modest job opportunities;
- The activity must lead to the creation of a transparent and more efficient distribution chain ensuring better income to rural producers.

These requirements are an integral part of Aavishkaar internal decision-making process. Every investment document prepared for Aavishkaar investment committee shall include a section on the company's potential social yield.

AIMVCF started operations in 2001 and made 13 investments before its first closing in 2007. The fund was finally closed in 2009 with INR 594.2 million, equal to approximately USD 12 million worth of invested capital.

Table showing some social performances of Aimvcf (2012)

ENTERPRISE	CITY	DESCRIPTION	SOCIAL PERFORMANCE (2012)
Servals Automation	Chennai	Servals Automation supplies affordable and energy-efficient cooking solutions. Its flagship products include a stove burner that allows up to 30% reduction in kerosene consumption, a biomass stove and a vegetable oil stove.	**101.817 tons of CO_2. Emissions were reduced thanks to energy-efficient kerosene burners**
Saraplast	Pune	Saraplast is the fastest-growing company in the country in the leasing of portable toilets and meets one of India's biggest challenges: access to sanitary facilities. The company supplies portable toilets along with cleaning services, waste assessment and disposal.	**11% of people has access to clean and safe toilets**
Waterlife	Hyderabad	Waterlife supplies drinking water to poorly-served communities, installing water purification plants fit to meet local requirements.	**69% had access to clean drinkable water**
INI Farms	Mumbai	INI Farms developed high-quality plantations for export by managing the agriculture supply chain, starting with pomegranate crops in the rural areas of Madhya Pradesh and Maharashtra.	**120 agricultural workers earn regular income at INI Farm pomegranate plantations.**
Milk Mantra	Bhubaneswar	Milk Mantra is a company operating throughout the milk supply chain, from sourcing to processing, all the way to marketing.	**5,000 dairy cattle farmers reported an increase in income within the Ethical Milk Sourcing programme of Milk Mantra**

4.5. Seychelles Conservation & Climate Adaptation Trust

PROPOSING ENTITY	NatureVest
SIZE	USD 21.6 million in total, including: • Financing subsidies USD 5 million • Loan capital USD 15.2 million • Discount of USD 1.4 million on the sovereign debt of USD 21.6 million
TRUST ACTIVITIES	• Repaying a loan of USD 15.2 million granted by TNC at 3% in 10 years • Paying out USD 280 K a year for 20 years in the local currency for marine conservation and climate change adaptation activities • Investing USD 150,000 a year for 20 year in endowment to finance future planning

This is an interesting case for this study because of the type of tool used. Unlike the other cases mentioned, the action consisted in setting up an independent public-private trust.

The Nature Conservancy (TNC) is an organization operating worldwide to protect ecologically important land and water for nature and people. *NatureVest* is TNC investment arm and its mission is creating and executing agreements that provide conservation outcomes and financial return for investors. To mitigate

the effects of climate changes in the Seychelles, *NatureVest* worked with the national government for an innovative debt conversion.

The Seychelles are a developing country consisting of 115 small islands off the coast of East Africa. They are by 99% an ocean country and tourism and fishing are the main economic activities. Consequently, the Seychelles people and economy are particularly exposed to climate change threats. More severe storms and sea level rise are eroding the coastal areas that attract tourists, warmer ocean temperatures are reducing fish and ocean acidification due to increased carbon levels is destroying coral reefs that offer protection from storms and vital habitat for many species.

In a typical debt conversion scheme, TNC secures repayable loans and subsidies for a new nonprofit trust. The trust uses its capital to make a loan to the Government that purchases debt from creditors and pays back the trust at more advantageous conditions. The trust uses the debt payments made by the Government to (1) repay the initial capital raised and (2) finance actions against climate changes. As a reward for the restructuring of its debt obligation at more advantageous conditions, the Government commits to improve its policy and to increase investments in conservation, for instance by creating protected marine areas and restricted zones.

The second step in the restructuring process was identifying a creditor to whom the Seychelles had an outstanding debt. At the time, most of the external public debt of the Seychelles was owed to the “Paris Club” creditors, an informal group of official creditor countries responsible for finding coordinated and sustainable solutions to the payment difficulties experienced by the debtor countries. After long negotiations, a debt of USD 21.6 million was agreed on with Belgium, France, Italy and the United Kingdom. That amount was then reduced to USD 20.2 million.

The third step in the restructuring process was raising USD 20.2 million to purchase the sovereign debt. *NatureVest* raised funds from two sources: (1) an amount of USD 5 million was donated by philanthropic foundations, including the Leonardo DiCaprio Foundation, Waitt Foundation, Oak Foundation, China Global Conservation Fund, Jeremy and Hannelore Grantham Environmental Trust and Turnbull Burnstein Family Charitable Fund, Lyda Hill and (2) TNC granted a loan of USD 15.2 million at a 3% interest rate repayable in 10 years.

The last step in the restructuring process was setting up the local entity, the "Seychelles Conservation and Climate Adaptation Trust", in order to:

- Collect subsidies amounting to USD 5 million and a loan of USD 15.2 million by TNC;
- Lend USD 20.2 million to the Seychelles Government to purchase USD 21.6 million worth of debt from official creditors with a discount against the value;
- Hold two promissory notes issued by the Seychelles Government at more advantageous conditions that those of the original debt.

The Seychelles Government set up the *Seychelles Conservation & Climate Adaptation Trust* as an independent trust fund, a public-private entity operating nationwide, with the *Conservation and Climate Adaptation Trust of Seychelles Act* of 2015. The trust is managed by a Board of Trustees that represents an heterogeneous group of stakeholders[18].

The fund uses its revenues to:

- Repay the loan granted by TNC;

[18] • TNC
• Two local NGOs for conservation in the Seychelles
• The Hospitality and Tourism Association of the Seychelles
• The Chamber of Commerce and Industry of the Seychelles
• The Finance Minister of the Seychelles
• The Minister of Natural Resources of the Seychelles
• The Minister of the Environment of the Seychelles
• The CEO of the Seychelles Island Development Corporation

- Plan the marine conservation of the fund for adaptation to climate change (paying out USD 280,000 a year in the local currency, amounting, over 20 years, to a total of USD 5.6 million);
- Capitalize an endowment for future planning, investing USD 150,000 a year at a 7% capitalization rate for over 20 years (for a total of USD 3 million).

The planning by the trust is expected to cover the following areas:

- Marine management of the new protected marine areas
- Restoring coral reefs and mangroves
- Economic diversification
- Sustainable tourism and fishing
- Improved related policies

Thanks to the policy of the *Seychelles* and investment commitments, as well as to the trust planning activity, the expected impact on conservation is as follows:

- Protected marine areas: the Seychelles will increase their protected marine areas from 1% to 30% of their territorial waters- this area covers approximately 400,000 square kilometres, the size of Germany. The increase should be completed by the end of 2020, with the first phase increase to 15% to be completed by the end of 2017.
- Areas where fishing is forbidden: one half of the new protected marine area - about 200,000 square kilometres - will be a "no fishing" zone to protect important feeding fields for tuna species, which will increase fish stock and improve the tuna fish production industry of the Seychelles.
- Coast protection: the Seychelles restore coral reefs and mangroves, which will act as a buffer against the sea level rise and against stronger and stronger storms. It will also develop and reform the management of coastal areas, fishing and sea policy, as well as regulatory protection to address climate changes.
- Permanent trust fund: the trust fund will manage the perpetual endowment to finance the activities for marine conservation and adaptation to climate change, in addition to ensuring compliance with the terms and conditions of the debt restructuring agreement. The trust shall also be responsible for annual distribution of the proceeds from the debt conversion, through a transparent process.

5. Case history of Italian impact investing for climate changes

(by the Italian Sustainable Investment Forum - *Forum per la Finanza Sostenibile* or FFS)

The Italian Sustainable Investment Forum (Forum per la Finanza Sostenibile or FFS) – a nonprofit association that, since 2001, has been promoting the integration of environmental, social and governance (ESG) standards in investment policies and processes – has set up a Work Group that, for the financial industry, Foundations and Third-Sector organizations, studies the contribution that impact investing can give to funding activities that are in line with the Sustainable Development Goals (SDGs) set by the United Nations as the 2030 Agenda for Sustainable Development, and, at the same time, can ensure financial return.
A manual to spread information on impact investing was prepared in cooperation with Social Impact Agenda for Italy, containing the analysis of the various financial instruments available on the market and of the related opportunities/risks for investors. Specifically, the following areas have been thoroughly examined: social housing; welfare services; educational services; sustainable agriculture and forestry; renewable energy; microfinance.
The manual was presented to the public in November 2017, during the Sustainable and Responsible Investment Week (SRI Week) – the most important event in Italy on this topic – and it can be downloaded from the association website[19].

As already pointed out, "impact investing" means investments in enterprises, organizations and funds set up in order to generate measurable social and environmental impacts and concomitantly able to generate financial return for investors[20].
Impact investing provides financial solutions to social and environmental problems/needs. The main features of this investment strategy are:

- The investor's **intentionality** to generate a positive impact in social and environmental terms;
- **The expected financial return**, which may vary based on the investor's goals but, in any case, must at least amount to full repayment of the invested capital;
- **Heterogeneity of returns**, which may be lower than or in line with the market ones, **and of the asset classes**, which also include advances on cash flows, fixed income, venture capital and private equity;
- **The measurability of the social and environmental impact** (with different goals and methods) and **reporting** of the generated impacts by publishing dedicated reports (impact reports).

The various types of investment are summarized in figure at page 20: impact investing is in-between the so-called *financial-first* strategies and philanthropy (*impact only*).

The four study cases that we present below deal with impact investing for the climate and, therefore, first of all with positive environmental impacts. It is worth pointing out that **the social scope and the environmental one are strictly interconnected**: just think of the social consequences of climate changes consisting in the increase of the so-called "climate migrants", i.e. the people that are forced to migrate because of the deterioration in the life conditions of their original communities caused by climate-related events, such as drought or floods. The number of climate migrants has been estimated as increasing to 200-250 million by 2050[21]. Conversely, investments in environmentally-friendly sectors (renewable energy,

[19] http://finanzasostenibile.it/attivita/impact-investing-la-finanza-supporto-dellimpatto-socio-ambientale/
[20] https://thegiin.org/impact-investing/need-to-know/#s1
[21] Gubbiotti, Maurizio, Finelli, Tiziana e Peruzzi, Elena 2013, "Profughi Ambientali. Cambiamento climatico e migrazioni forzate", Legambiente.it: http://bit.ly/1OYBUSx

forestry, etc.) not considering social aspects (for instance, work conditions) cannot be considered as generating overall positive impacts.

A final caveat concerns the **measurement of the results achieved by investments**: as already pointed out (please, see Chapter 4) the development of methods and data availability are uneven, but it is essential to stress that not all effects (positive or negative) can be translated into figures.
One of the main challenges lies in the importance of combining **quantitative and qualitative data**: an assessment of the single projects in exclusively monetary and/or financial terms – which entails assigning economic values to the results and the calculation of return rates – could be less than exhaustive. Therefore, the use of measurement methods entailing wide use of performance indicators is advisable, because they are very suitable to assess projects with social goals. This is the case of summary qualitative information describing the key conditions for the implementation of a specific goal.
Finally, it is essential to ensure that:

1. The goals of the activity invested in remain extensive and complex rather than being simply the measurable positive effects that can be reported as figures and
2. The time horizon is a long-term one, also beyond the period in which the investor has an interest in the risk or debt capital.

For a first overview of possible applications of impact investing for the climate in Italy, please refer to the study cases given below.

5.1. énostra Cooperative

ènostra is the Italian national cooperative vendor supplying sustainable and ethical electric power to households, businesses and Third Sector organizations. It is a community of aware citizens and businesses that has decided to change the way of producing and consuming energy with a bottom-up approach, fostering the shifting from fossil sources to renewable ones. To date, the cooperative has approximately 1,500 members and 2,000 outstanding supply contracts, for a supplied energy volume of 5GWh a year. Its business model provides for the sale to its members of electric power from renewable sources, certified with Guarantees of Origin, from its own plants or through bilateral contracts with other selected producers or purchased on the exchange. Moreover, ènostra carries out cultural, information provision and educational activities, and participates in national and international initiatives for reducing the emissions in the atmosphere generated from energy production from fossil sources (e.g.the *Divest Italy* campaign coordinated by the Italian Climate Network).

In 2018, ènostra will launch an **impact investing campaign addressed to all its members** (both natural and legal persons) with the goal to build a wind power farm with about 1MW power. In this way, the *prosumer* model is going to be used also in Italy and will allow the cooperative members to produce and consume their own energy from renewable sources. Investing will be reserved to the cooperative members and will be made with "*azioni di sovvenzione*", i.e. financing shares, governed by Italian Law No. 59/1992, in accordance with a specific regulation approved by the General Meeting of Members, which shall determine the risk-return profile and the funding amount in compliance with the remuneration limits laid down by the applicable legislation. In addition to ensuring a financial return to investors, ènostra will exhaustively report on the social and environmental impacts generated by investing in new production from renewable sources.

At present, the measurement and reporting activities that ènostra carried out in order to pursue its mission and to ensure utmost transparency towards its members is based on two main tools:

1) *Policy for the measurement of the environmental and social sustainability of the plants producing electric power from renewable sources and of the social responsibility of the producer enterprises.*

ènostra has implemented this policy and an original method to measure sustainability applied to plants and enterprises producing electric energy from renewable sources. The calculation tool has been developed based on the socio-environmental due diligence process with which Banca Etica assesses the creditworthiness of the enterprises that apply for loans and on the Code of Ethics with which Retenergie measures the impacts of renewable energy production plants, both in case of purchase of existing plants and in case of newly-built plants. The result was a sustainability matrix that ènostra uses "to certify" that the energy input in the network and sold to end customers is compliant with some objective and measurable standards. The Cooperative selects third-party producers to buy energy from by assessing the environmental compatibility of their plants or projects and the social responsibility of the owner enterprises. Each plant and enterprise passing the exclusion procedure is assigned a rating starting from the measurement of some technology-specific indicators.
In terms of sustainability, ènostra focuses on some types of plants (photovoltaic, hydroelectric and wind) in order to favour:

- The balance between plants that cannot be regulated (photovoltaic and wind) and plants that can be regulated (hydroelectric), in order to better adapt the production profile to its members' consumption profile;
- Plants that use mature technologies: the reason being that, on the one hand, the cooperative is not yet developed enough to be able to finance innovative technologies, on the other hand, it is committed to protect the members' capital with safer investments;
- Plants that do not generate climate-altering emissions in their energy-production process.

In terms of corporate social responsibility, ènostra assesses the vendors it buys energy from, based on some criteria concerning the Environmental, Social and Governance (ESG) scopes, that is to say:

- The plant portfolio;
- Lawfulness;
- Transparency and governance;
- Network and community relations;
- Environmental responsibility;
- Social responsibility.

2) *Grid showing the impact indicators published on utility bills to inform members.* Ènostra 2018 goals include the preparation of a sustainability report and the finalization of an impact assessment system. For the time being, the Cooperative monitors some indicators and publish them on utility bills, which are useful both for its members (to measure the impact of their supply choice) and to the cooperative company (to assess progress towards the achievement of its main corporate goals). The measured indicators are:

- Electric power produced by plants from renewable sources as kWh/year;
- Electric power from renewable sources sold to end customers as kWh/year;
- Prevented CO2 emissions in g/kWh for the ènostra supply trillion period vs. the national energy mix[22] (data published on the utility bills);
- Prevented PM emissions in g/MWh for the ènostra supply trillion period vs. the national energy mix[23] (data published on the utility bills);

While it is certainly true that the prevented CO_2 figure is a frequently-used indicator in many different situations, first of all in energy consumption bills, as the measurement of actions for climate change mitigation, this cannot be said for the figure on particulate matter that is not produced by those choosing to use energy produced from renewable sources. The choice to use this parameter aims at calling consumers' attention to the primary sources of energy (for instance,

[22] ISPRA data (please, see www.isprambiente.gov.it/files2017/pubblicazioni/rapporto/R_257_17.pdf)
[23] ISPRA data (please, see http://www.sinanet.isprambiente.it/it/sia-ispra/serie-storiche-emissioni/serie-storiche-delle-emissioni-nazionali-di-inquinanti-atmosferici/view)

oil, methane, coal) and to the fact that eliminating any combustion improves air and health quality, and, consequently, contributes to the reduction of social and healthcare expenditure. The active and informed consumers, who have become aware of the relationship between energy and pollution and between pollution and health, are the first ones to focus their choices, as well as savings, on green technologies and energy saving solutions.

3) *Initiatives against energy poverty.* As a sector player that focuses on social impacts and on the right to affordable energy, *ènostra* is part of the "*L'innovazione sociale tra energia ambiente e povertà*" (Social innovation in energy, environment and poverty) research project, supervised by prof. Paola Valbonesi of the University of Padova and funded by the Veneto Region and the Levi-Cases Centre for Energy Economics and Technique (University of Padova), with the participation of CUOA. The goal of this research project is verifying the possibility to fight energy poverty by increasing home energy efficiency and by activating specific incentives. Energy poverty means a situation in which life-line energy expenses required for decent living cannot be afforded or force a household to give up other essential consumption items [Miniaci, Scarpa and Valbonesi, 2015]. Recent studies have shown that energy poverty has multiple origins: this situation does not depend only on the household income, but it can depend also on the residence area, on the type of available services, of the home size and energy efficiency, of the number of members of the household and on its composition, and on the household's preferences and habits.
   The research underway focuses on energy poverty and home energy efficiency, in order to take account also of any relevant economic and environmental positive externalities resulting from lower consumption of methane gas and other fuels used for heating. By involving social services and parties that operate in the community and, thus, interact on a daily basis with households in poverty, the intention is to investigate the expediency of evolving from traditional incentive-giving mechanisms of welfare nature (extraordinary contribution to households for the payment of utility bills) towards new tools with which the resources allocated by the Public Administration can be invested in actions aimed at enhancing the efficiency and rationalizing energy expenses of "vulnerable consumers" (investing in expense reduction with long-term benefits consisting of cost saving and social impact).

   In 2050, with a regulatory framework supporting renewables, half of the European population, the so-called "energy citizens", could produce electric power and contribute to the network balance by flexibly managing – on an individual or collective basis – their energy demand[24]. Moreover, a recent study carried out in Germany has shown that, where renewable energy plants are the property of town-owned companies or local energy communities, the economic impact on the community is eight times higher than in the case where big external investors step in[25].

[24] Source: study *The Potential for Energy Citizens in the European Union*, by the CE Delft research and consultancy organisation on behalf of Greenpeace, The European Renewable Energies Federation (EREF), Friends of the Earth Europe e REScoop.eu

[25] Source: "Co-op chief: People can produce most of their energy themselves", interview with Dirk Vansintjan, President of the European federation of renewable energy cooperatives (RESCoop.EU) published on Euractiv (https://www.euractiv.com/section/energy/interview/weds-co-op-chief-people-can-produce-most-of-their-energy-themselves)

5.2. Impact investing and climate change: Forestry investments

(by Alex Pra and Lucio Brotto, Sustainable Investments Unit, ETIFOR SRL)

Reforestation and forest management is one of the most interesting and fastest-growing sectors for impact investing, i.e. investments with positive environmental, social and governance impacts, and, especially, for the climate-change themed segment. Starting as early as with the 1992 Rio de Janeiro Earth Summit and also in the recent Paris Accord on climate, the forestry sector has been defined as one of the key sectors in the mitigation of and adaptation to climate change. Indeed, forests perform an important action absorbing carbon dioxide from the atmosphere and are essential for the preservation of soil properties, of the water cycle and of natural habitats; moreover, they play an important role in the social and economic development.

In general, a forestry investment consists in the acquisition and/or in the management of a forest with the goals to obtain a financial return, essentially generated by four components:

1. Biological growth of trees that yield timber or burning wood;
2. The increase over the medium-long term in the prices of timber and wood products;
3. The increase in the value of forestry land or forestation-concerned land;
4. The sale of innovative products and services (carbon credits, medicinal herbs, sport and recreational uses, water purification).

Globally, in the last few years, forestry investments have increased exponentially, from about USD 1 trillion in 1980 to over USD 80 billion at present. The main source of financial return in these investments is timber trade, since the demand for timber has been estimated as increasing by over +30% from the present to 2030[26]. This increase is driven, on the on hand, by the evolution in consumption habits that are shifting towards products with low environmental impact (see the evolution in the building industry) and, on the other hand, by Bioeconomy policies that foster the transition towards production and energy systems based on biomaterials, such as timber and biomass. Moreover, in recent years, the increase in forestry investments has gone along with a change in the relevant business model: indeed, timber trade is no longer the one and only purpose, but the scenario has extended also to the marketing of other forestry products and services, such as eco-systemic services (tourism, wild forest products, water, carbon absorption, etc.) and biomass for energy purposes.

In financial terms, recent studies have stressed the strategic value and the advantages of forestry investments within investment portfolio, i.e. low volatility, protection against inflation, low correlation with other asset classes and the possibility to preserve capital[27]. Moreover, an essential aspect, speaking about impact investments, is the possibility to measure and report positive impacts and, in this regard, the forestry sector is at a very advanced level. Indeed, as early as in the early 1990s, along with the sustainable forestry management concept becoming institutionally well-established[28], the sector started to develop a significant number of tools to measure and ensure implementation of the sustainability concept in forest management. Specifically, today there are more than 50 standards, quality protocols and rating systems applying to forestry investments to ensure their environmental sustainability and to mitigate technological, legal reputational and social risks[29]. The most common example is the Forest Stewardship Council (FSC®)[30],

[26] FAO 2009, Global demand for wood products: http://bit.ly/2vQ6LIR

[27] Please, see the published works "Conservation Finance. From Niche to Mainstream: The Building of an Institutional Asset Class, 2016" (https://www.credit-suisse.com/media/assets/corporate/docs/about-us/responsibility/banking/conservation-finance-en.pdf) e "Current and Emerging Timberland Investment Market Prospects, 2010" (http://www.dasos.fi/dz/documents/timberland20investment20market20prospects20feb20201020final.pdf)

[28] In accordance with the most widely used definition, the one adopted in 1993 by the Ministerial Conference on the Protection of Forests in Europe, "Sustainable management means the stewardship and use of forests and forest lands in a way, and at a rate, that maintains their biodiversity, productivity, regeneration capacity, vitality and their potential to fulfil, now and in the future, relevant ecological, economic and social functions, at local, national, and global levels, and that does not cause damage to other ecosystems.".

[29] Brotto, Lucio, Pettenella, Davide, et al. 2016, Planted forests in emerging economies: Best practices for sustainable and responsible investments: http://bit.ly/2bl9vcO

[30] Please, go to the website: https://ic.fsc.org/en

which was set up in 1993 as the international reference body for certification of sustainability of forest management and chains of custody of forest products. In Italy, the FSC has been operating since 2001 and, to date, it has certified 64,000 hectares of wood and 2,758 enterprises. One of the most complete rating systems to be mentioned is FairForest[31], a system that uses a catalog of 170 indicators based on the IRIS (Impact Reporting and Investment Standards) to measure the impacts of forestation projects as regards financial and social-environmental performances of investments, quality of site performance, production security and business environment. Other significant examples of tools used in the sector are the Carbon Gold Standard[32], the Shared Impact Assessment Measurement Toolbox (SIAMT)[33] of FAST, the Forest and Plantation Policy[34] of ABN-AMRO and the Responsible Investments Guide[35] of the WWF.

ETIFOR SRL is a spin-off of the University of Padova and it helps companies, state bodies and private investors to choose make and manage sustainable investments in forests and agriculture generating positive impacts. In the last few years, ETIFOR has provided support to several forestry investments in Italy and elsewhere; some examples[36] are:

- **Natura7** (Alto Adige, Italy): forestry investment with positive impacts in the Alpine setting through the acquisition, improvement and sale of a forest area, combining production of building timber with the sale of CO2 fixation innovative services, improvement in water quality and responsible tourism. This area is FSC® certified. This type of investment (Euro 3 million) ensures diversification of the investment portfolio, keeping an annual IRR > 2%.
- **Maderacre** (Peru): acquisition of a forest concession to produce timber and processing plants to make semi-finished products. The company uses the FSC® certification and also sells carbon credits using the VCS[37] and CCB[38] certifications. IRR: 20% and value of the investment equal to Euro 35 million.
- **Bosco Limite** (Veneto, Italy): forestry investment in the creation of new forests in order to increase the quantity of drinkable water for the Region water supply network. Thanks to the assistance provided by Etifor, the owner of the fund makes the investment (€150,000) replacing corn production and generating a positive NPV of €430/ha/year. The investment generates environmental and social benefits (CO2 fixation, PM10 capture, m^3 of infiltration water recharging groundwater aquifers and an increase in public recreation areas).

In the projects overseen by ETIFOR, the metrics, indicators and certification schemes are customized and chosen in accordance with the investment target, with the customer and with the local specificities of the area the project is implemented. A practical example of impact and management metrics uses for forestry investments in the Italian scenario is given in the table at the following page:

[31] Please, go to the website: http://fairforest.openforests.com/
[32] Please, go to the website: https://www.goldstandard.org/our-work/what-we-do
[33] Please, go to the website: http://www.fastinternational.org/analytics/
[34] It can be downloaded from the website: https://www.abnamro.com/en/images/040_Sustainability/040_Risk_Management/Attachments/Forestry_and_Tree_Plantations_Policy.pdf
[35] It can be downloaded from the website: https://www.worldwildlife.org/publications/the-2050-criteria-guide-to-responsible-investment-in-agricultural-forest-and-seafood-commodities
[36] Other examples can be found on the website: http://www.etifor.com/en/portfolio/#_highlights
[37] Please, go to the website: http://www.v-c-s.org/
[38] Please, go to the website http://www.climate-standards.org/ccb-standards/

Aspect	Impact	Unit of measurement	Italy example on ETIFOR real data
Environmental	Percentage of area subject to fire	%	0% of the forest is subject to fire
	Carbon dioxide fixation	tCO_2/ha	1 reforested hectare captures at least 300 tCO_2 in 30 years
	Generation of drinkable water through infiltration	m^3/ha/year	1 hectare of infiltration forest area recharges groundwater aquifers with 0.5 million m^3/ha/year
	Percentage of protected area on total managed area	%	At least 10% of the forest area is managed with protection and conservations purposes
Social	Percentage area that the population can use	%	At least 50% of the area has safe and marked paths, with information boards
	Percentage turnover of forest products processed locally (range < 250km)	%	100% of products is at least partially processed locally
	Improvement in workers' health and safety	No/year	The number of accidents and diseases decreases over the years
Governance	Percentage of the forest area FSC® certified	%	100% of the forest area in the portfolio is FSC-certified or has started the certification process
	Participation of stakeholders in decision-making processes	YES/NO	Updated list of stakeholders and book of records of meetings
	Presence of tools to solve any disputes	No.	Any disputes have been solved or are in the negotiation phase
Financial	Financial performance of the investment	IRR (%)	Internal Rate of Return (IRR), or the rate of return on the invested capital, of 3%
	Number of years required for the investment to be repaid (Payback period)	No.	Payback period of 10 years
	Applying tax incentives/deductions	YES/NO	The contributions provided for in Measure 8 of the regional Rural Development Programme (RDP).

5.3. Fondazione Housing Sociale

The *Fondazione Housing Sociale* (Social Housing Foundation - "FHS") was set up in 2004 to develop the "Housing Sociale"[39] (Social Housing) project designed by the Cariplo Foundation. The project has the purpose of carrying out social real estate actions, experimenting **new action approaches and innovative solutions** for structuring, financing, implementing and managing affordable social housing projects. The Lombardy Regional Government and the National Association of Italian Municipalities (ANCI) are also founding members of the Foundation, thus giving evidence of its public-private partnership nature.

The Foundation intends to contribute to **solving the housing problem** of families and people, having special regard to those that are disadvantaged in income and/or social terms. It also aims at fostering the **creations of decent housing and social environments** where people, thanks also to their direct and responsible involvement and supported by an adequate service network, can live and have fulfilling and significant human relations and experience positive relations with the other members of the community.

Fully aware of the scantiness of resources available for free grants, the Foundation has - from the very beginning - developed its activity model based on **principles of sustainability and impact investing,** with ethical real estate funds as the most suitable tool to implement social housing projects in Italy. Indeed, **Ethical real estate funds** dedicated to social housing have been designed to support controlled-price rental

[39] "Social Housing" is an umbrella term referring to housing and services and socially-connoted actions and tools addressed to those that cannot meet their housing needs because they cannot afford it at market prices or because there is no adequate supply.

using the fund as a financial vehicle corporation not consolidated in the financial statements of traditional players, and medium/long-term risk capital with controlled return.

The first one of these funds, the ***Fondo Abitare Sociale 1*****,** was set up in 2006, raised Euro 85 million from institutional investors (Fondazione Cariplo, Cassa Depositi e Prestiti, Lombardy Region, Intesa San Paolo, BPM, Generali, Cassa Italiana Geometri, Pirelli and Telecom) to implement projects in Lombardy.

After the success achieved by that first fund, in 2009 the *Piano Nazionale di Edilizia Abitativa* (the Italian National Housing Plan laid down in the Italian Prime Minister Decree of 16 July 2009) provided for an Integrated System, at both national and local level, of real estate funds for "the acquisition and construction of properties for social housing, or the promotion of innovative real estate financial instruments, with the participation of public and/or private entities to enhance and increase the supply of rental housing".

This led to the creation of the ***Sistema Integrato dei Fondi*** (SIF, the Italian integrated system of real estate funds) that today accounts for a total of about Euro 3 billion including a national fund (*Fondo Investimenti per l'Abitare* – FIA) and over 30 local funds. Specifically, the FIA has an endowment of Euro 2,028 billion with the contributions made by Cassa Depositi e Prestiti (1 billion), private investors, such as foundations, banking and insurance groups, etc. (888 million) and by the Italian Ministry of Infrastructure and Transport (140 million).

The Fund is managed by CDP Investimenti Sgr and invests mainly in units of local real estate funds managed by other asset management companies, with holdings ranging from 40% to 80%. The remaining portion of the resources of local funds is raised from investors in the related community, such as bank foundations, local administrations, local authority housing companies, private players and private entities engaged in social activities. Then, these funds are managed by the leading Italian real estate asset managers that also carry out the single social housing projects. As of 31 December 2016, over 270 projects were underway with the goal, at the end of the programme (2020-2021), of having ready over 20,000 social housing units and 8,500 bed places in temporary and student accommodations, as well as local and neighbourhood services.

The main **critical factors** for these operations to be successful are:

- Finding local equity to complement the FIA investment;
- Return on investments (often missing the target of 3% return plus inflation, due especially to the need to have higher portions of rental accommodations and at lower rents);
- Time required for the town permits and administrative authorizations.

The value of Social Housing projects consists in the ability to make **good quality homes at low cost and with many services,** creating the ideal conditions for **setting up new and lively communities featuring active participation**. To this end, a **social support plan** is set up and provides for activities aimed at fostering tenants' sense of belonging to the community; consolidating relations between components; organizing representation bodies; laying down tasks and roles of active participation.

At the same time, the FHS believes that a social housing project must interpret the sustainability concept extensively, trying to achieve **long-term balances in the social, economic and environmental aspects**, relying on an integrated approach to design and striving to stimulate lifestyles that contribute to positive impacts.

Therefore, the Foundation attaches great importance to the **environmental sustainability** of its projects through an assessment process taking account of building actions (e.g. building renovation/regeneration is preferred to any greenfield projects) and energy efficiency (assessed based on the building energy performance certification).

In the **Figino "*Borgo Sostenibile*"** project – carried out in 2015 by the *Lombardia Comparto Uno*[40] real estate fund managed by InvestiRE Sgr in west Milan and consisting of 321 flats, an area of 290sm dedicated

[40] The Fund is an extension of the *Fondo Abitare Sociale 1*, which has been operating since 2006 to carry out projects in Milan and in other cities in the Lombardy Region.

to community-based house services, and an area of 2,650sm dedicated to local and town services, and an area of 1,550sm dedicated to businesses – energy efficiency and environmental protection were a key goal that was pursued by adopting general and specific criteria, such as:

- Combining the buildings' energy efficiency with noise control and natural light in the premises;
- Achieving a balance between produced and consumed energy through an appropriate technology mix;
- Using technologies that stimulate the reduction of polluting emissions;
- Using technologies designed to control water consumption (separation, recycling, etc.);
- Rationalizing and industrializing some phases in the building process in order to obtain higher quality of the architectural product using raw materials sourced from certified supply chains.

This environmental strategy led to the energy classification of the buildings in **class A of Cened,** the building energy certification scheme of the Lombardy Region (less than 30 kWh/sm per year), to the use of systems able to control energy dispersion and reduce consumption, as well as to the use of energy from renewable sources. Specifically:

- A **heating and cooling system** was installed using floor radiant panels fed by reverse cycle geothermal heat pumps;
- A mechanical **ventilation system** with heat recovery and humidity control was installed;
- A **monitoring system** was installed to control all energy consumptions;
- **LED Light fittings** were installed in outdoor areas;
- **Technical and building devices** were used as fit to control energy dispersion.

In addition to the aforementioned aspects of the system engineering design, the Figino project was equipped also with a BEMS (***Building Energy Management System***), i.e. a control, regulation and monitoring system covering both thermal energy production plants and the single real estate units. Thanks to the BEMS, the building and system engineering systems can be controlled, managed and optimized, the building consumption can be monitored and in-depth energy analyses can be performed.

Finally, as pointed out above, the social housing projects promoted by *Fondazione Housing Sociale* include material involvement of residents in the management of the buildings and of the areas intended for common use. This involvement translates into a significant **action to increase the community's awareness of environmental aspects**, with the goal of fostering responsible consumption and reducing water and energy waste.

5.4. SEFEA

The SEFEA group, specifically through the "parent" company SEFEA SC, has been operating for over 15 years in ethical finance, supporting exclusively projects with high social and environmental impact in Italy and internationally. Within the environmental aspect scope, SEFEA has worked mainly in the following sectors:

Energy Efficiency

- Promotion of the first Energy Service Company (ESCO – Solidarity & Energy SpA) with social impact in Italy. The support provided to the ESCO allowed a mechanism to be developed through which the savings generated by the higher efficiency of public power plants are used to promote social projects in the related community;
- Support to the definition of affordability of eco-villages in Italy.

In addition to allowing businesses, private citizens and state bodies to reduce their energy consumption, energy efficiency enhancement is one of the tools for mitigating social and economic consequences of

energy poverty. SEFEA is currently working on the presentation of a project to promote youth employment through actions fighting energy poverty.

Organic farming

- Assistance in the design of a financial solution to support Italian farms in the distribution of organic and biodynamic products;
- Support to the financial restructuring of an Italian farm engaged in organic farming;
- Financing for the production of organic fruit in a post-war scenario in Eastern Europe;
- Financial support to company delivering organic agricultural products in France.

The projects regarding organic and sustainable farming promote responsible use of natural resources and lower use of substances that are harmful for people and for the environment.

Sustainable development

- SwitchMed: an EU-funded project that provides support to and facilitates relations between parties interested in increasing social and ecological innovations in the MENA area, in order to achieve productive, circular and shared economy systems;
- SwitchAfrica Green: the general goal of this action is to contribute to reducing the environmental footprint of Kenyan micro, small and medium enterprises (MSMEs) in the agro-industry, with specific regard to mango, coffee and dairy sectors, while increasing their ability to compete in local and international markets.

By promoting sustainable production and consumption systems, virtuous development mechanisms can also be promoted, through responsible management of natural resources and circular economy mechanisms. Therefore, the aforementioned sectors allow financial return requirements to be coupled with the generation of positive social and environmental impacts for the community.

In 2015, within its activity supporting the European Federation of Ethical and Alternative Banks (FEBEA – *Fédération Européenne des banques Ethiques et Alternatives*), Sefea Consulting (consultancy company controlled by SEFEA) was responsible for the publication of the "*Review of impact assessment methodologies for ethical finance*" report, in cooperation with the Institute for Social Banking - ISB, prepared by ALTIS. The review provides an overview of the available indicators to measure the impact of investments by sustainable financial institutions and includes a focus on green and sustainable agriculture investments. Specific tables are attached hereto. The full report can be found on: http://febea.org/en/febea/news/research.
Thanks to the experience gained over the years and to exhaustive analyses provided by the available studies, including the one by FEBEA, ALTIS and ISB, Sefea has accrued extensive skills in terms of impact investing. Such skills will be directly used in the funds launched by the new Asset Management Company of the SEFEA Group, *SEFEA Impact SGR*.

Indeed, the impact management and monitoring process implemented by Sefea Impact Sgr is the core of its strategy and operations. Thanks to this process, the Asset Manager can constantly assess whether the set goals are being achieved and whether the expectations of the various stakeholders are being met, as well as have feedbacks useful to adjust its strategy where needed.

Specifically, the process has been developed starting from the main international models (EVPA, GIIN, etc...), and has 5 key steps as show in the diagram; the measurement of results must be structured on three different yet complementary levels: the levels of the Asset Manager, of the Fund and of single beneficiaries. Based on the specific level, and thus on the related goals, the most appropriate approaches will be adopted, referring to the existing literature and already tested practices. A key goals of SEFEA IMPACT

SGR is that, in the beneficiaries' corporate practices, the Impact Management principles are fully internalized, also with dedicated assistance.

The **Fondo Social Impact** (Fondo Sì) has been recently set up as an investment fund promoted and managed by Sefea Impact Sgr, with the goal of "*developing a sector of enterprises able to give, sustainably over the long term, adequate responses to society's needs by generating - with full awareness - a measurable positive social impact*". In selecting its investments, the Fondo Sì implements an Impact Investing strategy. Therefore, its target consists of enterprises that pursue clear and measurable social impacts, i.e. that aim at producing - through their entrepreneurial action - positive impacts on the community in social, environmental, cultural or other terms. The candidates are assessed based on the following elements:

- Legal form of social enterprise pursuant to the law (including social cooperatives and their consortia) and other cooperatives and companies pursuing clear and measurable social goals.
- The candidate organizations must comply with the size limits laid down for small and medium enterprises (SMEs) or have less than 250 employees, annual revenue below €50 million or a total annual budget not exceeding €43 million.
- It supports corporate expansion, business consolidation or reorientation, mergers and acquisitions. In exceptional cases, the Fund considers the launch of new entrepreneurial projects.
- The supported projects must show that they are affordable, ensuring repayment of the investment and a return on it. The rate of return and the repayment terms are assessed on a case-by-case basis, taking account of the specific features of each project.
- The Fund is focused on enhancing the best Italian entrepreneurial experiences.
- The social impact generated by the project must always be measurable with objective standards.

The Fund' financial action has the features listed below:

- Investment instruments – it invests in equity instruments (shares, stocks and, for cooperatives, cooperative shares, or shares for financial-backing cooperative members) or quasi-equity (convertible bonds, profit-sharing investments, subordinated instruments, etc.), combining, where the case, secured and unsecured loan instruments. Within equity investments, it generally acquires minority interests. It constantly monitors the investee performance, also through its representatives sitting on the investees' corporate bodies.
- Co-investing - It operates as a financial and technical partner for the project development and, therefore, the presence of any other financial partners co-investing in the project (the entities proposing the project or other financial partners) is seen as a plus.
- Investment size - between €300,000 and €2,000,000.
- Timeframe - the average duration of the Fund investments is 5 years.

Assistance services go along with the financial support, increase the transaction efficiency and effectiveness and ensure the achievement of the set goals in terms of social impact, affordability and resilience of the organizational system. For each project, in agreement with the proposing party, a technical support plan is designed setting forth the players involved, the methods and timeframe for service provision, interim and final goals, as well as monitoring procedures.

Support is provided many different forms:

- Assistance in governance management - In case of equity investments, the Fund generally retains a minority interest in the company providing its managers with assistance, while they remain responsible for operations and are never substituted by the Fund. Being part of the Boards of Directors, Sefea Impact supports the activity of the decision-making bodies of its investees.
- Assistance in business operations - Professional advisors transfer, over a set period of time, know-how and skills to the corporate areas that require them.
- Assistance in the implementation of impact management and monitoring processes.
- Group training on crosswise topics to foster the development of the investee's human capital.

Conclusions

In Italy, the market for social impact investing – meant as the set of parties, rules and infrastructure aimed at implementing investments the generate positive and measurable social impacts along with a financial return – is a young market featuring a complex structure. However, based on the existing trends and on potential demand, this report has identified impact investing as a way to channel private investments to green projects and, thus, to provide governments, non-profit organizations and environmental sustainability-focuses enterprises with support in achieving their social goals.

Even though impact investing is still niche in the wider range of socially responsible investing, the presented surveys and the experiments underway show that social impact is becoming a "third dimension" to be added to risk and return, which, today, is essential to maximize development benefits and sustainability. This is the reason why impact measurement has strategic importance. The analysis has shown that there are different methods for its measurement and metrics able to provide important information to investors; the significant heterogeneity of measures is due to the different nature of investors (patient or not) and to different models (quantitative vs. qualitative).

In addition to impact measurement, to conclude it is also worth mentioning the importance of the measurement process governance: indeed, there are significant technical and methodological problems in this regard, i.e. in defining and adequately involve the parties to the transaction; the process governance is all but neutral as to the methods used to generate the measure that will determine the subsequent payments. A crucial topic in which technology is playing an increasingly significant role. In this regard, solutions stemmed from big data and from the related algorithms (especially the blockchain technology) will have to be closely watched; these solutions are increasingly disruptive and, for some economic segments, seem to be the only way to break the "wall" that has been proving insurmountable with the approaches presently used by finance and policy makers to measure social impact.

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