



PALGRAVE STUDIES IN IMPACT FINANCE

Contemporary Issues in Sustainable Finance

Creating an Efficient Market through
Innovative Policies and Instruments

Edited by

Mario La Torre · Helen Chiappini

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Palgrave Studies in Impact Finance

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FOREWORD: PUTTING THE IMPACT IMPERATIVE AT THE HEART OF SUSTAINABLE DEVELOPMENT FINANCE

The 2030 Agenda for Sustainable Development aspires at a better future for all, thereby calling for an innovative and sophisticated financing strategy, with the dual challenge of mobilizing an unprecedented volume of resources, and leaving no one behind. Public action alone is not sufficient to address the scale and complexity of today's global challenges. The Addis Ababa Action Agenda, agreed by United Nations in 2015, calls on governments, businesses, foundations and individuals to act in a more coordinated manner, in the pursuit of a new model for economic growth that enhances human well-being and preserves the environment.

In response to international commitments, public actors are increasingly turning to the private sector as a potential ally in the pursuit of sustainable development, environment protection and poverty reduction. At the same time, mainstream investors and asset managers have become more attentive to the social, environmental and governance consequences of their operations. Market estimates vary greatly, depending on the definitions employed, but the trend is clearly upward, as investors progressively incorporate extra-financial considerations and decide to actively pursue positive impact strategies.

Independently of the labelling applied, public and private investors are turning to green, blended, social finance as a way to access new growth markets and respond to public expectations. While blending is driven by the need to increase the total funding available for the Sustainable Development Goals, green and impact finance aim to foster better ways to achieve these goals, through innovative approaches to social and environmental challenges. In practice, individual asset managers may adopt very

diverse approaches to guide their portfolio allocation, ranging from risk mitigation (exclusionary screening) to impact creation (active ownership). As institutional investors engage further and deeper in sustainable development, their skill set, risk/returns assessment and incentive structures will need to evolve accordingly.

While investors agree that financial and sustainable development returns can go hand in hand, the challenge lies in defining impact. Public and private organizations continue to measure different elements by different yardsticks, owing to the absence of common culture and language. The terms evaluation, monitoring, results and impact measurement are used interchangeably and without clear definitions.

Complex governance patterns and multiple layers of intermediation deeply affect our collective capacity to understand the actual contribution of joint public and private investments to the global agenda. As the delivery chain grows longer, it becomes more difficult for governments to exercise their steering and oversight function. The use of concessionality represents commercially sensitive information, which is often advanced as ground for non-disclosure.

Evidence gathered by the Organisation for Economic Co-operation and Development (OECD) shows that most impact investors seek market rate returns, while the capacity to track social outcomes is uneven at best.¹ Too often, public initiatives fostering impact investment also do not explicitly require an independent assessment of results actually achieved.

The accountability lines become even more blurred when funding is pooled in collective investment vehicles. The 2018 OECD Survey on Blended Finance Funds and Facilities² shed new light on their low propensity to track and publicly disseminate the results actually achieved through their operations. Almost two-thirds of the surveyed vehicles do not systematically update the social or environmental performance indicators at the end of the investment and a third of them have no dedicated internal monitoring and evaluation function. For a non-negligible amount (12%), an evaluation has never been performed, nor is it planned in the future. When it is, only one in four of the ensuing reports is made public.

The growing awareness of the need for private sector involvement has only intensified the urgency to enhance their degree of public accountability. But the measurement of investment outcomes should not be confused with, and cannot replace, the ex post evaluation of public policies supporting those investments. Impact investors are mostly concerned by the need to estimate or measure outcomes for immediate investment

decision or external reporting requirements, whereas public authorities need to ensure long-term policy learning based on actual, independently observed results.

In order to harness the full potential of sustainable development finance, we cannot shy away from “the impact imperative”: a shared understanding of how we define and assess the results of our collective efforts towards sustainable development. In this rapidly moving context, the impact imperative should embrace all resources deployed in pursuit of sustainable development, independently of their labelling. In their capacity as policy makers, market regulators and development finance providers, public authorities have the ultimate responsibility to counter the danger of “impact washing”, by establishing and promoting integrity standards.

We are at crossroads in terms of how governments and society as a whole are responding to the Sustainable Development Goals. Marginal adjustments will not be sufficient to deliver the billions of financing to the trillions of people that are in need. This shift in paradigm can only happen, if we redefine the way financial and economic markets function to promote a more equitable and sustainable allocation of resources. All sustainable development finance actors share the responsibility for delivering the 2030 Agenda, and this implies converging towards a united vision on what we mean and how we assess progress towards sustainable development.

Irene Basile

NOTES

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2. OECD (2018), *Making Blended Finance Work for the Sustainable Development Goals*, OECD Publishing, Paris, <https://doi.org/10.1787/9789264288768-en>.

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The Equator Principles Institutions won the Financial Times Sustainability Award. Karen’s research interest is on impact investing and impact entrepreneurship, as well as leadership evolution, theories of change and social stock exchanges. She is keynote speaker, advisor, facilitator, mediator and leadership coach.

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Enhancing Efficiency in Sustainable Markets

Mario La Torre and Helen Chiappini

1.1 THE PATH TOWARD SUSTAINABLE FINANCE

Sustainable investments—although still working outside a clearly defined framework—include investments aiming at achieving a positive impact on environment and society. Several different investments strategies (e.g., negative screening, positive screening, best in class) and many dominant purposes are inspiring sustainable investing.

Addressing the funding gap connected to the financing of sustainable development goals (SDGs) included in the United Nations Agenda 2030 (United Nations 2015) represents one of the priorities for sustainable investors over recent years. The Agenda 2030 includes 17 SDGs—including no poverty, zero hunger, quality education, reduced inequalities, and climate actions—and 230 precise targets that need to be financed by public and private investors. Similarly, the Climate Agreement signed by 195

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countries pushed funding needs connected to climate issues to the top of the agenda for the public (and private) sector.

Sustainable investments represent a growing, worldwide phenomenon: recent data from Global Sustainable Investment Alliance (GSIA 2019) estimates the market in USD 30.7 trillion, with a growth of 34% since 2016.

Public investments, however, are still insufficient to cover the funding needs of sustainable sectors. In such a panorama, public partnerships (PPP) are an alternative strategy to support the transition toward a more sustainable and inclusive economy. Similarly, public commitment—expressed through policy incentives—is particularly desirable. In this perspective, it is good to know that young generations are aiming at a positive impact with their investments: recent research by Schrodgers (2018) highlighted that 52% of younger people invest in sustainability compared to 28% of older generations.

Despite the interest that sustainable investments are gaining with governors, investors, and practitioners from many sectors and geographical areas, several related issues remain to be addressed.

This book aims at shedding light on some current issues featuring sustainable finance through an in-depth discussion of the relevant debates related to the financing of social and environmental initiatives.

The first part of this book focuses on improving the effectiveness of sustainable investments through efficient capital allocation and impact measurement, while managing the primary challenges to green finance is the focus of the second part of the book.

On efficient capital allocation and impact measurement:

Chapter 2 *Financing Sustainable Development Goals: Economic and Legal Implication for Sustainable Entrepreneurship* by Raffaele Felicetti and Alessandro Rizzello explores the theme of how social entrepreneurship may be financed in the current legal framework and contributes to the debate on how social and economic value may be maximized through both entrepreneurial and financial solutions.

Chapter 3 *Rethinking Taxation of Impact Investments* by Alessandro Mazzullo suggests a tax incentive model for social impact investments, discussing potential *pros* and *cons* of such a scheme.

Chapter 4 *Profitable Impact Bonds: Introducing Risk-Sharing Mechanisms for a More Balanced Version of Social Impact Bonds* by Giulia Proietti proposes an *alternative* financial scheme of social impact bonds (SIBs), analyzing how risks may be shared by a plurality of subjects and how to distribute more equally the benefits of SIB contracts.

Chapter 5 *Social Stock Exchanges—Defining the Research Agenda* by Karen Wend *discusses* the need of a social stock exchange to help impact investors find efficient investments and closing the gap between potential investors and investments currently available in the market.

Chapter 6 *A Macro-level Analysis of the Economic and Social Impact of Microfinance in Sub-Saharan Africa* provides an example on how micro-credit activity can contribute to meeting social aims in Sub-Saharan Africa. Specifically, the chapter by Roberto Pasca di Magliano, Andrea Vaccaro, and Giuliana Ferrara estimates the economic and social impact of a sample of microfinance activities in Sub-Saharan Africa.

How some of the relevant challenges in green finance may be managed:

Chapter 7 *Environmental Impact Investments in Europe: Where Are We Going Ahead?* by Giuliana Birindelli, Annarita Trotta, Helen Chiappini, and Alessandro Rizzello discusses the environmental European impact investing landscape, *considering* the new regulatory framework and the overall impact investing practices.

Chapter 8 *The Increase Importance of Green Bonds as Instruments of Impact Investing: Towards A New European Standardization* by Maria Cristina Quirici discusses the role of green bonds in financing environmental projects, with specific emphasis on the state of the art of green labels.

Chapter 9 *Green Banking in Italy: Where We Are and Where We Are Going* by Giuseppina Procopio, Annarita Trotta, Eugenia Strano, and Antonia Patrizia Iannuzzi contributes to the international debate on green banking, analyzing two case studies of Italian banks.

Chapter 10 *Opportunities and challenges in impact investing in Climate-Smart Agriculture in Latin America* by Angélica Rotondaro, Andrea Minardi, and Leonie Dissemmond focuses on the strengths and weaknesses of investing in agriculture projects, paying great attention to climate change and the overall *issue* of sustainability.

Chapter 11 by Mario La Torre and Helen Chiappini concludes the book discussing the trends, *opportunities*, and risks of sustainable finance.

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Financing Sustainable Goals: Economic and Legal Implications

Raffaele Felicetti and Alessandro Rizzello

2.1 INTRODUCTION

The 2030 Agenda on Sustainable Development Goals (SDGs) leaves open the question of how best to consider alternative forms of economy, social relations and governance (Bowen et al. 2017). In this context, policy makers, development practitioners and scholars are increasingly focusing their attention on the potential roles that the myriad types of investors and enterprises that make up the social and

Sections 4 and 4.1 have been written by Raffaele Felicetti, while Sects. 3 and 5 by Alessandro Rizzello. The Introduction, Sects. 2 and 6 and the Conclusions have been written by the authors jointly.

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solidarity economy (SSE) can play in addressing future development goals as well as any other complex social and ecological challenges.

In the delivery of social impact, the commitment of private actors has generally been limited to the nonprofit hemisphere, broadly speaking (NGOs, philanthropy, charities). Thus, there has always been a clear distinction, a trade-off, between social concerns and profit (Zingales 2000). Nonetheless, to confront future social and environmental challenges effectively and efficiently, economic resources are needed (Mawdsley 2018). Currently, the welfare state seems to be experiencing a major crisis, and nonprofit entities lack adequate resources (Karanikolos et al. 2013). Therefore, the idea that for-profit companies should contribute to solving major social problems—which they are often assumed to have caused—has gained widespread consensus (see, among others, Stout 2012; Elhauge 2005). Sustainable entrepreneurship that is involved in the generation of social and environmental impacts has repeatedly pointed to the critical need for impact investments. However, despite the growing attention to and interest of organizations and institutional investors in channelling private capital into sustainable ventures and products, there remain significant barriers and disincentives between mainstream financial actors and sustainable entrepreneurs (Hoogendoorn et al. 2019; McDermott et al. 2018). In this context, finance and economics on one side and corporate law on the other must be indissolubly linked to a greater extent than is customary: the former provides the resources and the latter the legal tools to manage them (Cumming et al. 2017).

Academic discourses around sustainability issues in entrepreneurship, corporate legal models and finance remain fragmented, and each specific discipline analyses this topic from its narrow perspective (Wallis and Valentinov 2017).

Innovative sustainable finance instruments, by pursuing social and financial returns, can serve as effective institutional mechanisms to help finance the SDGs. However, until a few years ago, there was no legal tool to optimize these capitals and allow companies to commit to social problems: conventional, purely profit-driven companies seem insufficiently equipped. Admittedly, the well-known shareholder primacy model, despite being slightly mitigated over time, prevents them—or, at least, discourages them—from also pursuing a “social mission”, at least without their directors risking a breach of their fiduciary duties (McDonnell 2014).

Starting from this perspective, this research adopts a multidisciplinary approach with the aim of proposing a conceptual framework that assumes

the multidisciplinary nature of sustainability. The proposed conceptual framework aims to develop an improved understanding of the conditions most conducive to the successful application of sustainable financing to sustainable entrepreneurship. This framework should be useful in investigating how sustainability issues may be aligned across entrepreneurship segments, corporate legal models and sustainable financial approaches. This research, therefore, contributes to the international debate on these topics by providing a multidisciplinary insight into the academic discourse around simultaneous economic and social value maximization within entrepreneurial solutions and financial opportunities in the sustainability arena.

To achieve these objectives, this chapter is organized as follows: in Sect. 2, the research design is described and key sustainability concepts are conceptualized. Section 3 provides an overview about the concept of sustainable entrepreneurship. In Sect. 4, the chapter highlights—from a legal perspective—how corporate models embracing profit, as well as social and environmental concerns, have evolved. Section 5 provides a conceptual map of the interplay of profit and social/environmental returns in finance. In Sect. 6, the chapter provides a conceptual framework useful to understanding how sustainability issues may be aligned across the spectrum of legal models of entrepreneurship and financial approaches. Finally, some conclusions are drawn by highlighting suggestions for further research and implications for entrepreneurs and policy makers.

2.2 RESEARCH DESIGN

This study employs an exploratory and qualitative approach to investigate the concept of sustainable entrepreneurship, the associated corporate legal environments and the forms of sustainable finance adaptable to the described phenomenon. This approach aims to clarify the possible interplay of such dimensions in relation to their ability to promote sustainable development objectives, such as SDGs. The use of a qualitative approach is not uncommon in academic work that seeks to shed light on the defining features of a multidimensional phenomenon (Eisenhardt 1989; Patton 2002). In particular, the research design aims to integrate literature on the concepts of sustainable entrepreneurship with those on corporate legal models and sustainable finance and to formulate a conceptual framework based on the resultant new understanding. A conceptual framework is a structure that the researcher believes can best explain the natural progression of the phenomenon to be studied (Camp 2001). Such a framework is

linked to the concepts and important theories used to promote and systematize the knowledge acquired by the researcher (Peshkin 1993). The conceptual framework presents an integrated way of looking at a problem under study (Liehr and Smith 1999). This integration is achieved by addressing three objectives: (i) undertaking a critical review of the literature on sustainable entrepreneurship, corporate legal models and sustainable finance and (ii) defining a set of variables to be investigated in order to (iii) construct a conceptual framework of the interface between these disciplines explored from this perspective. This conceptual framework will help organize existing and new insights and help in formulating new research questions regarding sustainable entrepreneurship and its funding.

2.2.1 Setting the Scene: Entrepreneurial and Financial Issues in the Sustainability Arena

In the aftermath of the 2008 financial crisis, concerns relating to market and state failures received increased attention and revealed opportunities to rethink “development”. Compared to conventional crisis responses, alternative pathways attracted more attention within mainstream knowledge and policy circles. With the term social and solidarity economy (SSE), academia tried to provide an umbrella term to refer to forms of economic activity that prioritize social and environmental objectives and involve producers, workers, public entities and citizens acting collectively and in solidarity. As perfectly summarized by Utting (2015), “Under the umbrella of ‘social and solidarity economy’ can be found different world views and understandings of ‘development’”. Accepting the reality of the capitalist system and its core institutions or ‘rules of the game’, social economy is primarily about expanding the economic space where people-centred organisations and enterprises can operate” (p. 1). Such a concept fundamentally includes a wide range of practices that span economic, social, environmental, political, communitarian or holistic dimensions. It emphasizes a strong integration between traditional economic structures and the more holistic and alternative approaches of the practices and communities of the solidarity economy. Within this arena, for the purpose of this chapter, we focused on economic and financial issues that conceive of the social and solidarity economy as an ethical and value-based approach to economic development that prioritizes the welfare of people and planet over profit and blind growth.

2.3 EMBRACING SUSTAINABILITY ISSUES IN ENTREPRENEURSHIP: AN OVERVIEW

The concept of sustainable entrepreneurship is relatively recent in academia, and common consensus on its definition is still lacking. Early definitions stressed the discovery of market opportunity, which detracts from sustainability (Cohen and Winn 2007; Dean and McMullen 2007). In particular, sustainable entrepreneurship is seen as a process of discovering opportunities that are present in market failures derived from sustainability and considers how they can be exploited in future goods and services that initiate the transformation of a sector towards an environmentally and socially more sustainable state. In this vein, sustainable entrepreneurs are increasingly acknowledged for addressing current social and environmental problems (Hall et al. 2010; York and Venkataraman 2010; Tur-Porcar et al. 2018). Sustainable entrepreneurs are motivated to have a positive impact on complex social and ecological problems, such as climate change, unequal access to healthcare and the financial system, and education and poverty.

Sustainable entrepreneurship is closely related to the fields of social and environmental entrepreneurship. The relationship between entrepreneurship and sustainable development concerns has been addressed by two main streams of research defined “ecopreneurship” and “social entrepreneurship”. Regarding the former perspective, earlier authors addressing sustainability issues and entrepreneurship have dealt exclusively with environmentally orientated entrepreneurship (among others, Shrivastava 1995; Isaak 2002). In this type of business model, profit remains the end goal of the business, but environmental goals are considered an integrated part of the economic logic of the business. Other authors have focused instead on social entrepreneurship (among others, Mair and Marti 2006; Nicholls 2008; Bull 2008). The social entrepreneurship concept in academic literature is concerned with achieving societal goals and securing funding (or, in other terms, achieving societal goals in a financially sustainable manner). Common to these perspectives is the motivation of entrepreneurs to create value for others by identifying opportunities arising from market failures, in other words, from problems in society that have been neglected or unsuccessfully addressed by public or private organizations (Wagner 2017; Hoogendoorn et al. 2019). In contrast to “regular” entrepreneurs, the aim of social entrepreneurs is not primarily focused on the pursuit of value creation for private gain; rather, it seeks to improve

quality of life in order to benefit others (Stubbs 2017; Evans et al. 2017). Moving from this consideration, the motivation of sustainable entrepreneurs pursuing social or environmental goals deviates from the one-sided pursuit of profit that tends to characterize the regular, or traditional, entrepreneur (Dacin et al. 2010). However, some differences may be distinguished in sustainable entrepreneurship. In particular, in the social entrepreneurship model, the creation of social benefits tends to dominate the generation of economic benefits, often in a not-for-profit context (Saebi et al. 2018); in this work, we identified this approach as “mission-centric” entrepreneurship. On the other hand, environmental entrepreneurs tend to protect our natural environment or ecosystem in a for-profit context that combines environmental and economic value creation (in this chapter, we refer to these entities with the expression “mission-related” entrepreneurship). In this vein, recent contributions look at the concept of sustainable entrepreneurship by combining these two fields. Specifically, this evolving concept of sustainable entrepreneurship explicitly focuses on a combination of social, environmental, and economic goals and, therefore, is sometimes considered to also include both social and environmental entrepreneurship (Belz and Binder 2017). Moving from these considerations, sustainable entrepreneurship became, in essence, the realization of sustainability innovations aimed at the mass market and, at the same time, it provides a benefit to large parts of society. Specifically, it is characterized “by some fundamental aspects of entrepreneurial activities which are less oriented towards management systems or technical procedures, and focus more on the personal initiative and skills of the entrepreneurial person or team to realize large-scale market success and societal change with environmental or societal innovations” (Schaltegger and Wagner 2011: 226). Thus, it can be described “as an innovative, market-oriented and personality driven form of creating economic and societal value by means of break-through environmentally or socially beneficial market or institutional innovations” (p. 226). More recently, within the sustainable entrepreneurship concept, some authors have also included those entrepreneurial activities that produce impact, even if by adopting business models not intentionally aimed at sustainability (Nicholls 2008; Maynard and Warren 2014; Lüdeke-Freund et al. 2016). In this chapter, we identified such entities with the term “mission-unrelated”.

Academic debate, therefore, appears willing to consider environmental, social and sustainable entrepreneurship as a unique field of research. However, there is a common understanding that social, sustainable, and

environmental entrepreneurship should be clearly distinguished from the traditional entrepreneurship domain because they focus on the creation of social value, whereas commercial entrepreneurship is strictly concerned with the creation of economic value.

In the context of this chapter, we define sustainable entrepreneurs as those who are not only driven by the social and environmental needs of society but also engaged in sustainable business (even if unrelated to their mission). Although we distinguish sustainable entrepreneurs from social and environmental entrepreneurs, we drew on the academic literature from these three related fields to arrive at our hypotheses.

2.4 PROFIT AND PURPOSE IN ENTREPRENEURSHIP: A LEGAL PERSPECTIVE

In the delivery of social impact, the commitment of private actors has generally been limited to the nonprofit hemisphere, broadly speaking (NGOs, philanthropy, charities). Thus, there has always been a clear distinction, a trade-off, between social concerns and profit (Zingales 2000). In other words, as has been observed, it was long believed that commercial revenue and social value creation were independent (Battiliana et al. 2012).

Indeed, until the last decade, from a corporate law perspective, it was generally possible to distinguish between two clearly separated main categories of corporate models. Imagining a spectrum, at one end, there were pure nonprofits; at the other end, traditional profit-driven companies. Both models had limits preventing them from effectively and efficiently pursuing a social mission.

Nonprofits usually suffer a profit distribution constraint, so that they cannot distribute dividends to their members or returns to their investors.¹ In fact, one of the main problems facing nonprofits concerns the difficulties they experience, compared to for-profit entities, in attracting capital (Sertial 2012; Taylor 2010; Hansmann 1981). Such prohibitions have been deemed necessary to ensure that users and the general public can trust those enterprises whose business serves social and solidarity purposes (Mosco 2017; Hansmann 2003).

Nonprofit status has always been seen as an effective form of consumer protection, especially in situations of asymmetric information (Ortmann and Schlesinger 2002; Hansmann 1994). This theory stems from the idea

that the contract, because of information asymmetries, fails to protect the consumer from enterprises' abuses: in this context, then, the prohibition on distributing profits is meant to show consumers that the enterprise is not interested in taking advantage of information asymmetries to increase its profits (Hansmann 1980).

However, the flip side is that the non-distribution constraint forces nonprofits to widely use debt instruments rather than capital (Zoppini 2000). Moreover, because they are de facto banned not only from equity capital markets but also from attracting investors—as they cannot, as mentioned, generally distribute financial returns to investors—their functioning relies primarily on grants and donations, which, as observed, often prove insufficient for the pursuit of their social goals (Sertial 2012).²

Therefore, the idea that for-profit companies, often regarded as the major source of social problems, should also contribute to solving those problems has gained widespread *consensus* (Stout 2012; Elhauge 2005).

This recognition has increasingly given rise, especially in the US, to the robust debate on the purpose of the corporation and, consequently, on where directors' fiduciary duties should be focused. The US represents the heart of the debate about the purpose of corporations, and for this reason, in this section, attention will be devoted to this jurisdiction. Even though legislation varies from country to country—in terms, for example, of directors' fiduciary duties—the main takeaways of the American debate give a sense of the high-level discourse on the topic and the core principles of the debate; with appropriate adjustments, these observations can be applied to any traditional corporation of any jurisdiction.

Corporations have multiple constituencies. Sometimes, their interests are aligned. At other times, however, the interests of these constituencies conflict with each other.

For example, between late 2015 and 2016, Mark Zuckerberg sought to design a stock reclassification plan that would have allowed him to unload a significant number of shares to pursue his philanthropic goals while retaining control of Facebook thanks to the company's dual-class structure. In fact, to avoid losing control of the company while simultaneously obtaining sufficient liquidity for his philanthropy, the Facebook founder had proposed—and a special committee advised—to issue a new class of non-voting stocks as a one-time dividend to each outstanding Class A and Class B share, “thereby tripling the number of Facebook total outstanding shares” and “re-inflating the voting weight of [Zuckerberg’s] Class B share holdings”.³ A pension fund filed a derivative suit in the Delaware

Chancery Court seeking to challenge the stock plan. While this case is mainly about dual-class structures, it nonetheless shows the existing tensions between shareholders and stakeholders' interests. To whom do directors owe their fiduciary duties? Can the directors permit the restructuring plan to enable Zuckerberg to pursue his philanthropic goals, while Facebook—and the other shareholders—do not receive any significant value in return?

Trying to summarize the debate to the extent possible, the traditional idea is that directors owe their duty of loyalty to shareholders, who are the owners of the company. In the US, this principle found its judicial recognition in 1919 when the Michigan Supreme Court ruled in the famous *Dodge v. Ford* case, in which the Court stated that a business corporation is organized and operated primarily for the profit of its stockholders. Thus, the powers of the directors must be employed to that end, and directors have a duty to maximize profits (*Dodge v. Ford* 1919). In the academic debate, the most notable view is probably that taken by Milton Friedman, who, in 1970, in response to the strengthening idea of the social responsibility of business, published the famous article “The Social Responsibility of Business is to Increase its Profits”. In this article, he identifies corporate managers as agents of their employers, the shareholders, to whom, therefore, they have primary responsibility (Friedman 2007; more recently, see also Strine 2015).

However, the principle of shareholder value maximization should not be overstated. In fact, at least in the US, under Delaware caselaw—the most important state for corporate law—directors' decisions fall under the business judgement rule, under which Courts will not interfere with decisions made in good faith by disinterested directors (on the business judgement rule see, among others, Arsht 1979). Therefore, directors could easily justify a decision also made in the interests of stakeholders by, for example, claiming that the decision is in the long-term interest of shareholders, and such a decision is likely to be immune from the Courts' scrutiny. Nonetheless, this principle poses significant hurdles to directors' ability to pursue a “social mission” (Stout 2012; Phillips et al. 2003; Testy 2002).

The risk of directors breaching their fiduciary duties was particularly significant in the context of leveraged buyout transactions of the 1980s. In those occasions, the buyer was often ready to offer shareholders high premiums but, once they acquired control of the company, adopted some decisions that would not uphold the (implicit) contract with stakeholders (i.e., buyers often fired employees, cut wages, increased company debt, etc.).⁴

As a partial reaction to this trend, state legislatures introduced the so-called multi-constituency statutes, which—without denying shareholder primacy—allowed directors to also consider stakeholders’ interests. Today, for example, both Florida⁵ and Minnesota⁶ have such statutes and, in particular, the latter is designed with specific reference to takeover situations.

Also with these evolutions in mind, many started taking the view that a company cannot be considered a mere contract; a corporation is a player in society, which has the advantage of, among others, limited liability. Thus, in return, companies—especially public companies—have an economic function, which is “not to address principal-agent problems, but to provide a vehicle through which shareholders, creditors, executives, rank-and-file employees, and other potential corporate ‘stakeholders’ who may invest firm-specific resources can, for their own benefit, jointly relinquish control over those resources to a board of directors” (Blair and Stout 1999:256).

More recently, there have been efforts to push companies to pursue stakeholders’ interests. In particular, in the US, at least two developments seem to reflect, at a high level, the current attempts to shift from the supremacy of shareholders to a commitment to serve all stakeholders.

The first development is at a legislative level. In August 2018, Senator Elizabeth Warren introduced a bill that aims to reverse “the harmful trends over the last thirty years that have led to record corporate profits and rising worker productivity but stagnant wages” (Accountable Capitalism Act 2018). Among the various measures proposed, the bill would require very large American corporations—those with more than \$1 billion in annual revenue—to obtain a federal charter as a “United States corporation”, which obligates company directors to consider the interests of all corporate stakeholders. In addition, Senator Warren proposes to change the corporate governance of US companies by forcing them to ensure that the corporation’s employees (Accountable Capitalism Act 2018) select at least 40% of their directors.

The second development came directly from the business world. In August 2019, the Business Roundtable announced the release of a new Statement on the Purpose of a Corporation, signed by 181 CEOs who committed to lead their companies for the benefit of all stakeholders (Business Roundtable 2019). With this last announcement, the signing CEOs committed to continue serving their own corporate purpose while sharing a fundamental commitment to all their stakeholders (customers, employees, suppliers, communities).

While most of these commitments do not seem very powerful,⁷ there is one, however, that seems to be the key to the new approach: the CEOs promise, in fact, to deliver value to all stakeholders. This seems even more striking if one considers that only approximately twenty years ago, the very first sentence of the Business Roundtable's Statement on Corporate Governance was that "the principal objective of a business enterprise is to generate economic returns to its owners" (Business Roundtable 1997).

The evolution of the debate summarized in this section shows that, regardless of the possible legal impediments, the latest trends seem to be pushing traditional for-profit corporations to pursue also a social mission.

2.4.1 *The (Legislative) Rise of Hybrid Models*

As a partial response to the limitations of both nonprofits and the corporate model, recent decades have witnessed the flourishing of "hybrid entities", and this movement is referred to as "creative capitalism" (Taylor 2010). There is no general definition of hybrid entities, but briefly, they try to combine the creation of social value with the production of financial revenues (i.e., they are not completely for profit or purely nonprofit). In general, these entities have been identified as those occupying the middle ground between nonprofit and for-profit, combining aspects of both models (Sertial 2012; Reiser 2010).

In other words, according to the ideal scheme, until recent times, there were two extremes: nonprofits on one side and for-profit entities on the other. Currently, along the spectrum from one extreme to the other, there are many legal entities with a variety of nuances, and depending on the models, the nonprofit or the for-profit is eroded (Felicetti 2018a).

Within this arena, the Social Enterprise (hereafter, SE and, in plural, SEs) is one of the most interesting models, particularly in Europe, where despite the widespread use of this notion, its meaning is far from precise (Felicetti 2018a). It is gaining popularity in the US as well where a large number of scholars seem to consider SEs a spectrum of corporate models ranging from purely nonprofits (Cooney 2015), passing through corporate hybrids, to purely profit-driven companies with a social commitment (Kerlin 2006; Dees 1998). From this viewpoint, it is of particular significance that in American academia, one can find more than twenty different definitions of social entrepreneurship (Light 2009).

However, it seems increasingly clear that, at least at a European level, SEs should have three specific features, at minimum.⁸

First, they generally have an exclusive—or, at least, prevalent—“social” purpose (i.e., they aim to provide a benefit to the community or, at least, pursue a general interest).

Second, their activity is carried out in an innovative and entrepreneurial way, and SEs are managed in an open and responsible manner and involve stakeholders: obviously, this does not mean that traditional companies are not managed in such a way, but SEs are subjected to additional management and governance requirements.

Third, profit distribution is excluded or somehow limited; in fact, its profits and assets must be totally or partially reinvested in its activity. This last aspect is the most relevant for this work’s purposes. In fact, if profit distribution must be excluded but can also be limited, it means that SEs are not necessarily nonprofit.

This remark might seem obvious, but it is not if it is considered that, for example, Italian SEs were originally designed as purely nonprofit.⁹ However, with Legislative Decree no. 112 of 2 July 2017, a reform of SEs was enacted as part of a more general reform of the Italian Third Sector; and the possibility for SEs to distribute profits, to some extent, was introduced. Indeed, regardless of the fact that SEs are still defined as nonprofit entities, the reform provides an exception to the profit distribution prohibition, allowing, under some circumstances, a distribution of up to 49% of its annual profits.¹⁰

Widening the focus, this shift of Italian SEs from a purely nonprofit model to a partially for-profit one is in line with a more general trend. Indeed, in many European countries (e.g., Belgium, France, Luxembourg, the United Kingdom), SEs can distribute profits, although in a limited way (Felicetti 2018b).

Therefore, SEs now seem closer to English Community Interest Companies (hereafter, CIC; plural, CICs), which is a typical hybrid legal structure (Cabrelli 2016; Sertial 2012). On the one hand, these companies must operate for the benefit of a community. However, under the aggregate dividend cap mechanism, which governs CICs’ profit distributions, these companies may distribute up to 35% of their annual distributable profits. Consequently, this mechanism forces CICs to reinvest no less than 65% of their annual profits in their activity.

Another hybrid model—somehow close to the abovementioned notion of SE—in which the nonprofit side dominates is the US Low-Profit Limited Liability Company (L3C). This is a specific type of limited liability company that shares features of both for-profit (L3Cs may distribute

profits)¹¹ and nonprofits (L3Cs pursue charitable purposes) (see Sertial 2012; Reiser 2010; Taylor 2010; Billitteri 2007).¹²

All these models, which may be considered SEs in the sense identified above, show that, in SEs, legislators took a for-profit model and dressed it in nonprofit clothing or, more frequently, took a nonprofit model and dressed it with for-profit clothing (namely, the possibility to partially distribute profits). Regardless, in all these models, the nonprofit essence remains dominant.

Similarly, however, in the for-profit world, there are also cases of shifts from the extreme to the centre (i.e., hybrid models built on for-profit enterprises). Most likely, benefit corporations, first introduced in many US states and, since 2015, also in Italy, represent the most notable example.

Benefit corporations are for-profit corporations and were introduced in 2010 in many US states. The first state to give them legal recognition was Maryland. Since then, many other states have followed this path, and most have based their laws on the “Model Act”, a model law drafted by B Lab, a nonprofit issuing certification to companies that meet high standards in terms of social and environmental performance, public transparency, and legal accountability. In 2015, benefit corporations were also introduced in Italy (Article 1, paragraphs 376 and ff. of Law no. 208 of 28 December 2015), the first European country to adopt this corporate model (Ridolfo 2016), deeply inspired by the American experience.

The statutes on benefit corporations differ from each other. Even within the US, they are diverse, as some states, such as Delaware, have adopted statutes diverging in significant ways from the Model Act (e.g., McDonnell 2014). However, the core is the same. While pursuing profits, these corporations must produce a general “public benefit”—broadly defined by law—and/or a specific one, identified by the benefit corporation itself.¹³

Legislations ensure compliance with these commitments mainly by using two tools: reporting and the director’s fiduciary duties. The former requires benefit corporations to publicly disclose their achievements by drafting and publishing reports. The latter—fiduciary duties—allows directors to overcome shareholder primacy by forcing them to either simply consider stakeholders’ interests or even balance shareholders’ profit maximization. In other words, directors should be more protected when making decisions that take into account not only shareholders’ profits but also stakeholders’ interests. It should appear clear, thus, that benefit corporations might solve the two aforementioned problems of for-profit enterprises: accountability and directors’ liability.

What is relevant here is that, to use the clothing metaphor again, in the case of benefit corporations, legislators took purely for-profit models and dressed them in nonprofit clothing—general interest purposes—thus partially impinging on their nature. In this case, however, the legislative technique is different from the one used in SEs: profit distribution has not been limited; rather, legislators decided to focus on fiduciary duties and reporting standards.

2.5 RISK, RETURNS AND SOCIAL PURPOSE: TOWARDS A NEW PARADIGM IN FINANCE

Over the past decade, there have been increasing efforts by practitioners, financial institutions and regulators to align the financial system with long-term sustainable development. The increased attention to the value of sustainability factors for efficient capital allocation and to the delivery of risk-adjusted returns represent clear signals in this sense. Sustainable Finance (hereafter, SF) is relatively new in the academic landscape, focusing on topics in the international banking and finance sector (Benedikter 2011; Lehner 2016; Lagoarde-Segot 2018); it introduced a new era in the supply, intermediation, and demand of capital for “sustainability” (Shiller 2012; Rizzi et al. 2018). More generally, SF considers how finance (investing and lending) interacts with economic, social and environmental issues (Fatemi and Fooladi 2013; Hangl 2014; Ziolo et al. 2017). However, so far, a single, universally recognized definition has not yet been identified. The concept of SF moved from the initial identification with an asset class of investments into socially responsible products or organizations (Sparkes and Cowton 2004) to a more holistic concept that includes the integration of economic, environmental and social dimensions into investment decisions (Kuzmina and Lindemane 2017). During the growth of this concept, SF was also interchangeably identified with the concepts of corporate social responsibility (CSR) (Scholtens 2006) as well as with ethical finance (Relano 2008). Academic research in this field covers different topics ranging from sustainable and responsible investment or SRI (Soppe 2009), microfinance (Robinson 2001), social impact investing (Weber and Duan 2012), social banking (Weber and Remer 2011), social impact bonds (Warner 2013), crowdfunding (Belleflamme et al. 2014) and green finance (Perez 2007).

The complexity of the concepts that fall under the umbrella term of SF is confirmed by the variety of players in this field. These players stem from all sectors, including social banks, venture philanthropy, community development financial institutions, and social and traditional businesses engaged in CSR activities (Nicholls and Emerson 2015). Profit and social purpose in finance may vary along a spectrum ranging from venture philanthropy, where social purposes are the main object of investment (impact-first social investors), to approaches looking for market rate returns alongside social impact targets (finance-first impact investors) (Chiappini 2017). Within these different rationalities and logics in the sustainable finance arena, only two forms of sustainable finance institutions represent the main actors guiding the paradigm-building process towards the simultaneous production of social/environmental impact as well as financial returns: social impact investments and ethical banking (Rizzi et al. 2018). Such approaches remain clearly distinguished from commercial financial approaches even if they differ in terms of business models or products (Rizzi et al. 2018). A further attempt to simplify the nature of the concept of SF is given by Grandin and Saidane (2011). They provided four principles around which the definition of SF should be built: (i) innovative approaches and new individual behaviour, (ii) sustainable growth, (iii) proximity to people, and finally (iv) inclusive and a non-proselytizing approach to classical finance. In other words, for the authors, SF requires new behaviours (regulation, controls and financial system adaptations) while stressing and ensuring proximity to people by changing the shareholders' value maximization paradigm to a win-win vision involving all actors. Concisely, traditional finance focuses solely on financial return and risk. By contrast, sustainable finance considers financial, social and environmental returns in combination. The financial approach to sustainability has gone through different stages over the last few decades. A first step in sustainable finance could be summarized as the intention, for financial institutions, to avoid investing in companies with very negative impacts, such as tobacco or whale hunting. In the second stage, environmental and social considerations were added to the investment decision process. More recently, in particular in the aftermath of the financial crisis of 2008, the frontrunners are now increasingly investing in sustainable companies and projects to create value for the wider community. In other words, the focus is gradually shifting from short-term profit towards long-term value creation. This is summarized well by Schoenmaker (2017): "In this approach, finance is a means to foster sustainable development, for

example by funding healthcare, green buildings, wind farms, electric car manufacturers and land-reuse projects”. In this innovative financial approach, “The starting point of SF is a positive selection of investment projects based on their potential to generate positive social and environmental impacts. In this way, the financial system serves the sustainable development agenda in the medium to long term” (p. 37).

More recently, the SF concept seems to be evolving in this direction, and multilateral convergences over the concept have gravitated around the role of finance in sustainable development. In this sense, SF refers to finance that can play a leading role in allocating investments to sustainable companies and projects and thus accelerate the transition to a low-carbon, circular economy (Schoenmaker 2018). The SF concept, therefore, confirms the broadening evolution from *shareholder value* to *stakeholder value* or triple bottom line: people, planet, profit. In other words, in “Sustainable Finance 3.0” (Schoenmaker 2018), rather than merely avoiding unsustainable companies from a risk perspective, financial institutions invest only in sustainable companies and projects. In this approach, finance is a means to foster a sustainable economy where financial decisions start with a *positive selection* of impactful projects and enterprises by assuming common peculiarities: (i) intentionality of the pursuit; (ii) simultaneity of the pursuit; and (iii) positive accountability for social/environmental returns and financial returns.

2.6 ALIGNING SUSTAINABLE CAPITALS, SUSTAINABLE ENTERPRISES AND THE LEGAL ENVIRONMENT: A CONCEPTUAL FRAMEWORK

In this chapter, the concept of the simultaneity of profit and purpose has been addressed in entrepreneurship, entrepreneurial law and finance using a qualitative approach. In particular, the main criticism of traditional financial and entrepreneurship theories is that traditional frameworks fail to explain the real financial and economic world. Several questions are posed regarding how finance and entrepreneurship should be reconsidered in this chapter’s ontological, epistemological and methodological assumptions (Zingales 2000; Margolis and Walsh 2003; Schinckus 2015; Lagoarde-Segot and Paranke 2016).

The combined effects of the financial crisis, first, and of the social and the focus on environmental challenges, second, undoubtedly lead to

evidence that new approaches are emerging by questioning the foundations of the traditional view. In Sects. 2.2 and 2.4, it is possible to observe how the interplay of profit and purpose in finance and entrepreneurship moved from a *shareholder value approach* to a *stakeholder value approach*. Following the same direction, the introduction of hybrids and attempts to push traditional for-profit corporations to deliver social goals, as highlighted in Sect. 2.3, shows similar attempts in the legal world.

In other words, profit and purpose appear to flow together towards a *holistic (and sustainable) value approach*, where capitals are directed to sustainable companies and projects. On the other hand, the paradigm shift to such a framework produced a convergence of legal entrepreneurial frameworks towards a hybridization of profit and nonprofit models.

The importance of these elements should not be overlooked because this perspective recognizes the multidimensional (and, therefore, multidisciplinary) aspects of sustainable value creation. First, this chapter emphasizes that impact is a key element of this paradigm. At the same time, such points recognize that profit and purpose are instantaneously produced through competition in the marketplace. All these aspects must be kept in mind if this perspective is to be adequately described and classified.

Figures 2.1, 2.2 and 2.3 present a synthesis of the above-illustrated paradigms from the perspectives of entrepreneurship, law and finance. They describe the nexus between profit and purpose by distributing, respectively, sustainable organizations, corporate legal models and capitals across two dimensions: (a) business values (profit maximization) and (b) social and sustainable purposes.

By listing each variable illustrated in Figs. 2.1, 2.2 and 2.3 of the sustainability arena, Fig. 2.4 represents the combination of such variables under a range of dimensions of simultaneous maximization of profit and purpose as conceptualized by Emerson (2003).

Such a conceptual framework illustrates the potential for a high degree of complexity in the interaction of these variables within the multidimensional phenomenon of sustainable value creation. Such a bi-dimensional conceptual framework can be seen as a kaleidoscope, an instrument through which to view the enormously varying patterns of impact value creation. The framework provides the possibility of describing subsets within the unwieldy set of all impact entrepreneurs, their respective legal frameworks and finance. The model illustrates three levels of simultaneous profit and purpose maximization where the perfect balancing between the two was obtained as sustainable entrepreneurship was pursued by

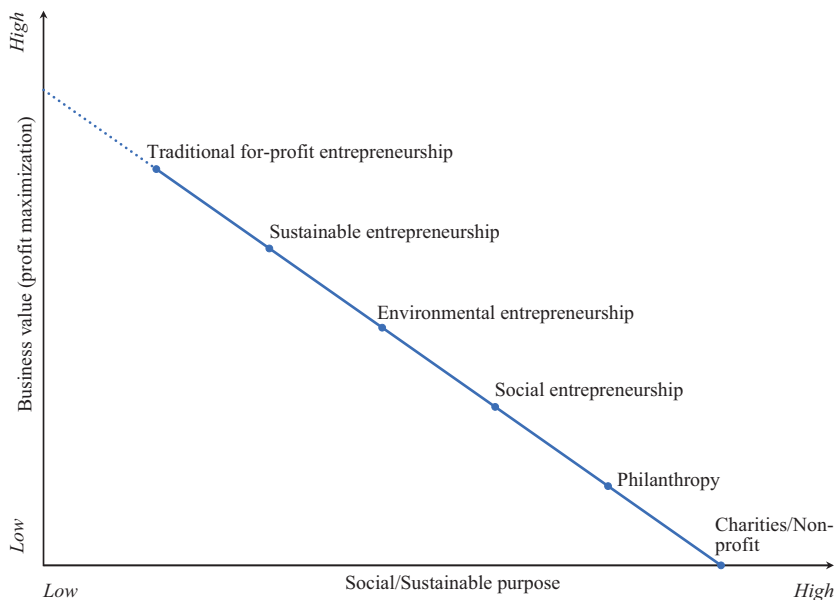


Fig. 2.1 The interplay of profit and purpose along entrepreneurship logics.
(Source: *Authors' elaboration*)

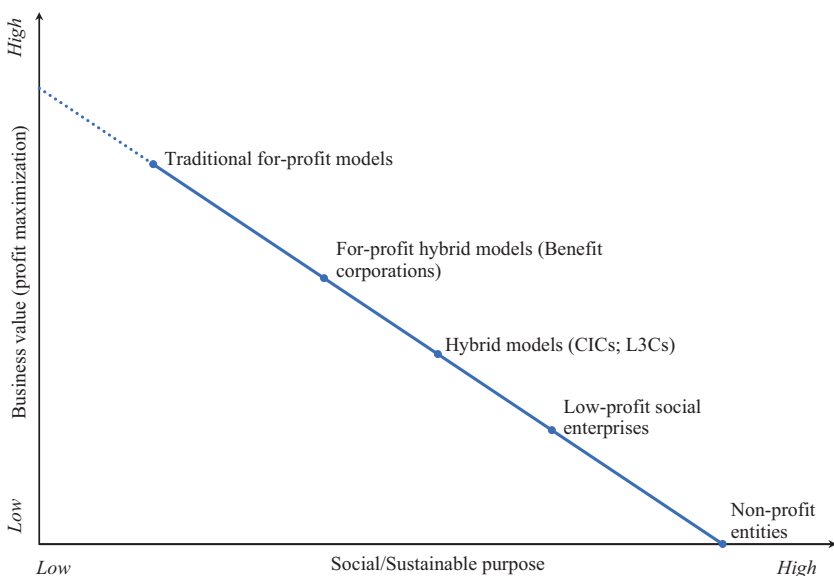


Fig. 2.2 The interplay of profit and purpose along corporate legal frameworks.
(Source: *Authors' elaboration*)

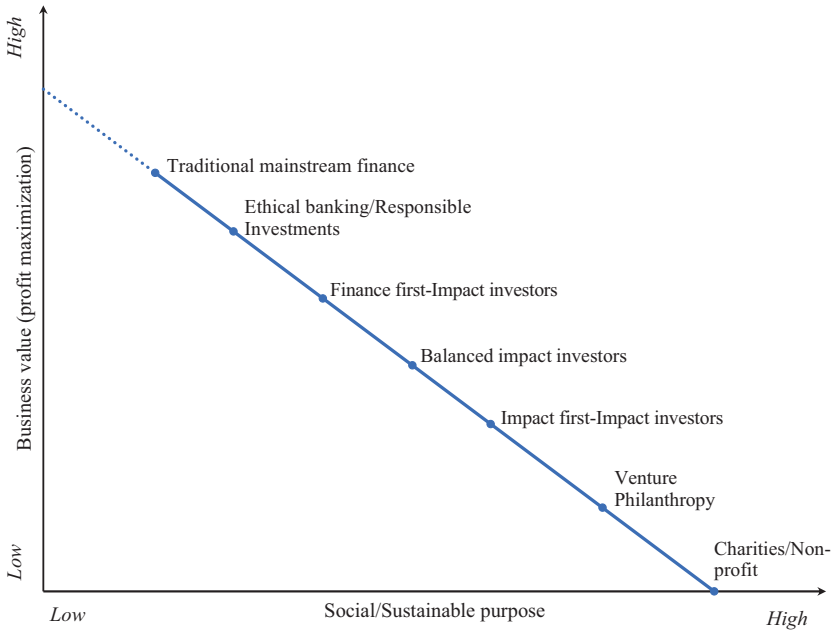


Fig. 2.3 The interplay of profit and purpose along sustainable capitals and investors. (Source: *Authors' elaboration*)

exploiting the market opportunities deriving from macrotrends emerging in the sustainability arena, as conceptualized in Sect. 2.1. For such actors, profit remains the end goal of the business, but sustainability goals are considered an integrated part of the economic logic of the business. Individual logic motivating such entrepreneurial ventures within these market opportunities may arise from traditional profit maximization (for mission-unrelated enterprises) or from an individual motivation to contribute to solving sustainability challenges (benefit corporations). It is interesting to note that in both cases, there is a perfect overlap between profit maximization and social/environmental impact maximization. However, the pursuit of profit may be the main end, in one case, or may be associated with social impact purposes, in the other case. In the first case, no particular legal barriers prevent directors from satisfying shareholders, and entrepreneurial activity may be conducted under traditional corporate legal frameworks. In this sense, it is possible to affirm that

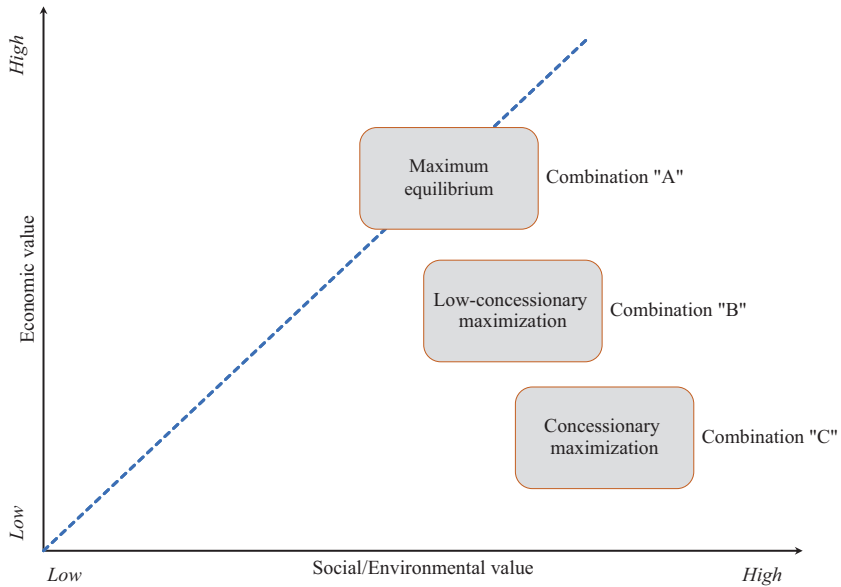


Fig. 2.4 Combination of entrepreneurship, corporate legal frameworks and capitals in the simultaneous maximization of profit and purpose segments. (Source: *Authors' elaboration*)

A:

Mission unrelated (impact) entrepreneurship/Sustainable entrepreneurship (market driven)

For-profit corporate models + Hybrid Corporate Model (Benefit Corporations)

Traditional finance + Finance-First Impact investors

B:

Environmental entrepreneurship

Hybrid Corporate Models (Benefit Corporations) + Hybrid Models (CICs, L3Cs)

Finance-First Impact Investors, Balanced Impact Investors

C:

Social entrepreneurship

Hybrid Models + (CICs, L3Cs), Low-Profit Social Enterprises

Impact-first impact investors

traditional financial actors may also contribute to funding these ventures because issues related to social impact are only “complementary” for these types of ventures. On the other hand, similar ventures may be embraced,

starting from positive intentions to contribute to social/environmental performances beyond positive profit returns. In such cases, a legal environment gravitating around traditional legal corporate models does not fit well. Hybrid models such as benefit corporations open the doors of simultaneity in the pursuit (and accountability) of profit and social/environmental benefits. In other words, in the above-described business opportunity segment, tradition and innovation may coexist in the adoption of entrepreneurial, financial and corporate legal frameworks. Such consideration creates a series of implications for the academic (and not only academic) debate around the relations between entrepreneurial and financial actors involved in the pursuit of sustainability targets that was limited to considering overall nonprofit or low-profit actors and practices.

In the other two segments identified, environmental business and social ventures, there is not a perfect balance of profit and purpose maximization because the business logics of such ventures derived from (less, in one case, or more, in the second one) positive motivations to obtain environmental/social returns and to measure those returns. For each segment, an ideal combination of the three variables was identified. In other words, within these areas of non-perfect overlap of profit and social maximizations, hybrid models of entrepreneurship, legal standing and capital become a necessity.

2.7 CONCLUSIONS

The conceptual framework illustrated above does not purport to answer specific questions about how sustainability meets profit or to provide specific developmental models for sustainable value creation. No claim is made that the framework or the list of variables are comprehensive; the claim is only that the description of the nexus between sustainable goals, entrepreneurship, corporate legal models and finance needs to be more comprehensive than it is at present.

A great many more questions are asked here than are answered. However, the chapter initiates a fundamental shift in the perspective on sustainable entrepreneurship and finance: away from viewing sustainable finance and sustainable entrepreneurs and their ventures as an unvarying, homogeneous population and towards a recognition and appreciation of the complexity and variation that abounds in these phenomena. At the European level, the importance of this concern is also amplified by ongoing initiatives, such as the Report on Sustainable Finance, recently adopted

by the European Parliament.¹⁴ Indeed, the Report underlines that there is “abundant capital seeking a profitable investment opportunity” and “the key to solving the riddle of sustainable finance is to creating an information and incentive framework so that this capital flows in the direction of the investments necessary to ensure a rapid and just ecological transition for our European economies and societies”. Thus, legislation seems to be pushing towards this trend.

In this chapter, we highlighted that within precise market boundaries, traditional and innovative models may—by doing business—coexist in the delivery of sustainable goals. As seen in Sect. 2.3, by addressing the main weaknesses of the two traditional corporate models—nonprofits and for-profit enterprises—hybrids seem to be appropriate “containers” for sustainable capitals that look to measure their social or environmental returns.

Nonetheless, hybrid models only partially solved the issue of incentivizing private organizations to deliver social impacts.

In fact, the hybrid models based on nonprofit structures have caps on profit distributions, and this limits their ability to attract investors, although to a lesser degree than purely nonprofit models.

This specific issue is solved with benefit corporations, which do not suffer profit distribution constraints. However, after almost ten years since the introduction of the model, there seem to be few benefit corporations. It is not easy to find accurate figures on benefit corporations as many US states do not release official numbers and most, if not all, benefit corporations—except Laureate Education, which went public in 2017—are private.¹⁵ B Lab’s unofficial estimate is that there are slightly more than 5000 benefit corporations in the US.¹⁶ Clearly, capital continues to be invested in purely traditional for-profit companies.

The solution, therefore, needs to be found in the for-profit world. We argue, however, that rather than forcing companies to both make profits and deliver social goals through legislation, the same result can and should be achieved by the market if all the actors move simultaneously in the same direction.

It is essential to monitor the effects resulting from recent voices demanding a transition from profit to a broader concept of value maximization for shareholders, and this represents an interesting avenue for future research. In this promising multidisciplinary field of research, it could be interesting to investigate how traditional corporations engaged in impact businesses can deliver and measure their impact in addition to their profit. Addressing such a gap in research could provide interesting

insight into the unexplored market potential for sustainable investments. For example, the SDGs set by the United Nations and welcomed, for example, by the European Institutions, concern specific areas (e.g., education, clean water and sanitation, clean energy, etc.). This reflects the existence of a legislative “favour” for these domains, to which correspond an equal number of market opportunities. If this is true, then there is space for profit-driven companies to run businesses in these areas. This might lead to a perfect alignment between the business’s purposes and the SDGs. Therefore, in this case, profit-driven companies would produce a positive impact while doing business, without the issues mentioned in the section above. Indeed, in this case, there is complementarity between making profits and doing good.

Therefore, the main argument is that purely profit-driven companies, in contrast to what is generally thought, might play a key role in doing good, and this seems to be particularly true in the case of business addressing sustainability goals.

NOTES

1. In the US, for example, Section 501(c)(3) of the Internal Revenue Code, in setting out the criteria for tax exemption, specifies that in corporations, community chests, funds or foundations organized and operated exclusively for some specified purpose (e.g., religious, charitable, scientific), “no part of the net earnings of which inures to the benefit of any private shareholder or individual” shall be tax exempt.
2. Doeringer observes that in the US, the UBI system (“Unrelated Business Income”)—which imposes federal income taxes on nonprofits if income is derived from a (i) trade or business; (ii) regularly carried on and (iii) not substantially related to the nonprofit’s exempt purpose—poses serious impediments to financing charity through activities that have commercial qualities (Doeringer 2010). In the same sense, Taylor 2009/2010.
3. See the Complaint in *United Food and Comm. Union v. Mark Zuckerberg* (2018), case Id. 2018-0671. In May 2012, Facebook went public with a dual-class stock structure: high-voting Class B shares—held by Zuckerberg—that have ten votes per share, as compared to Class A shares worth only one vote each. By June 2015, Zuckerberg held 60.1% of Facebook’s voting power primarily through his massive Class B holdings while controlling less than 17% of Facebook’s total outstanding shares. In its derivative suit to challenge the restructured stock plan, *United Food and Commercial Workers Union* claimed that “as Zuckerberg significantly

ramped up his philanthropic pursuits in 2015, it became clear that achieving his personal liquidity goals would inevitably result in the loss of his Facebook founder control. Indeed, monetizing anything more than 14% of his economic interest in Facebook would cause his voting control to dip below 50.1%, effectively passing control of the Company to Facebook's Class A stockholders—an unacceptable result for Zuckerberg.” See paragraph 3 of the complaint.

4. Problems arose, in particular, when upholding these implicit contracts would become a liability to shareholders and, thus, breaching such contracts would allow buyers to realize gains. According to Shleifer and Summers, if the incumbent managers are nonetheless committed to upholding stakeholder claims, “ousting such managers is a prerequisite to realizing the gains from breach” (Shleifer and Summers 1987). Thus, the hostile bidder had incentives in offering premia to shareholders in order to gain control of the company, while incumbents were running the risk of being removed. In other words, in these cases, the interests of incumbents and those of stakeholders were aligned—both of them risked losses as a consequence of the hostile transaction. However, managers would have had a hard time if, in resisting these bids, they used the rhetoric of maximizing shareholder value because, among other reasons, these offers indeed entailed high premia for shareholders. Thus, they started using a different narrative—that is, they also owed fiduciary duties to other constituencies (Allen and Kraakman 2016).
5. Section 607.0830 (6) of the Florida Business Corporation Act states that “in discharging board or board committee duties, a director may consider such factors as the director deems relevant, including the long-term prospects and interests of the corporation and its shareholders, and the social, economic, legal, or other effects of any action on the employees, suppliers, customers of the corporation or its subsidiaries, the communities and society in which the corporation or its subsidiaries operate, and the economy of the state and the nation”.
6. Section 302A.251(5) of the Minnesota Business Corporation Act provides that “in discharging the duties of the position of director, a director may, in considering the best interests of the corporation, consider the interests of the corporation’s employees, customers, suppliers, and creditors, the economy of the state and nation, community and societal considerations, and the long-term as well as short-term interests of the corporation and its shareholders including the possibility that these interests may be best served by the continued independence of the corporation”.
7. Delivering value to customers, investing in employees by compensating them fairly, dealing fairly and ethically with suppliers, supporting the communities in which the companies work and generating long-term value for

shareholders (see Business Roundtable 2019) are, arguably, all commitments that one would expect from a company regardless of the purpose of a corporation.

8. See the European Commission Communication “Social Business Initiative”, 2011. See also Article 2 of Regulation no. 1296/2013 (so-called EaSI Regulation). See also the proposal for a Regulation on the European Social Fund Plus (FSE+) (Article 2, par. 1, n. 15).
9. By definition, SEs could not pursue profit and, therefore, when they were set up as companies or co-operatives they represented an undeniable exception to the for-profit nature of companies. SEs could obviously generate revenues; what was prohibited (except for social co-operatives) was their direct or indirect distribution to the SE’s directors, shareholders, workers and so on (see Article 3 (2) of Legislative Decree no. 155 of 24 March 2006. Article 3 clearly listed the profit distributions that had to be considered “indirect”; however, it has been observed that room remained to make those indirect distributions not listed by the article (Capecci 2007)). Profits had to be either employed for the implementation of the SE’s activity or re-invested within the SE by means of a share capital increase.
10. This is the “general” limit, whose purpose is ensuring that at least more than half of the SE’s annual profits are employed for the implementation of the SE’s activity or re-invested in the SE by means of a share capital increase.

Additionally, an “individual” limit is set. In fact, SEs cannot distribute to each shareholder more than the maximum interest rate of the Italian postal savings certificates (the *buoni fruttiferi postali*, BFP) increased by 2.5%.

11. Usually, the legislation does not foresee specific caps on profit distribution, and this has been identified as one of L3Cs’ weaknesses compared to, for example, CICs (Pearce 2013).
12. Since 2008, when Vermont was the first State to adopt a statute on L3Cs (Simon 2009), other American states have allowed the establishment of *limited liability companies* in a low-profit form. L3Cs maintain most features of classic limited liability companies, including their flexibility, but their structure has been adapted to obtain the *nonprofit-for-profit* hybridization. In fact, as stated above, they may distribute profits, but nonetheless must significantly pursue charitable or educative purposes pursuant to the Internal Revenue Code.
13. In the US, all benefit corporations set up pursuant to statutes relying on the Model Act are required to pursue a general public benefit. Conversely, Washington and California do not require benefit corporations to pursue a general public benefit defined by the law, but only require them to pursue a specific one, identified by the companies themselves.

These benefit corporations are called social purpose corporations (Washington) or flexible purpose corporations (California) (on this benefit corporation model, see Reiser 2012).

In Italy, benefit corporations are required to operate in a sustainable and responsible manner and to seek one or more public benefit(s), identified as the production of one or more positive effects (or the reduction of negative ones) on one or more of the categories identified by law (e.g., people, communities, environment, etc.) (see Article 1, paragraphs 376 and 378, lett. a) of Law no. 208 of 28 December 2015).

14. See Report on Sustainable Finance - 2018/2007(INI) adopted by the European Parliament on 4 May 2018.
15. See the company's website at <https://www.laureate.net/aboutlaureate/> (last visited 8 November 2019).
16. See B Lab's website https://benefitcorp.net/businesses/find-a-benefit-corp?field_bcorp_certified_value=&state=&title=&submit2=Go&sort_by=title&sort_order=ASC&op=Go (last visited 8 November 2019).

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Rethinking Taxation of Impact Investments

Alessandro Mazzullo

3.1 BACKGROUND AND RATIONALITY OF THE ANALYSIS

The “impact investments” are defined as investments with the intention to generate positive, measurable social and environmental impact alongside financial returns (Freireich and Fulton 2009; SIITF 2014; OECD 2015; La Torre and Chiappini 2016).

From this definition emerges the main challenge both for this new asset class and for the so-called impact first enterprises: reconciling economic profit and social objective (Emerson 2003; Foster and Bradach 2005; Agrawal and Hockerts 2019).

A lot of States have felt the need to recognize this specificity with a special legal status.¹

The social entrepreneurship and impact investing have thus acquired a relevance not only economic but also legal.

This legal qualification took place for a double reason: to highlight the competitive specificity of these companies within the market; but also, in perspective, to link public benefits, especially fiscal (Gianoncelli 2017; Mazzullo 2019), to this legal recognition.

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The recognition of the qualification and related benefits has been based essentially on juridical-formal criteria (Mayer and Ganahl 2014).

From this point of view, the social impact ended up as an objective rather than a result.

The legal recognition, in other words, was not conditioned by the achievement of a minimum social impact, concretely measured and certified. The pursuit of a positive social impact was considered sufficient, regardless of the degree of actual achievement.

At the legislative level, as well as at a scientific level, little attention is paid to the legal relevance of the social impact as a substantial criterion.

The objective of this contribution, instead, is to analyze the proposition of a new fiscal model that considers the specificity of the impact investment. In this model, the impact reveals a substantial criterion. It is taken as a tool to modulate the tax advantages.

In this perspective, *de iure condendo*, the social impact is no longer just the object but the instrument of special taxation.

The fiscal lever (i.e., the set of tax advantages) is no longer just a tool to favor private investments in forms of entrepreneurship with a high social impact. It's a direct form of investment for the State. The addressing of greater fiscal advantages toward the business models with higher social impact, in fact, can be equated to a rationalized form of public investment.

The Italian case, in this regard, presents aspects of particular interest because of a recent legislative reform. In addition to having introduced specific tax advantages for forms of impact investing² (Mazzullo 2019), it has also provided a different modulation of the taxation regime based on the different social impact achieved.

The field of investigation, as is evident, is still in a pioneering phase (Clarkin and Cangioni 2016; Kipfer 2019).

At a legal level, legislative examples regarding new phenomena such as impact investing and social entrepreneurship are still scarce.

Even more rare are the legislative examples that recognize special tax regimes for investments or companies with high social impact.

Therefore, the analysis is carried out in a "*de iure condendo*" perspective, rather than de "*iure condito*".

At a methodological level, the consequence is poor quantitative analysis and the need to focus on qualitative aspects, starting from hints offered by isolated practical cases.

3.2 LEGAL RELEVANCE OF IMPACT INVESTING AND SOCIAL ENTREPRENEURSHIP

As anticipated, the legal significance of investments and companies with a high social impact is essentially based on formal legal criteria.

In this sense, the role assumed by the non-distribution constraint, as well as by operations in some sectors of general interest (Kerlin 2006), is paradigmatic.

In particular, the methods of legislative recognition of social entrepreneurship were essentially three (Felicetti 2018; Montani 2019).

Some first-generation legislations have enhanced the historical function of cooperatives, identifying them as the legal type of reference for the social enterprise. For example, just think of Croatia, Czech Republic, Hungary, Poland and (partially) Greece (Felicetti 2018; Montani 2019). In practice, the “social cooperative” was created as a form of adaptation of the cooperative society. In essence, this is a cooperative that pursues a social purpose, regardless of the result. The purpose is predominantly or exclusively non-profit and based on the operativity in certain sectors.

Other countries, including Finland, Denmark, Lithuania, Luxembourg, Romania, Slovakia, Slovenia and Italy, have preferred to introduce a transversal legal qualification (Montani 2019). But even in this case, the qualification criterion was based on legal-formal criteria analogous to the previous model, regardless of the social impact as a result.

Emblematic is the case of the Société d’impact sociétal del Lussemburgo.³ Despite the *nomen iuris*, also the Société d’impact sociétal assumes the impact as a goal, rather than as a minimum requirement necessary to obtain the qualification.

A third model, as in the case of the British CICs, has created an autonomous legal form.⁴ In this case, the recognition is granted by a public regulator and is based on a community interest test.⁵ In this case, it was preferred to resort to a concrete evaluation of the activities that will be carried out. It is not based on a legal-formal criterion, but the social impact, even in this case, has been assumed in its dimension of objective rather than as a result (Felicetti 2018).

Finally, similar considerations can also be made for the low-profit limited liability companies, the social purpose corporations, the flexible purpose corporations and the benefit corporations of the US system (Montani 2019).

Also from the point of view of the recognition of social impact investments, similar considerations can be made.

The regulation of European funds for social entrepreneurship is particularly significant. According to art. 3 of EU Regulation n. 346/2013, the EuSEFs are qualified on the basis of the formal characteristics of the companies receiving the investment, regardless of the results actually achieved.

However, even the social impact, as a concrete objective achieved and measured, had its partial legal relevance. But it was conceived above all in relation to the protection of private interests.

The reporting obligations of the social impact must be read in this sense. The sanction introduced for Italian benefit companies is exemplary in this regard. According to art. 1, paragraph 384, law n. December 28, 2015, n. 208, antitrust sanctions are applied in the event that the benefit objectives are not pursued.

At the legislative level, therefore, the impact has assumed importance as an objective; but mainly in the perspective of protecting the private donor, investor or for-profit competitor.

In the relationships between private individuals, in fact, the results concretely achieved become more important, rather than merely formal criteria. The individual donor and investor are interested in evaluating the returns of their philanthropic or financial investment. Numerous philanthropic organizations and most professional investors are acquiring their metrics to assess the impact of their investments (Rangan et al. 2011; Vurro and Perrini 2013).

The understanding of the value of the social impact for the public player, at the legislative and scientific level, seems, however, still lacking.

The importance of the analysis of the social impact of taxation is widely shared (Benczúr et al. 2017). But the analysis of the potential and criticality of a differentiation of public benefits, based on the different social impact, is still poorly developed.

From the point of view of scientific analysis, it is possible to see that most of the definitions of impact investing do not dwell on the nature of the investment: public or private.

In general, we tend to take the second for granted and underestimate the possibility of conceiving the State as a possible impact investor.

The concept of public intervention in favor of social entrepreneurship is often reduced to the level of mere intermediation or facilitation between

the demand and supply of private capital (Fazili 2010; OECD 2019; Tekula and Andersen 2019).

On rare occasions, the possibility of an active financial intervention by the State is contemplated and analyzed.

In such cases, the State acts as an impact investor in the same way as the private individual: investing financial resources in an entrepreneurial project capable of ensuring a social and economic return.

3.3 TAXATION AND SOCIAL IMPACT

The State can play a role of impact investor also in a different way. The recognition of tax expenditures, in fact, can be represented as a sort of public investment.

The State can invest either by pouring resources (from the public budget point of view: more exits) or by lowering taxes for certain types of companies (from the public budget point of view: lower revenues).

This is the case of the various hypotheses of special taxation linked to social entrepreneurship projects (Mazzullo 2014).

In the allocation of these resources, the State is called upon to make rewarding or penalizing choices.

The aforementioned considerations appear to be important also because of the limits of the market in which the impact investing operates: difficulties for institutional investors linked to the type of asset, low liquidity, etc. (Chiappini 2018; OECD 2015, 2019).

Having to think of a system of tax benefits for impact investing and social enterprises, it seems interesting to investigate about the opportunities and problems of a tax model directly based on the impact. Even so, the State plays an important role with respect to impact investing.

The recognition of a reward regime in favor of social investments, moreover, cannot be reduced to a mere fiscal “facilitation”. It is often a form of compensation (usually partial) between the amount of the tax benefit and the amount of savings enjoyed by the State through the action of the various forms of social entrepreneurship (Italian Revenue Agency 2014; Gianoncelli 2017).

The positive social impact, in fact, often translates into a positive impact on public spending. Social enterprises relieve the State from burdens that otherwise would have been charged to it; perhaps with greater inefficiencies and costs (Defourny and Nyssens 2006; Gawell 2014).

In these cases, therefore, it would be more correct to speak of “compensatory taxation” rather than “facilitation” (Mazzullo 2014; Italian Revenue Agency 2014).

This approach can be useful for creating an ad hoc tax infrastructure to facilitate impact investing and social entrepreneurship.

The modulation of this “compensatory taxation” (in terms of both social benefits and public savings) can be an innovative way of taxation (OECD 2019).

This type of differentiation could also serve to overcome some of the main objections to the recognition of a tax system facilitated in this area.

Among these, in particular, the idea of a dangerous distorting effect in terms of market competition is relevant.

In Italy, with the law of 6 June 2019, n. 106, a process of reforming the third sector and social entrepreneurship was launched.

Following this provision, the Italian Government issued the new Third Sector Code (Legislative Decree No. 117 of 2017) and Legislative Decree n. 112 of 2017 of social enterprise reform.

In order to make the investment within social enterprises as attractive as possible, despite the cap applied to the remuneration of the investment, two instruments of tax exemption have been envisaged:

- the deductibility of investments in the share capital of social enterprises, by natural persons;
- the deductibility of investments in the share capital of social enterprises, by Ires subjects.

Paragraphs 3 and 4 of art. 18, in particular, recognize a regime of deductibility and deductibility for investments made in the equity of social enterprises, similar to what was introduced for innovative start-ups with a social purpose (art. 29, Legislative Decree 179 of 2012, converted by Law No. 221 of 2012) and for innovative SMEs (art. 4, Decree Law 3 of 2015, converted by Law No. 33 of 2015).

For what concerns social enterprises, it is important to highlight the absolute tax exemption for all profits internally destined and reinvested in the activity (art. 18, paragraph 1).

This is an extremely significant fiscal lever that guarantees greater attractiveness of social impact investments.

The ratio is sought in the functionality of those profits with respect to the achievement of a purpose considered, even if private, of general

interest and not selfish. However, these are state aids subject to authorization by the European Commission, pursuant to art. 108, paragraph 3, of the TFEU.⁶

These provisions represent an embryonic attempt to tax impact investing in Italy in a special way. Before the 2017 reform, companies and social investments had no particular advantages, except for the particular case of social cooperatives governed by the law of 8 November 1991, n. 381.

The selective criterion of the tax advantage, however, is still the traditional one of the legal-formal qualification. To take advantage of these measures, it is sufficient to register in a special public register, subject to certain conditions.

The social impact, however, is not relevant either as a condition (and) or as a measure (quantum) of the tax benefit.

It should be borne in mind that the part of the 2016 parliamentary law has not yet been implemented in the section in which the government was delegated to introduce a taxation regime that also varied according to the social impact actually achieved.

This forecast, however, represents an extremely important novelty that goes in the direction of the paradigm shift mentioned above.

As recently stated by the OECD: “Impact investing has the potential to benefit government and taxpayers by reducing costs and improving social policy outcomes. It can change the role of government from paying for inputs to paying for outcomes. It can also benefit not-for-profits by diversifying their funding sources and helping them to develop technical expertise in benchmarking and measuring outcomes, as well as in improving governance and accountability” (OECD 2019).

Therefore, the real challenge for the public actor is the transition from a system of paying for inputs to a system of paying for outcomes.

For the reasons already explained, this shift of paradigm cannot be limited to financial resources that come from public budgets.

The same approach, which is the element of innovation that requires attention, can be applied to taxation through a modulation of the facilitations based on the legal qualification (social enterprise, benefit corporation, social purpose corporation, low-profit limited liability company, etc.), but above all based on the different social impact.

Conceiving the tax relief system as a form of public investment is therefore not a sterile classification issue. The diversity of approach is reflected in concrete changes of processes.

For the public investor, “investing” could mean:

- greater awareness of its scarcity of resources, also in terms of reducing tax revenues;
- a more careful selection of the best performing subjects;
- a closer relationship between the resources used and the return in economic and social terms; in this case, between tax expenditures, social impact and savings in public spending.

For social enterprises that want to access these tax benefits, this change of approach could favor:

- greater performance in terms of impact actually achieved;
- greater efficiency in reporting and transparency.

Conceiving the tax system in an investment logic could lead to positive externalities and constitute an authentic innovation capable of influencing the entire system of subsidies to companies, even non-social ones.

The traditional approach, in fact, is based on the prior recognition of the tax relief based on the recurrence of certain initial assumptions.

The incentive is rarely linked to the actual achievement of the general objectives pursued by the legislator.

Even more rarely, the amount of incentive is linked to the degree of achievement of those objectives.

Contrarily, applying an investment logic when considering benefits granted to social enterprises means taking into account their actual impact both in qualitative and quantitative terms.

It means, in the most advanced perspective, reserving the facilities for the most impacting social enterprises, differentiating the entity according to the level of impact achieved.

On a more strictly legal level, there is a further argument that reinforces the usefulness of this change of approach.

As mentioned above, it is customary to speak of tax benefits when, in some sectors, it would be more correct to speak of compensatory taxation. This is precisely the case of special taxation of social enterprises.

It is known, in fact, that these companies are characterized by the pursuit of aims of general interest otherwise reserved to the general competence of the State.

In the transition from a Welfare State system to a Welfare Society system, the space of civil arises between the market and the public: a private area with a general purpose.

This is the area where the so-called social enterprises arise, indistinctively if for- or not-for-profit.

Their action often translates into savings in public spending. This saving is also frequently greater than the amount of recognized tax expenditures.

Rather than facilitating, therefore, it would be more correct to speak of compensation (often only partial) with respect to the benefits assured to the public actor, relieved of the cost of social charges which otherwise would have had to be occupied and, perhaps, with lower results in terms of efficiency.

This taxation can then be defined as “compensatory”.

A compensation relationship will be all the more evident and legitimate, and the greater the capacity to reconnect the same benefit not only to the actual social impact but also to the revenue, in the form of lower public expenses.

On a legal level, these aspects are particularly important because they justify the reasonableness and legitimacy of the various forms of tax incentives granted to social enterprises.

3.4 THEORETICAL CRITICALITIES

It is clear, indeed, that the risk could be to perceive these incentives as forms of alteration of competition with respect to companies operating in the same areas, but with an exclusively economic-financial orientation.

In addition, this argument is one of the main reasons for the legislative resistance to the recognition of tax advantages for the various forms of social enterprises.

As underlined by the recent NYU Law School Report (2019):

The most common for-profit social enterprise legal forms available in the United States—namely, benefit corporations, L3Cs, BLLCs, and SPCs—are not currently subject to new tax categories or treatments. These social enterprises are subject to the rules of for-profit entities and activities and are not eligible for exemption from federal income tax under any of the currently available categories ... As a result, to date the adoption of new social enterprise legal forms has not translated into new federal or state law tax treatments ... Proponents of tax benefits for for-profit social enterprises, however, have been met with resistance due to the challenges the government would face in certifying social enterprises and ensuring that they are achieving the

intended public benefit, particularly where there is no single definition of social enterprise in the United States but rather a complicated legal landscape of multiple social enterprise legal forms across States.⁷

With respect to common law, another interesting example happened in Philadelphia, the first US jurisdiction to enact a social enterprise-related tax law.

In 2009 passed the Philadelphia Sustainable Business Tax Credit (SBTC), which enables up to 25 eligible businesses in Philadelphia to receive a tax credit of up to \$4000 a year if B Lab certified or qualified as a “sustainable business”. To be considered a “sustainable business” under the ordinance, applicants must submit evidence that they give substantial consideration to employee, community and environmental interests in their practices, products and services.

As highlighted in the NYU School of Law report (2018–2019): “the ordinance has not been amended to include benefit corporations or BLLCs, despite these social enterprise forms being available in Pennsylvania since 2012 and 2016, respectively. This may signal a reluctance on behalf of the city to assume that companies set up as benefit corporations or BLLCs are per se sustainable businesses. Or, it may indicate that policy-makers do not believe legal form is dispositive, and that observable actions of the businesses are more important than form”.

The border, once again, seems to move beyond the mere legal qualification toward the social impact actually achieved.

Starting to think in terms of tax compensation would make it possible to overcome many of the aforementioned resistances.

These considerations fit into the theoretical debate around the concept of “contributory capacity”.⁸

The significance of the debate assumes a transnational relevance for what concerns the nature and function of taxation assumption: that is, the ability to pay (Jarach 1981; Kaplow 2010; Gianoncelli 2017).

This debate has been revitalized by the introduction, in various legal systems, of new forms of tribute that do not affect the traditional wealth constituted by heritage or income: the most important cases are represented by environmental taxes (Bovenberg and Goulder 2002; Leiter et al. 2011).

In the Italian debate around the concept of contributory capacity as a constitutional prerequisite of state taxation, there are two orientations.

On the one hand, there are those who understand it as ability to pay: as a set of assumptions having a purely patrimonial relevance (Kendrick 1939). On the other hand, there are those who qualify it as a mere allocation criterion in a distributive perspective (Article 3 of the Constitution), which finds its own premises in elements that can be economically evaluated but not necessarily endowed with patrimonial nature (Jarach 1981; Gallo 2014; Gianoncelli 2017).

The first conception, which has its roots in a vision of a liberalist but still majority, sees the contribution capacity as a limit placed on the fiscal legislator to protect the rights of the person. The second conception, which has its roots in an egalitarian, solidaristic and welfaristic vision (Articles 2 and 3 of the Constitution), sees contributive capacity not only as an instrumental criterion for raising money but also as a political means for implementing rules for distributive justice to correct social inequalities.

The principle criticality of the first conception is that of subordinating the principles of equality, distributive justice and solidarity to the need of protecting one's patrimony and, in it, of the "person" assumed as a subjective entity inseparably connected with its proprietary rights.

The second concept, on the other hand, is better when framing new taxes, such as those "environmental in the strict sense", which increasingly assume as a tax basis the physical unit that causes environmental damage, without any link with a qualified patrimonial capacity (Verrigni 2003; Gallo 2010; Alfano 2011).

On the one hand, it is a question of assuming the ability to pay as a criterion for allocating costs connected with the reparation of environmental damage among those who, with the same patrimonial capacity, have contributed to produce it. On the other hand, to "facilitate" or "compensate" those eco-responsible companies that are, respectively, able to not impact or even facilitate the environmental balance.

The European Commission, by enhancing the fiscal leverage, first urged the Member States to introduce ecological taxes in the strict sense⁹ and subsequently legitimized, in the matter of State aid, the provision of an incentive tax expenditures system¹⁰ that assumes a particular importance.

The structural logic underlying the new environmental subsidy system aims to enhance the fiscal leverage based on the positive or negative impact on the environment and, more or less directly, on the primary balance in terms of lower expenses.

Translating the same logic into the social entrepreneurship field of action, one can wonder if these organizations have the prerequisites for a

special contributive capacity compared to that of other taxable subjects (Gianoncelli 2017; Mayer 2017).

Moreover, in this case, the reasoning can take as a reference not only social entrepreneurship (strictly and broadly speaking) but also socially responsible companies, starting from the ones attentive to environmental protection.

As has long been observed, their ability to contribute must be seen not only in terms of financing public spending but also in terms of its containment.

In such case, one should more correctly speak about “compensatory taxation”, the State should consider the problem of individuating the right compensation between what it saves given the action of social entrepreneurs, rather than considering the issue of a mere tax benefit.

The tax expenditures system relating to social entrepreneurship, in addition to being cumbersome, does not adequately consider their ability to contribute to a “primary balance” improvement in the form of lower expenditure (public expenditure) before that of higher revenue (tax collection).¹¹

If it is true that everyone is obliged to contribute to public expenses on the basis of their ability to pay (Article 53 of the Constitution), it is questionable whether it is not possible, indeed obligatory, to grant social entrepreneurship a contribution capacity that excludes, or better, precedes tax collection (Zizzo 2011).

On this point, the question is increasingly frequent if the non-profit organizations have a constitutionally protected right to different tax regimes (Miscali 2011; Mazzullo 2014).

The topic also has its own independent relevance in terms of the European discipline on State aid.

It is legitimate to question whether a certain measure, even before being selective, can really be considered as an advantage; in particular, if its compensatory function with respect to the benefits given to public accounts by certain types of companies, such as social ones, can justify a differentiated treatment also in terms of State aid (Cusa 2013).

The theme assumes its fundamental and specific relevance when thinking about the importance of the fiscal lever in the entrepreneurial sector and social impact investments.

As known, among the criteria used by European law to determine whether aid is legitimate, companies (or individuals) belonging to specific sectors submit to a selection process.

In the context of State aid, tax benefits are also included, of which social entrepreneurs and enterprises are often beneficiaries.

The Court of Justice has often legitimized forms of aid based on arguments that strictly adhere to the principles or structure of tax system to which the organization is related. In these cases, although based on a method that can be inhomogeneous, the aid has often been considered non-selective (Gianoncelli 2013; Id. 2017).

Among the elements considered relevant, in order to exclude the selectivity of the aid, as it complies with the logic of the tax system, once again, the specific contribution capacity of some subjects stands out.

On the subject of what we have called “compensatory taxation”, some judgments of the Court of Justice deserve attention given the decision to provide some tax benefits for institutions of social utility.

The first is the judgment of 14 September 2006, in case C-316/2004, *Stauffer*, concerning the exemption from the tax on legal persons reserved by Germany to the bodies that pursue exclusively public utility purposes. The tax measure was subject to the condition that these entities were resident, for tax purposes, in the German state and it was a matter of deciding their compatibility in terms of European legislation on the free movement of capital. On the basis of this decision, it was acknowledged that “it would not be forbidden for Member States to introduce provisions which impose the existence of a sufficiently close connection between the recognition of tax advantages for the entity and activity that the same actually exercises in favor of the national community; as evidenced by the German State in the context of the oral discussion, in fact, the body that is integrated into the social life of the country takes on the performance of tasks which, otherwise, the state should provide, with consequent expenditure of public resources”.

In other words, the court is recognizing the compensatory nature attributable to fiscal measures regarding forms of social entrepreneurship.

Equally significant is the decision of January 27, 2009, case C-318/07, *Persche*, paragraphs 44 and 45, where the orientation of the Court is further specified, establishing that, although it is: “legitimate that a Member State reserves the granting of tax advantages to institutions that pursue some of its general interest objectives (see, to that effect, judgment of *Walter Stauffer Music Center*, cit., point 57), it cannot, however, limit this benefit to the only entities established in its own territory whose activities are therefore suitable to raise it from its own responsibilities”.

Even more clearly, in paragraph 49, we read that: “it is legitimate for a Member State, in the context of its own legislation regarding the tax deductibility of donations, to treat differently recognized bodies of general interest established in their own territory with respect to those established in other Member States when the latter pursue objectives other than those set forth in their legislation. (...)”.

3.5 PRACTICAL CRITICALITIES

Even compensatory taxation, therefore, can represent a sort of pay for result tool, with the only difference that it would not consist in a financial exit but rather in a minor revenue receipt.

In order for this to happen, however, it is necessary to implement a legislative and administrative infrastructure that is still lacking within the various legal systems.

The central point is certainly represented by the implementation of a standardized system for measuring social impact, regardless of the specific field of action.

To this end, a useful tool could be the attribution of a social rating, similar to that provided for public procurement. Consider, in Italy, the legality rating¹² and the corporate rating.¹³ These are used as awarding instruments and are based on reputational requirements assessed both qualitatively and quantitatively through objective and measurable indices.

The attribution competence could be given to independent rating agencies subjected to public control and financed with a compulsory contribution by the companies that decide to undergo the evaluation to obtain the relative tax benefits.

Or, the impact assessment and rating assignment could be referred directly to the administrative authority (Fig. 3.1).

Further preconditions for the development of an efficient public impact investment system, in the form of tax expenditures, are:

- the existence of a clear framework: above all in relation to the concepts of business and investment with social impact;
- the adoption of official transnational definitions, at least at the EU level;
- improvement of accountability systems by social enterprises and in relation to the impact actually achieved;
- strengthening the control system;



Fig. 3.1 Social rating system

- the implementation of cost/benefit analysis systems linked to public actions subsidized by the intervention of social enterprises.

3.6 APPLICATION EXAMPLE AT LOCAL LEVEL: VERONAMERCATO SPA

It is clear that the steps still to be taken are still considerable. Especially at the level of national legislation, significant infrastructural elements are still lacking, starting with those related to measuring social impact and saving on public spending.

Nevertheless, at the local level, there are some concrete application examples.

One of these is related to the recovery of food waste in the third Italian fruit and vegetable market—Veronamercato spa (Bonomi and Ricciardi 2017).

An FAO study (2011) showed that the amount of food wasted in industrialized countries (222 million tons) is equal to the food production available in sub-Saharan Africa (230 million tons).

The waste of food, moreover, increases the production and distribution costs for companies, increasing at the same time the costs of disposal and related costs (e.g., environmental hygiene tariffs).

In the fruit and vegetable sector, many wastes are physiological in almost all phases of the production process. The causes are different: natural disasters, high perishability during storage or transport, damage to packaging during the distribution process, value reduction linked to the passage of time during the marketing phase and so on.

Hence, large quantities of food are lost, with a high nutritional and organoleptic capacity, but of little commercial and economic value.

Veronamercato spa has thus joined a project that also involved the municipality and the third sector for the reuse for social purposes of this food.

The win-win project allowed in 2013 alone (Bonomi and Ricciardi 2017):

- to recover a quantity of fruit and vegetables of 787,246 kilograms, for an economic value of EUR 903,758;
- for the for-profit sector, to save EUR 149,409 for lost collection costs and EUR 67,610 for lost composting costs.

As far as this is of most interest, a further saving for Veronamercato spa was of a fiscal nature, thanks to a percentage reduction of the municipal tax on waste in proportion to the quantitative percentage of fruit and vegetables donated (and not turned into waste) up to a maximum ceiling of 80%, for a total value of an additional EUR 70,000 (Fig. 3.2).

This reduction was made possible thanks to a specific municipal resolution which, in this case, has precisely modulated the tax levy to the different social impact actually realized.

3.7 CONCLUDING REMARKS

Based on the above considerations, it is possible to summarize the following considerations.



Fig. 3.2 Veronamercato Spa

The public can also act as an impact investor based on the commonly adopted defining elements.

This intervention can materialize either through outgoing investments, or through partial renunciation of the overall tax claim.

Designing tax expenditures as forms of investment implies a significant change of perspective.

Where it is possible to link the level of taxation to the degree of impact, economic and social, of taxable subjects, it is possible to make a more efficient and responsible use of public and private resources.

At the national legislative level, the examples are still very scarce.

An interesting case is the Italian one. In 2016, a reform was launched that expressly contemplated the possibility of modulating the taxation of forms of social entrepreneurship to the different degree of social impact. In this respect, the reform has not been implemented.

Full implementation has been hampered by the lack of fundamental infrastructural elements: among others, the lack of a standardized and certified metric of social impact and savings in terms of public expenditure.

Nevertheless, at the local level, there are already some best practices. Among the interesting cases is that of the Municipality of Verona that managed to modulate the local tax on waste based on the actual positive social impact deriving from the recovery, for social purposes, of food waste from the city's fruit and vegetable market.

NOTES

1. For an analysis of the most recent legislative recognitions, around the world, see: Bidet, E., & Defourny, J. (Eds.) (2019) *Social Enterprise in Asia: Theory, Models and Practice*, Routledge, Defourny, J., & Nyssens, M. (2012). "Conceptions of social enterprise in Europe: A comparative perspective with the United States". In *Social enterprises* (pp. 71–90). Palgrave Macmillan, London; Esposito, RT (2012). *The social enterprise revolution in corporate law: A primer on emerging corporate entities in Europe and the United States for the benefit corporation* Wm. & Mary Bus. L. Rev., 4, 639; Terziev, V. (2019). *Social entrepreneurship in Bulgaria and Europe*. IJASOS-International E-Journal of Advances in Social Sciences, 5 (14) Wilkinson, C., Medhurst, J., Henry, N., Wihlborg, M., & Braithwaite, B. W. (2014). *A map of social enterprises and their ecosystems in Europe: Executive Summary*. A report submitted by ICF Consulting Services, European Commission; Filatova, U., Semeryanova, N., Suslova, S., Gabudina, A., & Kopytova, A. (2019). *Legal aspect of social entrepreneurship*. In *E3S Web of Conferences* (Vol. 91, p. 08071). EDP Sciences.
2. According to the art. 1, paragraph 1, of Legislative Decree 3 July 2017, n. 112: "Possono acquisire la qualifica di impresa sociale tutti gli enti privati, inclusi quelli costituiti nelle forme di cui al libro V del codice civile, che, in conformità alle disposizioni del presente decreto, esercitano in via stabile e principale un'attività d'impresa di interesse generale, senza scopo di lucro e per finalità civiche, solidaristiche e di utilità sociale, adottando modalità di gestione responsabili e trasparenti e favorendo il più ampio coinvolgimento dei lavoratori, degli utenti e di altri soggetti interessati alle loro attività". According to the art. 18, paragraph 1: "Non concorrono alla formazione del reddito imponibile delle imprese sociali le somme destinate... ad apposite riserve ai sensi dell'articolo 3, commi 1 e 2.". According to the art. 18, paragraphs 3 and 4: "3. Dall'imposta lorda sul reddito delle persone fisiche si detrae un importo pari al trenta per cento della somma investita, successivamente alla data di entrata in vigore del presente decreto, dal contribuente nel capitale sociale di una o più società, incluse società

cooperative, che abbiano acquisito la qualifica di impresa sociale da non più di cinque anni. L'ammontare, in tutto o in parte, non detraibile nel periodo d'imposta di riferimento può essere portato in detrazione dall'imposta sul reddito delle persone fisiche nei periodi d'imposta successivi, ma non oltre il terzo. L'investimento massimo detraibile non può eccedere, in ciascun periodo d'imposta, l'importo di euro 1.000.000 e deve essere mantenuto per almeno cinque anni. L'eventuale cessione, anche parziale, dell'investimento prima del decorso di tale termine, comporta la decadenza dal beneficio e l'obbligo per il contribuente di restituire l'importo detratto, unitamente agli interessi legali. 4. Non concorre alla formazione del reddito dei soggetti passivi dell'imposta sul reddito delle società, il trenta per cento della somma investita, successivamente alla data di entrata in vigore del presente decreto, nel capitale sociale di una o più società, incluse società cooperative, che abbiano acquisito la qualifica di impresa sociale da non più di cinque anni. L'investimento massimo deducibile non può eccedere, in ciascun periodo d'imposta, l'importo di euro 1.800.000 e deve essere mantenuto per almeno cinque anni. L'eventuale cessione, anche parziale, dell'investimento prima del decorso di tale termine, comporta la decadenza dal beneficio ed il recupero a tassazione dell'importo dedotto. Sull'imposta non versata per effetto della deduzione non spettante sono dovuti gli interessi legali".

3. In this regard, see: Ateliers Kraizbiere, *Sociétés d'impact sociétal et associations sans but lucratif: Tableau comparatif*, Ateliers Kraizbiere – Société Coopérative, 2017; Hiez, *Société d'impact sociétal: première reconnaissance législative de l'économie sociale et solidaire – Loi du 12 décembre 2016 portant création des sociétés d'impact sociétal*, in *Journal des Tribunaux Luxembourg*, 2017, 110.
4. European Commission, *Social Enterprises and Their Ecosystems in Europe – Country Report: United Kingdom*, 2019, spec. 27.
5. See the section 35 (2) of the 2004 Act.
6. As reiterated also by the last paragraph of the art. 18, Legislative Decree n. 112 of 2017.
7. Grunin Center for Law and Social Entrepreneurship, *Mapping the State of Social Enterprise and the Law 2018–2019*, p. 14: http://www.law.nyu.edu/sites/default/files/upload_documents/Tepper%20Report%20-%20State%20of%20Social%20Enterprise%20and%20the%20Law%20-%202017-2018.pdf
8. Art. 53, paragraph 1, Italian Constitution: "Every person shall contribute to public expenditure in accordance with their capabilities".
9. European Commission, *Communication on taxes, fees and environmental taxes in the Single Market* of 29 January 1997, in COM (97) 9 final and Bull. EU 1–2/1997 ref. 1.2.160, in the full version of the official publications office, Brussels on 26 March 1997.

10. Communication of the Commission—Temporary Union framework for State aid measures to support access to finance in the current financial and economic crisis.
11. Significant in this regard is the symmetry recorded by Istat between the contraction of the presence of the public in certain sectors of intervention and the expansion of the role of the third sector. See, always for Italy, Istat—“9° Censimento industria e servizi, istituzioni e non profit: un Paese in profonda trasformazione”.
12. Approved by Parliament at the end of 2012 (art. 5 ter of the Decreto-legge n. 1/2012), the rating of legality is the instrument with which ICA attributes a score, from one to three “little stars”, to the honest businesses that have a turnover of more than EUR 2 million per year and that meet a number of legal and “quality” requirements. To obtain a “little star”, the owner of the company and other executives should not have previous convictions for the offences referred to in Legislative Decree number 231 of 2001 and for major crimes against the public administration as well as for tax offences. Furthermore, these persons should not have been prosecuted for crimes related to the mafia. With regards to the company, it should not have committed administrative offences arising from the offences referred to in Legislative Decree number 231 and must not have been convicted in the previous two years for illegal antitrust and consumer protection. The company also has to make payments and financial transactions over EUR 1000 exclusively using traceable instruments. To get a higher score, the regulations indicate another six requirements: two “little stars” if half of these are followed and three “little stars” if all are followed. The rating given by the Antitrust Authority, as required by law, and in accordance with the provisions in Decree number 57 of 2014, “is taken into account in the granting of loans by the government, as well as in the access to bank credit”. Under the same legislation, “the credit institutions that fail to take account of the rating assigned in the granting of loans to businesses are required to forward to the Bank of Italy a detailed report on the reasons for the decisions taken”.
13. Planned by the art. 83, paragraph 10, of the Italian public contracts code (Legislative Decree 50/2016).

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Profitable Impact Bonds: Introducing Risk-Sharing Mechanisms for a More Balanced Version of Social Impact Bonds

Giulia Proietti

4.1 INTRODUCTION

Social Impact Bonds are a mixed partnership between Public and Private, conceived as a possible solution to convey new resources into welfare expenses and to address public budget contractions.¹ The financial scheme has created great interest in the last decade and there are many reasons to justify this excitement (Berndt and Wirth 2018). Notwithstanding the undeniable advantages, SIBs still present numerous downfalls which impede the spread of an authentic financial market of the product. This

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chapter focuses on these limitations and offers a possible alternative to preserve the good elements of SIBs.

One of the main weaknesses of the scheme has been the imbalance of exposure between the actors involved. While governments and Social Providers bear almost no economic risks, with the exception of risks to reputation, investors are required to put capital into a highly unpredictable programme with low control over their investment. The paradox of SIBs is that the repayment of investors depends entirely on the performance of the Social Provider which has no financial repercussions for failure nor a stringent economic interest in obtaining a favourable result. To this end, this chapter aims at introducing some modifications to the financial scheme, to transform the risk for investors from risks of performance into risks of credit and to redistribute both exposure and benefits between the parties involved. The chapter also encourages the choice of Social Providers among corporations and hybrid entities which are fit to be parties of a financial scheme, combining the creation of social impact with the production of revenue. Thanks to these modifications, SIBs could become an effective tool to raise capital for innovative enterprises that are capable of demonstrating their social impact in terms of public budget reduction, while pursuing a profit. This use of the financial scheme could encourage a new form of inspired capitalism, laying the foundation for a socially oriented economic market.

4.2 CHARACTERISTICS OF SOCIAL IMPACT BONDS

Social Impact Bonds, or pay-for-success bonds, are a financial product aimed at targeting public budgetary challenges through the use of private investments.

The scheme, defined as a mixed partnership between Public and Private, was conceived as a possible solution to convey new resources into welfare expenses and to address and adjust to public budget contraction (Burand 2013; Demel 2013; BEPA – Bureau of European Policy Advisers 2011; Liebman 2011; Gambardella et al. 2018; Mulgan et al. 2010; Arena et al. 2015; Busch et al. 2016; Warner 2013; Barajas et al. 2014; Schinckus 2017).

The creation of an SIB requires a series of connected contracts between public administration, private investors, social service providers and an intermediary. The common element to each contract is the identification of a positive social result capable of reducing public expenditures. Private

investors who decide to finance an SIB agree to be remunerated only if the specific social outcome is accomplished. The social service provider, usually a non-profit entity, agrees to develop a social programme with the funds received; this social programme must be capable of achieving the desired outcome. Finally, the public administration (also called the “Outcome Payor”) agrees to remunerate the investors if the specific performance is met. To connect the different obligations between multiple parties, a new entity (also called “special purpose vehicle”) is commonly created to act as the intermediary of the project, and an independent evaluator is appointed to verify the credibility of the results.

Social Impact Bonds have created great interest in the last decade and there are many reasons to justify this excitement (Weibel et al. 2009; Warner 2013; Schinckus 2017; Dear et al. 2016). The main advantage of the scheme is the elimination of any economic risk on the public actor. The government is required to bear the economic costs of the operation only if positive results have been achieved and have, consequently, reduced public expenditures or resulted in societal improvements. In using SIBs, the economic risk is shifted to private investors who are considered more appropriate players in terms of evaluating the profitability of an investment and less likely to jeopardise their own capital, as opposed to a public administration risking the funds of taxpayers.

SIBs also stand out from other forms of impact investments because they create an interdependence between social results and financial return, so that only high impact results can create large financial returns and vice versa.

Furthermore, the scheme introduces the economic concepts of Measurability, Accountability and Performance into the world of public social services. These quantitative concepts allow for evaluation of the reach and impact of public social programmes (Social Finance Report 2018), which were usually funded without the expectation of producing certain and definite results (Burand 2013; Fact Sheet: The NYC ABLE Project for Incarcerated Youth 2012). As such, the introduction of an outcome-based financial scheme has been considered a useful tool to enhance the effectiveness of social programmes, protecting taxpayers’ money from inefficient public spending (Social Impact Bonds 101, 2017).

SIBs have finally been regarded as a tool to speed up the rate of social innovation and to test new approaches, determining their efficacy before turning them into new public programmes. The involvement of multiple Social Providers has been regarded as a tool to bring together different

expertise and to better investigate the needs of society. Social Impact Bonds have also proven to be more flexible than ordinary public services programmes since they define an outcome rather than the exact services to be provided. Given these characteristics, SIBs have the potential to scale-up promising and original ideas, encouraging innovation and cost-savings for governments.

Notwithstanding the undeniable advantages arising from the implementation of Social Impact Bonds, the financial scheme presents numerous downfalls, some of which are impeding the spread of an authentic financial market of the product.²

This chapter aims to identify these weaknesses and proposes possible solutions to make the product more interesting from a financial perspective. To this end, in the first paragraph, the structure of SIBs and their major limits would be analysed followed by a brief history of SIBs, their creation and developments. Finally, an alternative model, called “Profitable Impact Bonds”, is proposed. This model has the advantage of overcoming the main limits of SIBs through the involvement of profitable corporations, without renouncing the undeniable advantages of being performance-based products.

4.3 WEAKNESSES AND DRAWBACKS OF THE INSTRUMENT

One of the main weaknesses of SIBs has always been the imbalance of exposure between the actors involved in the financial scheme. While the government and the Social Provider bear very low risks, except for those risks to reputation, investors are required to put capital into a highly unpredictable programme with low to zero control over their investment. Indeed, despite their name, Social Impact Bonds are not bonds (Clifford and Jung 2016) nor do they entitle their holders to voting powers over the management of the social programme. The name itself is a misnomer: SIBs do not pay out a fixed rate of interest at their expiration. For this reason, they resemble more equity investments in the sense that they pay out only in case the result is achieved (Davies 2014). In most SIBs, Social Providers do not even have a direct contractual relationship with the investors, but only with the intermediary, the party in charge of connecting the multiple actors together.

In business law, capital risk is usually balanced by the recognition of certain powers to direct the management (i.e. voting rights). In the SIB context, however, the achievement of the social outcome, to whom the

repayment of the bond is conditioned, cannot be directly influenced nor controlled by the investors. On the contrary, the only party that can influence the obtainment of such result is the Social Provider, who is fully financed up-front, does not bear any economic risk and has no impelling economic interest to succeed. Indeed, the Social Provider is not required to reimburse or indemnify investors for the missed results, not even in case of fault. This “absence of skin in the game”, the complete protection from risks of one party at the expense of another, acts to undermine the scheme (Taleb 2012), making it financially unappealing.

Another significant risk deriving from the SIB arrangement is that the government is the ultimate and unique source of repayment for investors. Especially in those countries facing political instability or financial crisis, this aspect does not represent a safe guarantee for investors.

Yet, another inconvenience of Social Impact Bonds are the high costs involved in their implementation. Every SIB requires a large amount of time and money just to define a desirable social result and to evaluate its impact on the public budget. Government participation often activates public procurement procedures, increasing the complexity of the overall transaction. In addition, there are costs related to the intermediary, usually a new entity created for the purpose of the programme, and the contractual relationships of the intermediary with the multiple parties involved (Public Administration, Investors, Social Provider and Independent Evaluator). Finally, SIBs must cover all expenses deriving from the management, execution of the programme and measurement of programme result. For these reasons, in order to make an SIB profitable, the investment must be significantly large. Certainly, a greater diffusion of the financial scheme and its contractual standardisation can reduce, but not eliminate, these expenses: every SIB will always need to be tailored to the specific circumstances of its implementation and would not benefit from replication (Demel 2013). These expenses would be reduced in the case of a direct relationship between the Public Actor and the Social Provider, without the need for the creation and intervention of an intermediary (Burand 2013).

Finally, one last inconvenience of SIBs is that its investors cannot exit their investments before the full contract term is complete; considering that the average duration is of about 52 months.³

Once these features have been considered, it is hard to define Social Impact Bonds purely as financial products. If the difference between philanthropy and impact investing is the presence of a financial return, the

extremely high risk involved in SIBs makes the line between the two categories very blurry. On the other hand, SIBs do not give their investors any tax benefit, a difference from charitable donations, nor do they benefit from the tax exemptions provided for public bonds (Mazur 2017). Given this scenario, the main challenge for jurists and economists is to try to preserve the good elements of the financial scheme while solving the many downfalls that the original structure presents. To this end, this chapter aims at introducing a new possible financial scheme, the Profitable Impact Bond (or PIB), capable of transforming the risk involved in SIBs from a risk of performance into a risk of credit. If enacted, PIBs will introduce a risk-sharing mechanism between Investors and the Social Provider, reducing the possibility of “free-riders’ dilemmas” (Taleb 2012). But before explaining the characteristics of this proposal and analysing the role of SIBs for the future sustainability of welfare systems, a brief history of Social Impact Bonds is necessary.

4.4 HISTORY OF SOCIAL IMPACT BONDS

The term “social policy bond” was coined in 1988 by the economist Ronnie Horesh to express his idea of a financial instrument issued by the government capable of rewarding investors only after the achievement of a certain goal (Horesh 2000; McHugh et al. 2013). From this initial idea, more than 20 years passed before the first Social Impact Bond saw the light of day in the UK in 2010 (St. Peterborough pilot) (Disley et al. 2011; Bolton 2010; Kohli 2010) followed by an American replica in 2012 (ABLE—Adolescent Behavioral Learning Experience in Rikers Island; Press Release 2012; Chen 2012).

The Peterborough SIB funded interventions to reduce recidivism among offenders who had served short prison sentences. The pilot was originally intended to operate for seven years. The organisation “Social Finance” acted as the financial intermediary of the operation, raising around £5 million GBP from private individuals and charities. These funds were used to finance the so called “One Service”, a comprehensive support programme delivered by six different Social Providers, addressing the main needs and challenges of released prisoners. The English Ministry of Justice agreed to pay investors if the recidivism rate during the 12 months following discharge would be reduced at least by 7.5%.⁴ If the outcome were not achieved, investors would have entirely lost their investment.

The first American SIB, ABLE, targeted juveniles' recidivism in Rikers Island prison, offering cognitive behavioural therapy including education, training and counselling services. The programme had a sole investor, Goldman Sachs Bank's Urban Investment Group, that provided around \$9.6 million USD. The New York City government agreed to repay the investment if the decrease in recidivism would be of at least 8.5%: the threshold to generate an adequate public saving (Olson and Philipps 2012).⁵ The organisation "MDRC" acted as the financial intermediary of the project, transferring the raised funds to the Osborne Association, the Social Provider in charge of therapeutic services. The Vera Institute of Justice was appointed as the evaluator of the SIB's results.

Both the English and the American SIBs aimed at reducing prisoners' recidivism through the delivery of individual support, education and social inclusion services. Notwithstanding this similarity, the two programmes had a fundamental difference: the American version was characterised by the provision of a guarantee to balance the risk of the investor.⁶ Specifically, Bloomberg Philanthropies agreed to secure the investment in case of failure with \$7.2 million USD, up to 75% of the \$9.6 million USD borrowed. The provision of such a guarantee implicitly recognised the imbalance of exposure between the parties involved and partially defeated the financial purpose behind the scheme, tainting the initiative with philanthropic features.⁷ It is extremely interesting to note that, between the two SIBs, the one provided with less financial security ended up being successful. Notwithstanding the fact that the UK bond was terminated in advance by the Ministry of Justice, the programme succeeded in reducing the tackled prisoners' recidivism and produced a 3% annual return for investors. On the other hand, the American SIB, though bigger in size and potential, could not achieve the desired outcome. It might be argued that the very existence of a guarantee created the premises for the malfunction of the US SIB, increasing apathy in the parties involved.

Despite the failure of the first American SIB, as of February 2017, 14 more pay-for-success programmes had been launched in the US for a total of \$130 million USD investment (Government Performance Lab, 2017). The SIB "movement" registered a worldwide growth with 108 projects launched in 24 countries for a total of \$392 million USD; already there are 10 successful programmes as of January 2018 (Social Finance Report 2018). According to this report, SIBs are available in Australia (8), Austria (1), Belgium (1), Canada (4), Cameroon (1), Congo (1), Colombia (1), Germany (3), Finland (2), France (2), Japan (3), India (3),

Israel (2), the Netherlands (8), New Zealand (1), Peru (1), Portugal (4), South Africa (1), South Korea (2), Sweden (1), Switzerland (1), Uganda (1), the UK (47) and the US (22).

These numbers are a sign of how this financial scheme appears promising to governments and of the interest that exists in future development of SIBs. SIBs are currently deployed to tackle the most impelling social challenges such as health services, criminal justice and incarceration, poverty, economic instability and housing services, migration, and children's welfare. The SIB model surely has the potential to increase the efficiency of public expenditures on social programmes and to test their effectiveness. However, should the costs and risks of restructuring public services be shifted entirely to private investors? If the scheme wants to attract capital and create a strong financial market, without having to rely on philanthropic institutions for future development, the answer should be certainly no.

4.5 A PROPOSAL FOR A MORE BALANCED FINANCIAL SCHEME: PROFITABLE IMPACT BONDS

As mentioned in the previous paragraphs, the main limitation of Social Impact Bonds derives from the unbalanced exposure of the actors involved. A well-defined contractual relationship must create an incentive structure that aligns the interests of all their parties (in this instance governments, investors and service providers) around the delivery of a pre-agreed set of outcomes.

In SIBs, while investors face the highest risks without any significant remedy or compensation, the Social Provider is generally funded up-front and is protected from any economic consequences originated by the failure of the programme. The paradox of SIBs is that the repayment of investors depends entirely on the performance of a party which has no financial repercussions or stringent economic interests in obtaining a favourable result.⁸

The role of Social Providers in SIBs has usually been assigned to non-profit entities. This choice creates a double inconvenience. Firstly, non-profits are generally incapable of generating income and must therefore be shielded from any economic risk deriving from the operation. This makes them an unfit financial party. Secondly, these organisations are acquainted with a fund-raising mentality rather than an outcome-based one: their

economic model is based on the acquisition of enough funds to deliver as many social services as the finances allow. There is no stringent need for numbers, results or even returns on investment. Operations are accomplished as long as they have sufficient resources, if not, the next fund-raising campaign must be set up. There has never been a non-profit entity that has been obliged to terminate its operations for not meeting some performance standard; non-profits are more probably shuttered for not being able to raise enough funds.

Is the involvement of non-profit entities strictly necessary for the implementation of pay-for-success schemes? These entities have traditionally been in charge of providing social services, but they are not the only ones.⁹ Hybridised organisations that unite for-profit mentality with the achievement of a social outcome have risen globally: from social enterprises to the newest benefit corporations (Celia 2010; Cummings 2012; Underberg 2012; Brakman Reiser 2011; Schoenjahn 2012): corporations whose business models combine the generation of a profit with the attainment of collective benefits. The participation of these new types of enterprises could be the key to create a more balanced version of SIBs, herein “Profitable Impact Bonds”, or “PIBs”, to stress out the importance of involving profitable enterprises in the financial scheme.

PIBs have been imagined studying the failures of the most important SIBs, starting from the case of Rikers’ Island, as well as taking into consideration interesting risk-sharing models enacted in Europe.¹⁰

What are the characteristics of a Profitable Impact Bond? As in ordinary pay-for-success products, PIBs determine a specific social outcome capable of generating a public expense reduction. The Public Administration agrees to pay a certain sum in case the social outcome is achieved. The key difference with a SIB is the choice of the Social Provider: instead of a non-profit organisation, this fundamental actor is selected among for-profit entities that are capable of generating an income while targeting a specific social outcome. The selected “for-profit” Social Provider receives the funding from investors as a loan: for this reason, its capacity to generate a revenue constitutes an important guarantee of repayment for investors. The bond agreement determines the amount of such repayment, that can be with or without interests or only in percentage, to be more appealing for the Social Provider. In case of failure of the programme, the Social Provider must repay its debt to investors. In case of success of the programme, as in SIBs, investors are paid by the public administration according to the results achieved. In this scenario, the Social Provider can benefit

from the elimination of the debt towards investors, generating an equivalent capital buffer for the corporation.

PIBs are also characterised by a simpler structure than SIBs as investors have a direct relationship with the funded corporation, without the need for an intermediary. The PIB agreement, indeed, could be structured as a multilateral contract between investors, the corporation acting as Social Provider, and the government. Investors are given voting and controlling powers over the operation in exchange for their capital; the funded corporation agrees to pursue the specific social outcome with the raised funds, and the public administration consents to repay investors in case of success of the programme. The agreement also appoints an independent evaluator to certify the outcome of the programme.

The advantages of this scheme are multiple. The most important one is that the Social Provider has “a lot of skin in the game” and is extremely interested in its good outcome, being otherwise personally exposed to financial responsibilities. Investors, on the other side, are not risking to lose their whole investment and are partially guaranteed by the corporation’s assets and capacity to generate a revenue. The transactional costs are lowered by the fact that there is no third-party intermediary or special purpose vehicle created only for the sake of the PIB, while the public actor benefits from the same advantages of an SIB and is required to finance the operation only after its successful outcome. Furthermore, consumers themselves can validate the virtue of a project, supporting the demand of the social service and consequently generating profits for the Social Provider. Finally, the most powerful advantages of PIBs would surely be the capacity to transform the social impact of hybrid corporations into an economic value, rewarding those companies that are focused on creating positive effects for the community.

Now let us use an example to clarify the potential of Profitable Impact Bonds.

Let us say that X is a corporation which manages a free-waste supermarket where every product is sold without packaging through the use of reusable ecological bags or containers: no plastic or other polluting materials are ever consumed. As such X is a corporation which is capable of producing profits but its profitability might not be attractive enough for an ordinary equity investment from a purely financial perspective. Notwithstanding this aspect, X’s service is capable of producing great social impact reducing those public expenses related with waste management and environmental pollution. For the purpose of this example, we will arbitrarily assume that,

thanks to X's activity, the public administration can save \$1 dollar for every item sold, if at least 1 million items are sold in three years. Now let us try to build a Profitable Impact Bond on this scenario and see how its structure might better compensate the imbalances of Social Impact Bonds.

A group of investors agree to lend X the amount of \$800,000.00 dollars to allow the organisation to sell at least 1 million items during a period of three years. If the organisation succeeds in achieving such a result, the public administration would benefit from an expense reduction of \$1 million dollars. This public budget savings will be used to repay investors, who would gain \$200,000.00 dollars in return (25% interest), while the successful corporation would generate additional revenue thanks to the elimination of debt towards investors.

But what if the social outcome is not achieved? In a pure Social Impact Bond, investors would simply lose their capital without any negative impact on X, a win-all-or-lose-all bet for investors. In a Profitable Impact Bond, instead, investors are creditors of the corporation, and X has to either repay them or face insolvency and, eventually, bankruptcy. Therefore, X is interested in the outcome of the programme and needs to carefully implement a strategy to either:

- (a) use investors' money wisely in order to produce enough income to repay the loan;
- (b) use the funds mainly to achieve the social outcome in order to obtain the repayment from the public administration (i.e. lowering prices to attract more consumers) or
- (c) implement a mixed strategy between (a) and (b) to diversify the risk;

It is evident how, in PIBs, X, the funded party, is strongly encouraged to succeed and reach the desired social outcome. Indeed, if the result is not achieved, X must repay investors, although the repayment might be agreed only in a percentage. In this aspect, a Profitable Impact Bond is more appealing to X than the issuance of ordinary bonds. Investors, on the other side, are provided with the rights normally accorded to the holders of bonds, and have controlling and voting powers over X management. They are not risking to lose their whole investment and, in case of success, investors will be rewarded with an interest. Finally, with respect to Social Impact Bonds, the direct funding to X and the lack of special purpose vehicles eliminates unnecessary expenses related to the implementation of the financial scheme, allowing the Social Provider to allocate more resources towards the achievement of the positive result.

4.6 CONCLUSION

Social Impact Bonds have revolutionised the world of impact investing and provided a new form of partnership between Public and Private. They are transforming the way public services are conceived globally, introducing result-based mechanisms and measurements. However, their inner imbalance threatens to limit the development of a strong financial market. In the nine years since the implementation of the first SIB, this financial instrument is still a niche, far from becoming a pervasive product. It is estimated that impact bonds have attracted around \$441 million USD globally, about 0.1% of the \$502 billion USD committed to impact investing.¹¹ These sums are considerably small if compared to the total value of the stock market, worth around \$73 trillion USD.¹² In 2016, the UK Minister for Civil Society had imagined that, by 2020, the market would have reached a value of £1 billion GBP within only the UK.¹³

The imbalance of risks and the reliance on non-profit organisations for the implementation of result-based programmes could be some of the main reasons behind the slow growth of this market. Corporations that are capable of producing both a profit and a positive impact could be a better and more interesting partner. This is the main idea behind the proposal of Profitable Impact Bonds.

In 2015, the Rockefeller Foundation and Yunus Social Business introduced an experiment to leverage commercial capital for social businesses, an experiment called the “Social Success Note”¹⁴ (herein SSN). The SSN aimed at extending the SIB approach to small social businesses. The structure involved three parties: a business, an investor and a donor. As in the PIBs, the investor would provide a loan to the social business to be repaid back without interest. However, if the social business could achieve a pre-determined social outcome, the donor would pay to the investor an outcome payment, amounting to a competitive market return.

The first SSN was launched April 12, 2019,¹⁵ and focused on tackling the lack of access to water and sanitation in Uganda. The investor, UBS Optimus Foundation, provided a working-capital loan of \$500,000 USD to the social business “Impact Water”, to help that entity in selling, installing and maintaining affordable water filtration in Uganda with a goal to reach 1.4 million children. If this outcome is met, Rockefeller Foundation will provide an outcome payment of \$200,000 USD split between the investor, UBS Optimus Foundation and the social business, Impact Water.

The whole scope of the SSN, indeed, is to provide low-cost financing for social business. Moreover, here the outcome payor is not a public administration, but rather a philanthropic institution interested in the positive outcome. Notwithstanding these peculiarities, the experiment is interesting because it recognises for the first time the importance of extending the benefit of result-based programmes to social businesses. The key benefits of the SSN, indeed, are declared to be the scalability of the programme since “social business are easier to take to scale than traditional NGOs by their nature”,¹⁶ as the former provide “appropriate capital structure and alignment of incentives”, given that “the upfront funder and social business share the risk and benefit”.¹⁷

In addition, the European Union has recognised the importance of social enterprises and of their role “in tackling societal and environmental challenges and fostering inclusive growth”.¹⁸ By social enterprises the Commission grouped all those entities that have three main characteristics:

- An entrepreneurial dimension, differentiating them from traditional non-profit organisations;
- A social dimension, or an explicit social purpose, differentiating them from traditional corporations;
- A governance dimension or the presence of a declaration of intention that locks in the social goals of the organisation.

These entities have been considered key drivers of equitable and socially inclusive economic growth.¹⁹ In 2011, the European Commission considered social entrepreneurship as one of the 12 levers to relaunch growth and strengthen confidence in the European market.²⁰ Again, in 2012, strengthening social entrepreneurship was one of the four strategies for the economic growth of the European market to “deliver social innovation, inclusiveness and trust”.²¹ In the same year, the European Commission started the Social Business Initiative with the aim of improving financial access to those entities and establishing the European Social Entrepreneurship Fund and the Venture Capital Funds, two labels to allow the marketing and the growth of this type of investments across the EU.

These actions recognise the potential of social enterprises to revolutionise the market and the need to provide those enterprises with adequate private capital. PIBs could be one way to facilitate directing private investments towards corporations producing both a profit and an impact.

Self-interest is arguably the largest motivator of economic activity.

Self-interest is the propeller of human action (Smith & Cannan 1922).²²

If a party does not have a compelling interest in the outcome of an operation, such as non-profit organisations in the implementation of SIBs, it is utopian and naive to expect its best performance. This is where Social Impact Bonds fail. This is, in the view of the author, their Achilles' heel.

The advantage of Profitable Impact Bonds is to make the Social Provider an interested party in the economic outcome of the programme, redistributing better both risks and benefits. The Social Provider becomes, indeed, the main actor of the programme, capable of being either negatively or positively affected by its outcome. It has a stringent economic interest to succeed. For this reason, investors have more guarantees to get their capital back and to profit from it.

Moreover, social businesses are entities that are already results-oriented and need not learn how to deliver these results, a difference from traditional non-profit organisations participating in a SIB.

Obviously risk cannot be completely eliminated from a financial product, but it can be transformed. The risk in PIBs is converted from the risk of mere performance in SIBs into a risk of credit, a measurable economic indicator. Investors are promised a return on investment calculated on the amount of risk undertaken, similar to ordinary equity investments. Finally, public administrations benefit as a whole from the creation of more competitive products, whose resources are allocated more efficiently.

Social enterprises are extremely important actors of the modern market that should be empowered and preferred over ordinary businesses because they try to “use business as a force for good”.²³ This commercial creativity, the possibility to produce wealth for oneself while solving collective social problems, should be encouraged and taken advantage of. Profitable Impact Bonds could be the means to achieve this result, raising capital for innovative enterprises capable of demonstrating their social impact in terms of public budget reduction, giving new impulse to impact investing and widening the market of pay-for-success products.

NOTES

1. The Article has benefitted from the author's participation in the research project “From the theory of social finance to a concrete social bond”, directed by Prof. Riccardo Salomone from the University of Trento, Faculty of Law and financed by Fondazione Caritro.
2. Many bonds, indeed, have been supported by philanthropic institutions or adapted to make the financial product more appealing.

3. Brookings Institution Global Impact Bond Database, January 1, 2018.
4. Payments were triggered also in case of a reduction of 10% in the frequency of reconviction events in each cohort of 1000 prisoners.
5. The breakeven point of the operation would have been reached only if recidivism would have been reduced by 10% rate.
6. To be precise the investor was only one: the financial bank Goldman Sachs.
7. Shielding investors from risk at the expense of another actor, here a third-party guarantor, was not a good solution to the problem, but a mere way to shift the financial exposure.
8. Additionally, the government is adversely affected by the success of the programme, generating a saving if the social result is not fully achieved.
9. As noted already by Burand, *id.* p. 506, "In the existing SIBs, [the] payees are all non-profit entities; but they need not be." Concerns may arise from the involvement of the private sector in services traditionally left to the government. These issues are not addressed in this comment but they can constitute an interesting subject for further discussion. An early formulation of the idea that the private sector could offer a valid alternative for governmental programmes is George Overholser's, *Envisioning a \$1 billion social investment Fund*, speech to American Forward's "Gathering of Leaders", February 12, 2007.
10. Such as the social outcome contract enacted by Municipality of Norrköping and Leksell Social Ventures AB in Sweden, titled "Improved school performance and reduced risk of replacement for children and young people in Norrköping Municipality placed in HVB / SiS".
11. GoLab Projects database available at: <https://golab.bsg.ox.ac.uk/knowledge-bank/project-database/>
12. *Id.*
13. *Id.*
14. See <https://www.yunussb.com/blog/social-success-note>
15. See <https://www.yunussb.com/blog/launched-innovative-new-financing-solution-social-success-note>
16. The first SSN has been launched in April 2018, See: <https://www.yunussb.com/blog/launched-innovative-new-financing-solution-social-success-note>
17. See: <https://www.yunussb.com/blog/launched-innovative-new-financing-solution-social-success-note>
18. "A map of social enterprises and their eco-systems in Europe", (European Commission 2015 at <https://ec.europa.eu/social/BlobServlet?docId=12987&langId=en>).
19. Social enterprises and the social economy going forward, (Expert Group on Social Entrepreneurship-GECES-2016) at https://ec.europa.eu/growth/content/social-enterprises-and-social-economy-going-forward-0_en

20. European Commission, *Single Market Act*, COM (2011) 206.
21. European Commission, *Single Market Act II*, COM (2012) 573.
22. To cite John Smith “It is not from the benevolence of the butcher, the brewer, or the baker that we expect our dinner, but from their regard to their own interest. We address ourselves, not to their humanity but to their self-love, and never talk to them of our own necessities but of their advantages. Nobody but a beggar chooses to depend chiefly upon the benevolence of his fellow citizens”, Smith J., *An Inquiry into the Nature and Causes of the Wealth of Nations*, Oxford, 1976, p. 19.
23. The B Corp movement’s anthem. For more information about B Corps and the difference with benefit corporation, see <https://bcorporation.net/about-b-corps>

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Social Stock Exchanges: Defining the Research Agenda

Karen Wendt

5.1 INTRODUCTION

Since the 2007/2008 financial crisis, many questions have been posed about how financial markets operate and how they are able to benefit society (Shiller 2013; Zingales 2015). The contribution made by financial markets and financial institutions to the prosperity of society has been questioned and the need to develop new investment opportunities able to create blended return and shared value have emerged (Kramer and Porter 2011; Lehner 2016b; Weber and Feltmate 2016; Jacobs and Mazzucato 2016). Around the globe, new investment models able to reflect responsible behavior have been claimed in order to keep financial markets in tune with the development of society.

Investing with the joint purpose of financial return and a desired social or environmental impact is on the rise according to the Global Impact Investing Network GIIN (GIIN 2016b), with market size estimates of up to USD 1 trillion by 2020 according to O'Donohoe et al. (2010). However,

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there is not yet a segment on stock exchanges of impact investments or social enterprises according to Kleissner—the founder of the GIN network—Kleissner (2018). Today impact investing is mostly the domain of wealthy individuals, foundations, and family offices. Non-accredited investors and/or retail investors plus pensions funds are not yet able to meaningfully participate in this new way of investing (Kleissner 2018).

At the same time, the following megatrends can be identified:

- (1) The recent upsurge in entrepreneurship in many countries (Fairlie et al. 2015; OECD 2016; Schawbel 2017),
- (2) shifting attitudes toward the role of business in society (Deloitte 2016), and
- (3) a broad policy push for sustainable development which materialized in the 17 Sustainable Development Goals (SDG) and the Paris Agreement (UN 2015; UNFCCC 2015).

However, a more recent survey by Barclays (2017) found that despite the widespread interest in the topic, very few investors have actually made impact investments. Practitioners in the field often emphasize a chronic lack of investment-ready projects like the “Finanzagentur for Social Entrepreneurship” (FASE) and the Global Impact Investing Network (GIIN) (FASE 2016; GIIN 2016a. This might be an effect caused by limited market access or high transaction costs. Although considerable networking efforts have been made to boost investor demand and establish the necessary infrastructure (see e.g. WEF 2013; Schwartz et al. 2015; Rexhepi 2016), thus far, impact investing has remained the domain of relatively few wealthy individuals, family offices, and foundations, while non-accredited investors and pension funds cannot participate in this newly emerged market (Kleissner 2018). According to Kleissner, investees lack access to products available to more affluent investors, and a lack of transaction platforms (ibid). It has been argued that not enough assets can be found that match the impact definition (ibid). The creation of regulated funding platforms, known as social stock or impact exchanges (SSEs), has been proposed by practitioners as a necessary step toward democratizing and popularizing impact investing, easing the asset search process for investors and capital access for entrepreneurs. While the need for SSE is heavily debated in expert circles along with the challenges they may bring about, the first SSEs have come into existence in the UK, the US, Canada, and Singapore, complemented by some smaller SSEs in Brazil, South Africa, and Kenya.

Social stock or impact exchanges (referred to as SSEs) have been proposed as a key step in achieving the objective of attracting capital and investors (Nicholls and Patton 2015, p. 324). Lehner and Nicholls recommend combining the elements of existing crowd-funding (see Lehner and Nicholls 2014), peer-to-peer lending, philanthropic loan or donation, and other comparable platforms. An interesting question is whether fully fledged and regulated SSEs would essentially operate just like conventional stock exchanges by serving as “market places for listing, trading, settlement and clearance of shares, bonds, and other financial instruments issued by or for social and green businesses, albeit in the context of highly specific listing and reporting requirements” (Shahnaz et al. 2014, p. 157).

Forbes Magazines stated in 2014, “As the spotlight on investors seeking social investments continues to brighten, the rise of social stock exchanges—places where people can buy shares in social businesses with missions that align with theirs—shouldn’t be all that surprising” (Forbes 2014). Although very different in their status and characteristics, the four SSEs up and operating include the Social Stock Exchange (SSX) in the UK, the Social Venture Connexion (SVX) in Canada and Mexico, the Impact Exchange (IX) in Mauritius and Singapore, and the US Mission Markets (MM) in the US. In addition to the big four, there are a few other emerging and operating platforms around the globe with related objectives.

This chapter analyzes to what extent impact investments and social entrepreneurs qualify for stock exchanges. In addition, this chapter examines under what conditions social stock exchanges could emerge as a transparent regulated marketplace for raising capital for social entrepreneurs and impact investors through financial instruments.

This research—through an exploratory analysis—is based on a qualitative approach including a systematic literature review (Tranfield et al. 1993), a research survey (Baker et al. 2011), and interviews with impact investment experts. In particular, the author performed a systematic literature review and examined the content of the different research subfield in impact investing for understanding the investment side and studied social entrepreneurship studies in order to understand the investee side, regarding social entrepreneurs as potential suppliers of eligible assets for impact investors. The author scrutinized the results of the literature review to identify instruments and current practices that can be enclosed in the impact investing and social entrepreneurship landscape. The author also scrutinized existing SSEs and their mission in helping entrepreneurs that self-identify as social or impact or green entrepreneurs. In order to identify

social entrepreneurs and scaling problems, surveys on social entrepreneurs' challenges achieving social and financial success were analyzed. A landscape of instruments and assets available to impact investors emerges. Based on this landscape the question arises on why there is no impact investing section on the stock exchanges or liquid social stock exchange. In order to gain insights, interviews have been conducted with impact investing experts from the EMPEA impact investing council to find out about the challenges and opportunities of introducing such a segment at the stock exchange.

The chapter contributes to clarify the entire spectrum of impact investing instruments or lack thereof. I then try to give a prognosis drawing from the knowledge obtained on under what conditions a Social Stock Exchange can contribute to facilitating investee-investor match, understanding new concepts, instruments, and dynamics, and serving as guide for scholars and practitioners.

This chapter is organized as follows. Section 5.2 highlights the methodological approach, while Sect. 5.3 describes the main results of the literature review. Section 5.4 shows the results of the expert interviews on impact investing. Finally, Sect. 5.5 provides insights and implications that may be useful for the development of the stock market, and Sect. 5.6 focuses on limitations and main conclusions.

5.2 RESEARCH DESIGN AND METHODOLOGICAL APPROACH

In this work a two-pronged methodology was undertaken: (1) a systematic literature review approach (Tranfield et al. 2003) in order to select the most relevant works published to date in the field of impact investing (Baker et al. 2011) and social entrepreneurship (Christopoulos and Vogl 2015; Christopoulos 2019). Then an analysis of existing stock exchanges for purpose and mission was undertaken, and two interviews with impact investing experts were conducted. The researchers aims to conduct a preliminary analysis of the expected services a social stock exchange or impact section on an existing stock exchange could provide. In the next sections, we discuss our search method.

A systematic literature review is an objective, replicable, and comprehensive method to assess relevant studies on a specific topic (Tranfield et al. 2003; Thorpe et al. 2005; Weed 2005). A three-stage procedure was

chosen as suggested by Tranfield et al. 2003: planning, execution, and reporting.

The review entailed extensive searches of relevant databases. To avoid bias and errors in the process of literature identification, a research protocol has been developed (Tranfield et al. 2003). Conference proceedings, working papers, and non-peer-reviewed journal articles have been excluded from our sample of analysis. All the articles obtained were analyzed in order to verify the relevance with the object by the analysis of abstracts. With regard to practitioners' literature, the GIIN database (Höchstädter and Scheck 2015) was scrutinized and missing reports were added. Research surveys are considered as a way of bridging the gap between financial theory and practice (Weaver 1993), and the continuing dialogue between academics and practitioners could be helpful in designing research agendas by moving from the consideration that finance practice can contribute to finance theory and vice versa (Weaver 1993; Kent Baker and Mukherjee 2007). The author relied on existing survey investigating social entrepreneurship. A primary research was conducted on this issue. In designing the semi-structured interview, the author considered that a challenge in conducting interviews with institutional investors is negotiating access. Considering the fact that investors have very busy schedules, the interview was designed to run between 30 minutes and 1 hour, striking a balance between the topics to be covered and the time investors spend to answer.

5.3 THE INVESTOR-INVESTEE LANDSCAPE: A THEORETICAL ANALYSIS

5.3.1 *Terminological Clarifications and Conceptual Assessment*

The World Economic Forum in its 2013 Report stated: "Despite the buzz, there is limited consensus among mainstream investors and specialized niche players on what impact investing is, what asset classes are most relevant, how the ecosystem is structured and what constraints the sector faces."

Academic literature shows significant variations in the conceptualization of impact investing (Care and Wendt 2018) and authors highlight that impact investing goes by many names (Hebb 2013; Höchstädter and Scheck 2015), including double and triple bottom line, mission-related

investing, program-related investment, blended-value, and economically targeted investing.

Höchstädter and Scheck (2015) investigates a large number of academic and practitioners' works by highlighting several inconsistencies in definitional and terminological aspects. By analyzing only peer-reviewed work, Rizzello et al. (2016) depict the academic landscape of impact investing by providing a useful map of contributions, areas of inquiries, and future research directions. Rizzello et al. (2016) and Höchstädter and Scheck (2015)—are two works that shed light on impact investing research area, but they do not provide an assessment of financial instruments and investment opportunities that are actually available in the impact investment market.

There is widespread agreement that impact investing is mobilizing capital for “investments beyond financial returns. The intention of impact investments is to create positive ecosocial returns beyond financial return” (Brandenburg and Jackson 2012; Freireich and Fulton 2009). Two key components of this definition are, first, the intent of the investor to achieve such impacts and, second, the investment has a double bottom line, considering aspects beyond financial returns.

Bugg-Levine and Emerson (2011, p. 10) highlight that the idea behind impact investing is that investors can pursue financial returns while also intentionally addressing social and environmental challenges. Impact investing definitions are based on two common principles: (i) the blended-value principle and (ii) the principle of sustainable financial return (Weber 2016). In this sense, Weber (2016) clarifies that these two principles distinguish impact investment from conventional investment because the latter is not striving for positive social impact but only for financial return (Weber 2016, p. 86). However, the precise conceptual boundaries and terminology are still under discussion (Glänzel and Scheuerle 2016), and other terms, such as “social investment” (Dowling 2017), are used to describe widely similar approaches. Some authors use the term “social impact investing” (Martin 2013; Joy 2013; Hangl 2014; Glänzel and Scheuerle 2016; Schrötgens and Boenigk 2017; Chiappini 2017a). In this sense, Salamon (2014, p. 14) highlights the term impact investing.

Impact investing has initially been a term coined by the Rockefeller Foundation. Social impact creation by investors was necessary “because governments, charities, philanthropists alone were no longer capable of dealing with the twenty-first century’s social and environmental challenges. Budget restrictions precluded the social welfare state to provide

social services. Focussing on the act of charitable giving rather than on achieving social outcomes hindered many charitable organizations from realizing their full potential concerning innovations, effectiveness and scale” (Lehner and Brandstetter 2015). The World Economic Forum recently acknowledged the role the investment and finance sector can play in creating solutions to social problems and stated: “Given the nature of how resources are distributed in the world, private investors may have a special role and responsibility in addressing social challenges” (World Economic Forum 2013). Yet, apart from a small number of specialized forms of impact investing like social impact bonds, green bonds, and mission-related philanthropic investments, little is known about the complex interplay between entrepreneurs or organizations, intermediaries, investor regulations, and the successful use of instruments in the field. Glänzel and Scheuerle (2016) use the term social impact investing to clearly distinguish from finance-first approaches of impact investing that have a stronger commercial orientation. Hummels (2014a) encloses impact investing in the wider category of responsible investing, of which it is only a part, while Hebb (2013), Pretorius and Giamporcaro (2012), Viviers and Firer (2013), and Viviers et al. (2011) consider impact investing as “responsible investing.” Shulman and George (2012) consider impact investing as a form of socially responsible investing (SRI), while Geobey and Weber (2013) clarify that SRI screens out investments for social, environmental, or governance reasons while impact investing is based on the assumption that investments can create financial returns and address social and environmental challenges simultaneously. Impact investing is also included by many authors in the social finance landscape (Suetin 2011; Geobey and Weber 2013; Geobey et al. 2012; Mendell and Barbosa 2013; Weber 2013, 2016).

Impact investing has four distinct categories in the view of NPC and Cambridge Associates. It encompasses responsible investment or socially responsible investments (SRI), sustainable investment, thematic investment, and impact-first investments (Cambridge Associates 2019). Figure 5.1 reflects this journey.

The field of impact investing is populated by different classes of investors, as shown in Fig. 5.2. Impact first investors are those prepared to forgo a marginal unit of additional profit for a marginal unit of impact (often foundations, endowments) and those who—according to their mandate and fiduciary duties—will focus on financial profit first. Impact-first and financial-first investors will compromise neither on profit nor on

➤ Stages of Impact Investing:



Fig. 5.1 The impact investment journey. (Source: Authors’ elaboration adjusted from Brandstetter and Lehner (2015))

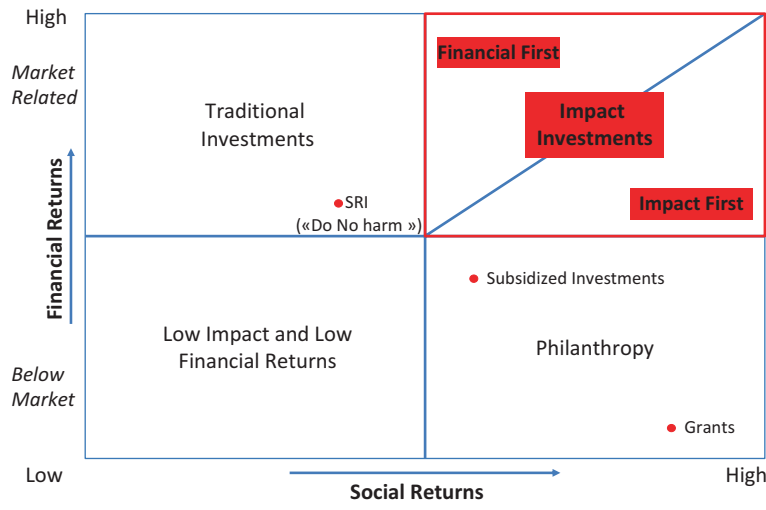


Fig. 5.2 Impact investing. (Source: Wendt 2018)

social returns. They wish to combine high social returns with high financial returns. Integral investors are also part of the impact and financial-first segment (GIIN 2016b).

Impact investments may fit in a 2×2 matrix. Impact-first and financial-first are in the upper left and lower right quadrants, implying a trade-off. In the lower left quadrant, we have deals with suboptimal financial and impact returns—an investor wouldn’t make these types of investments. In the upper right quadrant, we have those investments that achieve risk-adjusted rates of financial returns and strong social and environmental impact. These are the impact assets investors will like to go for.

GIIN states that “A theory of change (also referred to as the Theory of Value Creation or Logic Model) is an expression of the sequence of cause-and-effect, actions or occurrences by which organizational and financial resources are hypothesized to be converted into the desired social and environmental results (GIIN 2016c). A Theory of Change provides a conceptual road map for how an organization expects to achieve its intended impact and is often displayed in a diagram (GINN 2016c).” A Theory of Change can often be expressed as an if-then statement, specifying what the organization does and its expected results (GIIN 2016c). It has recently been argued that such a Theory of Change provides a clear framework for measuring, tracking, and improving impact. The rationale of the Theory of Change is to shift the focus from design to successful implementation and circumscription of the desired social and environmental outcome. The Theory of Change allows to build the transformation journey from intent to impact.

5.3.2 *The Impact Investing Market in Search of Enabling and Supporting Structures*

There is little research on impact investing instruments. There is more to find on responsible and sustainable investment (see meta-analysis provided by Clark et al. 2014). The term impact investment provides a broad rhetorical umbrella under which a wide range of investors could huddle (Bugg-Levine and Emerson 2011, p.12). Hummels (2014a) defines “microfinance as an exemplary case of impact investing.” Grieco (2015) lists some examples of impact investments, including social impact bonds, developmental impact bond, cash on delivery aid, microfinance, and green bonds. Microfinance (Hummels 2014b; Hummels and Milone 2014); This logic has been adopted by many authors (Koshovets and Frolov 2015; Fanconi 2017). As the market evolves quickly, other forms of capital injections have been added to the impact investing landscape, which include private equity, venture capital, social venture capital, and developmental venture capital (Lane 2014b; EMPEA 2015; Silby and Nicholas 2015; Martin 2016; Bhat and Ahmad 2017). Impact investors mainly use the following vehicles for activating impact investments. They set up private equity or venture capital fund, use direct investment strategies, and to a lesser extent, they have been experimenting with social bonds and green bonds. However, the analysis from J.P. Morgan Social Finance and the

GIIN network shows that private equity is by far the most commonly used tool for impact investment.

The selection of asset classes shows – when putting it on an investment scale running from microfinance, seed, venture capital, private equity instruments are chosen that do not trade on a stock exchange. Secondary markets exist for venture capital and private equity; however, the reasons for not making it to the secondary market are one of the areas the author was researching in expert interviews.

As documented by Barman (2015), the early discussions about establishing a market for impact investing were very much focused on mobilizing investor demand. The goal was to link together distinct areas of investment such as clean technology, microfinance, and community development, under the general umbrella of impact investing, and introduce basic terminology and infrastructure that could steer the conversation and attract investor interest (see e.g. Monitor Institute 2009). The previous history of practices, such as social entrepreneurship, venture philanthropy, and SRI, had ensured that there were enough individuals and organizations predisposed to intuitively understand and internalize the basic idea behind impact investing. In short, a suitable set of cognitive instruments that determine how information about finance and investing is processed (Preda 2005) was in place and the initial efforts were quickly amplified into an “impact investing movement” (Bugg-Levine 2016).

In addition to investment vehicles, the author has researched the investee side of impact investing. In particular, microfinance, social entrepreneurship, green and clean tech, as well as health-tech are targets of impact investors. Social entrepreneurship is considered to provide impact in its purest terms. The term “social entrepreneur” has more recently been described as those who establish businesses primarily to meet a social aim rather than for personal pecuniary benefit (Christopoulos 2019). Research that does exist primarily focuses on the characteristics of the social entrepreneur and their motivation to establish a social enterprise (e.g. Germak and Robinson 2015; Smith et al. 2014; Lehner and Germak 2014; Korsgaard 2011; Christopoulos and Vogl 2015) with little understanding of the contemporary practice, opportunities, and challenges encountered by social entrepreneurs. Social entrepreneurs have been described as value-orientated individuals who create social change through the start-up of an enterprise (Certo and Miller 2008), as innovators who achieve social change through enterprise (Zahra et al. 2008), and as individuals who are motivated by the opportunity to adopt an innovative approach to pull

together resources and networks to satisfy needs which the state cannot or fails to provide (Thompson et al. 2000). While there is no definitional consensus, the focus on social value is consistent across various definitions (Peredo and McLean 2006; Shaw and Carter 2007), as well as an understanding that the characteristics of social entrepreneurs, the opportunities they pursue, and the outcomes of their businesses diverge somewhat from typical business approaches (Mair and Noboa 2006). Rather than solely relying on charitable donations and/or grant funding, social enterprises may seek to use trading activities to achieve social goals and financial sustainability (Sacchetti and Campbell 2014). Certo and Miller (2008) suggest that to achieve growth and/or to ensure sustainability social entrepreneurs must develop their business and manage resources with a commercial as well as a social mission. Robinson (2006) argues that while the decision of commercial entrepreneurs to pursue entrepreneurial activities depends largely on the extent of economic barriers, social entrepreneurs face challenges related to both social and institutional structures. To counteract these challenges, the use of networks has been found to be important for social entrepreneurs and enterprises in acquiring resources, reaching customers, identifying opportunities, and generating support from the local community (Sacchetti and Campbell 2014; Hynes 2009; Shaw and Carter 2007). A survey conducted by Christopoulos (2019) suggests that in terms of challenges associated with the achievement of success of social enterprises, the narrative responses fell into several themes. First, lack of funds available was mentioned by more than 50% of respondents directly. A further half referred to a lack of staff. Cumulatively, these responses suggested a lack of resources as a challenge for the social enterprise.

The creation of SSEs, an “expensive and long-term market building venture” (OECD 2014, p. 21) represents an important aspect of this more general process of discursive and institutional development.

J.P. Morgan Social Finance and GIIN further examine and explore impact investment dynamics in several publications, such as in “Perspectives on Progress: the Impact Investor Survey” (JP Morgan Chase/GIIN 2013).

The report reveals the experiences, expectations, and perceptions of 99 impact investors in 2012 and their plans for 2013. Investors surveyed for the report include fund managers, development finance institutions, foundations, diversified financial institutions, and other investors with at least USD 10 million committed to impact investment. Respondents also reported the instruments that they use to make impact investments.

Private equity and private debt instruments are the most used instruments—83% use private equity and 66% use private debt. Forty-four percent of the respondents use equity-like debt structures, and 18% of respondents reported using guarantees.

Private equity is an investment approach within impact investing. It employs the traditional private equity model that intends to generate an attractive financial return for fund managers and their investors. The private equity process is one in which investors structure an investment vehicle (private equity fund) to raise capital from major institutional and individual investors (such as pension funds, endowments, and high net worth individuals), committing the commingled capital into private businesses to expand and improve their operations, and ultimately, and usually after several years, to sell their stake in these businesses or to take them public on a stock exchange in many cases as an Independent Public Offering (IPO).

An important attribute of private equity is that it can enable access to vast pools of financing through global capital markets. By comparison, funding sources such as government aid and philanthropic finance are often limited (and unpredictable) in low-income countries and represent only a fraction of what is potentially available from the capital markets. Funding from Development Finance Institutions (DFI) may be significant in scale and can play a catalytic role, but is usually only available on the condition that additional private equity and therefore raise much more money than with crowd-funding for instance. In addition, it will impose much more restrictions on impact investors and normally is bound to a proven track record, which may not exist in the infancy stage in which many impact investment businesses find themselves.

For example, equity investment can be a more favorable capital base than debt for the many businesses with potential impact that are testing new business models to deliver products or services to consumers who have inconsistent and low incomes. “Some new business models require significant customer education, which can be capital intensive and can take some time to translate into revenues, which can make it challenging to service a debt investment,” explained Yasemin Saltuk of J.P. Morgan Social Finance. In certain situations, particularly in frontier markets or early-stage businesses, portfolio companies can face volatile cash flows, unpredictable supply chains, poor infrastructure, or inefficient regulation. This can translate into volatile cash flows for the businesses, making debt payments a burden, especially at high interest rates (EMPEA 2015). As

private equity and venture capital are fit for providing its investors with exit strategies like Independent Public Offering and Independent Coin Offerings, one has to wonder, why impact investors have not used secondary markets so far to make impact investing both accessible to the normal investor and scaling exponentially. One could argue fresh money for the impact investees scales the impact company. The real effect of impact investing may therefore not lie in investing in impact but in scaling the impact. Thus, the author is investigating why impact investment are not brought to secondary markets and to what extent this hampers the development of impact investing as the impact can be multiplied through scaling and fast growth. Impact has two components: creating the impact in the business model and scaling the impact by scaling business. In particular, impact creators and social entrepreneurs have pointed out that they often lack the resources to scale their business.

Attracting institutional capital remains a significant constraint to the development of impact investing. Although increasing in size and prominence in the past several years, private equity-style impact investing remains a “niche” investment strategy according to Bridges Ventures (2016) that mainstream institutional investors do not typically include in their portfolios. Attracting institutional investors will require evidence that it is possible to achieve both impact and financial returns, and education of investors about appropriate opportunities in which to invest. For instance, “FIR Capital” has raised awareness locally in Brazil by convening private wealth managers, the Brazilian private equity association, universities, pension funds and journalists, with the support of the Brazilian private equity association ABVCAP (EMPEA).

5.3.3 *Overview of the Case for SSEs Made by Market Participants*

Before looking into the prognosis of SSEs, it may be useful to set the stage by reviewing the key arguments that have been put forward in support of specialized investor-investee matching platforms. As SSEs are rare and new, very little research is available to base on. In the following, the author has been compiling what could be found on the topic from practitioners mainly:

1. SSEs improve market access by connecting impact companies with investors who are looking to combine financial return with desired

social or environmental outcomes. Given that businesses require finance to grow and investors need information about investable projects, SSEs directly address a legitimate need from both points of view.

2. “SSEs help democratize and popularize impact investing by making it accessible to a wider set of investors. This would result in more dispersed ownership, leading to higher liquidity, which in turn would attract additional investors” (Hartzell 2007, p. 10). As emphasized by Kleissner (forthcoming), lack of access to products and transaction platforms means that non-accredited investors have thus far been cut off from impact investing. SSE would allow private and retail investors to invest directly—provided the regulation of the SSE is able to create the required trust in the market. Institutional Investors have legal restrictions due to their fiduciary duties obligations. This group of investors has little access to impact investing as they have to invest bigger lots than impact investing currently provides. They are de-facto excluded from impact investing due to the current small lot size of impact investments. SSEs would help solve this problem as they create a liquid market and also allow the bundling of assets, creation of derivatives, and could boost market capitalization—by reducing transaction and research costs. Indeed, according to Tomás Carruthers, the CEO of SSX, making impact investing accessible to not just specialist and professional investors but also to the wider public constitutes the core reason why the SSX was brought into being (All Street Research 2017).
3. By aggregating data on impact companies and organizing analyst coverage, SSEs reduce information and transaction costs while being essential for the accurate valuation of the listed securities (Campanale 2010) and make capital markets work for society. Without an SSE, transaction costs are especially high for investors. For impact companies, strict listing and reporting requirements may introduce additional costs, but in return, they can benefit from listing, feedback on what requirements to be met to become listed, better accessibility and availability, better marketing, and access to a wider investor base.
4. Being an SSE-listed company serves as a seal of quality, providing investors with confidence that proper due diligence has been undertaken (Newsweek 2009). In other words, investors would

look at SSEs not merely as positive alternatives to conventional exchanges (Hartzell 2007), but as tools for identifying projects with the highest social or environmental impact.

5. Without a liquid market, investors may be excessively cautious, reducing the amount of capital available to impact companies (Shahnaz et al. 2014, p. 155). SSEs offer an exit route for early-stage investors and make impact assets more attractive to investors in general. A liquid market should also allow a sustainability premium for IPOs that might be more visible than on a traditional market. In line with portfolio theory only in an IPO situation or a merger the goodwill can be monetized. So, it would help the current venture capitalists and private equity investors to exit existing assets by placing them on a liquid market, which creates room for new investments for this investment group. At the same token, the assets currently bound in private equity and VC could populate the SSE and therefore counter the argument of “missing impact assets” (UN Development Programme 2017).
6. SSEs introduce market discipline and encourage competition between impact companies. The securities issued by the best performing firms would carry a premium, and conversely, inefficient companies would be penalized by the market (Chhichhia 2014). By creating a more transparent impact measurement framework and mandating regular disclosure of relevant information, SSEs would thus allow for better informed investment decisions (Shahnaz et al. 2014).
7. Just like conventional stock exchanges serve an important regulatory function, SSEs would help establish the currently underdeveloped regulatory framework for social finance (Dadush 2015).
8. By making impact investing more accessible and popular, SSEs would increase investment for sustainable development, both in developed and in developing countries. If tied to the UN SDGs the carrying vision and impact could be huge. It has been suggested that SSEs may emerge as an important channel for directing future flows of international development finance (Campanale 2010; Chhichhia 2014). Indeed, if impact investing reached just half of the optimistic USD 1 trillion market size predicted by 2020, it would still surpass current Official Development Assistance (ODA) by a factor of four (Dadush 2015).

9. SSEs would help protect the mission of the listed companies by connecting them with investors whose values and objectives are aligned with their own. According to Shahnaz et al. (2014), many impact companies are deterred from traditional exchanges due to fears of conceding control to investors who may be indifferent to the social or environmental purpose of their business. SSEs would help avoid this problem by connecting companies with investors who understand impact investing and are less likely to demand excessive focus on financial profit.
10. To bring any new institution into being requires considerable organized effort, both discursive and material, that must be sustained for extended periods of time. As explained by Preda (2005 149), the “discourses about investing establish how investment activities are conceptualized and represented” while material arrangements “determine the settings of investment activities, the quality of financial information, and shape the interaction modes of investors” (Preda 2005 149) and by extension, of other actors involved in the investment process. The social construction of impact investing and SSEs represents a special case of what this might entail in practice.
11. Finally, it can be argued that SSEs help the sector to transition into a more regulated capital market, regulated by the SSE board which can help avoid mission drift, focus attention on UN SDGs, and help their implementation while eliminating market inefficiencies. Stock exchanges enable a double-blind action process, create trust in the institution, and set a clear universal framework of rules.

5.3.4 *Blueprinting Social Stock Exchanges*

As documented by Barman (2015), the early discussions about establishing a market for impact investing were very much focused on mobilizing investor demand. The goal was to link together distinct areas of investment such as clean technology, microfinance, and community development, under the general umbrella of impact investing, and introduce basic terminology and infrastructure that could steer the conversation and attract investor interest (see e.g. Monitor Institute 2009). The previous history of practices, such as social entrepreneurship, venture philanthropy, and socially responsible investing (SRI), had ensured that there were

enough individuals and organizations predisposed to intuitively understand and internalize the basic idea behind impact investing. In short, a suitable set of cognitive instruments that determine how information about finance and investing is processed (Preda 2005) was in place and the initial efforts were quickly amplified into an “impact investing movement” (Bugg-Levine 2016). This impact investing movement can now be merged with the UN SDG vision for 2030. The creation of SSEs constitutes an “expensive and long-term market building venture” (OECD 2014, p. 21) and also represents an important aspect of this more general process, UN SDG implementation and institutional development.

From the very beginning, a defining feature of impact investing has been what Dadush (2015, p. 173) refers to as “blueprinting”—the use of templates from conventional finance to create social and sustainable finance. This becomes evident when one juxtaposes some key terminology from both fields: regular investing becomes impact investing; instead of conventional bonds there are social impact bonds; instead of traditional banks there are ethical and sustainable banks; instead of credit risk ratings there are social impact ratings; return on investment (ROI) becomes social return on investment (SROI); and conventional stock exchanges are re-conceptualized as SSEs. According to Dadush, this systematic imitation has been strategically important to attract a wide range of individuals and institutions by communicating the message that, at the end of the day, impact investing is nothing other than conscious investing and can provide help to mainstream impact investing using special SSE exchanges. SSEs are not something altogether alien or out of the ordinary. These attempts to legitimize and popularize impact investing bear a similarity with how investing as such, during the first globalization wave, was conceptualized and promoted as a natural human activity that should be made accessible to everyone (see Preda 2005). Obviously, the current context is very different and the comparison should not be taken literally, but it does help understand the underlying dynamics.

More generally, the emergence and subsequent development of impact investing has been characterized by a deep interest in the quantification and measurability of outcomes to allow for performance-based accountability, while harnessing the “inherent virtues of the market” to organize and guide the financing of impact-driven entrepreneurship. At the same time, however, there is no universal agreement on whether impact investing, and social finance in general, can be seamlessly integrated with dominant structures and ideology, or whether they might develop into a more

fundamental critique of traditional financial and economic ideas (see Lehner 2016a). A full consideration of this issue is beyond the scope of this chapter. Suffice it to say that the hybrid character of social finance allows this phenomenon to be conceptualized as a positive redefinition of conventional finance, but also as a potentially problematic application of a particular politico- economic way of thinking in the context of sustainable development and the non-profit economy, making it an extension of some key ideological and economic trends of the past few decades, in particular, market-fundamentalism and financialization.

With regard to the structural genesis of social finance, including the opportunities and limitations entailed in SSEs, Glänzel et al. (2013) propose four possible scenarios. First, the social investment scenario, or the “social innovation boom,” characterized by large volumes of private investment and the emergence of a broad spectrum of financial instruments and actors. This would eventually include fully developed SSEs, successfully operating in the context of sophisticated regulatory and institutional standards. Second, the garage lab scenario in which the supply of finance would exceed the demand, leading to a scattered ecosystem with few scalable projects and the continued importance of more traditional forms of funding. Third, the commercialization scenario where demand for finance would be relatively high, but it would be met with a restricted supply focused on profitable large-scale projects. In such a scenario, the role of SSEs may be commercially significant, although the profit motive would dominate over social and environmental objectives, leaving many high-impact but commercially unattractive initiatives underfunded. Fourth, the wasteland scenario where, apart from occasional deals and success stories, the field as a whole would remain underdeveloped and marginal, while the majority of social purpose organizations would continue to be dependent on public support and traditional philanthropy.

Figure 5.3 provides an overview of the landscape of impact entrepreneurship and finance structured around income models and finance instruments most applicable in different sectors of economic activity. Detailed descriptions of the four quadrants can be found in Glänzel et al. (2013, p. 61–62). Here, it is important to note that the concept of SSEs is not universally applicable across all four quadrants. For example, organizations leaning toward quadrant 1 and especially quadrant 2 have limited ability to cover their costs from earned income alone, even though their social or environmental impact may be considerable. In other words, many of these organizations rarely generate positive financial returns, making them

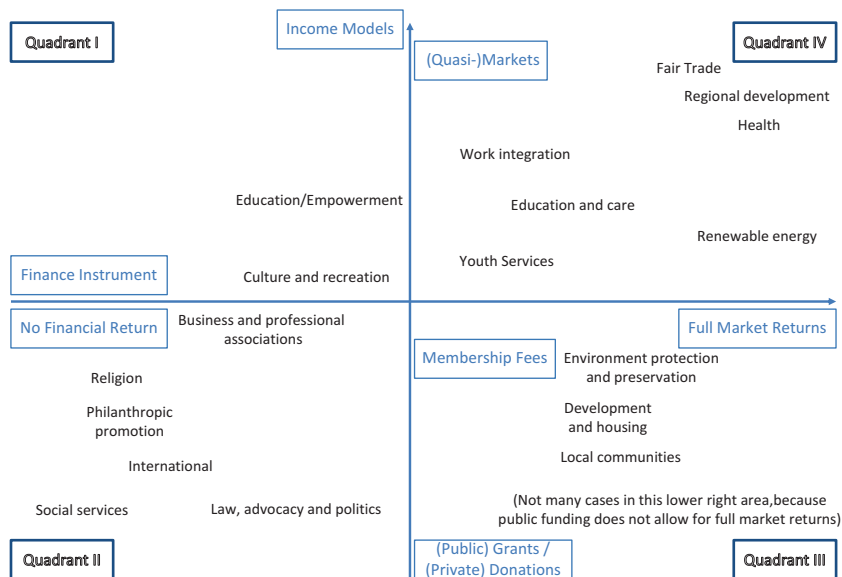


Fig. 5.3 The landscape of social entrepreneurship and finance. (Adjusted from Glänzel et al. 2014)

dependent on favorable tax laws, private donations, or public subsidies, and thus relatively less attractive to impact investors, most of whom are, at minimum, looking to recover at least their initial investment (GIIN 2016a).

At the moment, stock exchanges for social entrepreneurs are missing due to the low deal size. Placing social entrepreneurs in the framework above, the most likely candidates for SSEs can be found in quadrants III and especially IV. Although services like environmental conservation, education, housing, or energy are often supported by the state, and are not necessarily better organized on a commercial basis, many activities in quadrants III and IV involve opportunities for combining positive financial returns with an environmental or social mission. However, as mentioned above, such opportunities do not exist across the whole spectrum covered by Fig. 5.3. For this reason, Glänzel et al. (2014, p. 63) call for a balanced mix of funding mechanisms, and note that although SSEs may prove useful for financing certain types of initiatives, they also have their limits, especially when it comes to activities where success is difficult to define and measure. These caveats are highly relevant in the context of

analyzing the discourse and activities driving the structural development of impact investing, especially as they relate to the broader economic and political issues mentioned above.

Hartzell (2007, p. 4) asserted in 2007 that “the establishment of an ethical exchange is an idea whose time has come.” This conclusion was subsequently echoed by Nicholls and Pharoah (2008, p. 28).

The concept of SSEs has grown out of a gradual confluence of four distinct phenomena. First, there are the ideas and practices of corporate social responsibility (CSR) (Lee 2008; Schmitz and Schrader 2013) and social entrepreneurship (Leadbeater 1997; Poon 2011), both with histories of at least several decades. Second, there are approaches to investment that combine financial objectives with social return: SRI (Sparkes and Cowton 2004; Wallis and Klein 2015), shared values—how to reinvent capitalism and unleash a wave of innovation and growth (Porter and Kramer 2011) and more recently impact investing (Bugg-Levine and Emerson 2011; WEF 2013; Daggers and Nicholls 2016). Third, there is the reconceptualization of philanthropy over the past couple of decades characterized by the emergence of “venture philanthropy” (Letts et al. 1997; Alter et al. 2001; Grossman et al. 2013; Bishop and Green 2015; John and Emerson 2015). Finally, there is the widespread concern for sustainable development (Lélé 1991; Redcliff 2005; UN 2015).

Looking into the history there appears to be a clear need for a transparent, clearly regulated market for impact investing serving the UN SDG goals. This can be derived from what the sector has achieved thus far without the help of market infrastructure assistance. Up to now we see one functioning role model for investors SSEs—the SSX. So what is SSX doing differently from other players? The idea of issuing shares for a social or environmental mission comes from the non-profit sector and still is alive—albeit in a grow linearly mode.

Companies with a social or environmental mission have been issuing shares for several decades. In 1984, the UK-based fair trade company Traidcraft made the first ever public issuance by an ethical business, raising £0.3 million. Of course, none of these businesses offered their shares through a dedicated SSE as no such platform existed. Unless the company was listed on a regular stock exchange, there was also no secondary trading, apart from a few exceptions in which small and relatively inactive “matched bargain” markets were operated either by the brokerage firm Brewin Dolphin or Triodos Bank. In the early to mid-2000s, in the midst of an increasing number of ethical issuances, Triodos considered opening

a single public market, called Ethex, but the idea failed to materialize. Instead, shares of ethical companies kept trading through a matching service provided by Brewin Dolphin (Hartzell 2007, p. 12). Ethex was eventually opened in 2012 and continues to operate as a non-profit online service with secondary trading for some securities, although the platform is not a regulated stock exchange (Ethex 2017). This case provides a useful model for understanding that social stock exchanges are feasible with the will of philanthropy for a limited segment offering limited services and certainly not going as far as being regulated like a traditional stock exchange. A parallel development in the second half of the 1990s was the discussion on the possibility of creating an exchange-type funding platform for non-profit organizations or an index of social enterprises to flag investment opportunities for socially responsible investors (Nicholls and Pharoah 2008). According to Emerson and Wachowicz (2000), these ideas were first raised in a publication titled “Grants, Debt and Equity: The Non-profit Capital Market and Its Malcontents” (Emerson 1996). By the early 2000s, combined with the popularization of social entrepreneurship and venture philanthropy, on the one hand, and the growing discourse on the importance of measurable outcomes and accountability in the non-profit sector, on the other, the idea of SSEs as a way to connect mission-oriented organizations with potential investors began gaining some traction. A landmark event took place in 2003 when São Paulo’s stock exchange BOVESPA launched the world’s first “social stock exchange”—a project proposed by Celso Grecco and his CSR-focused marketing firm Attitude Social Marketing (Newsweek 2008).

The idea behind this platform was to use BOVESPA’s infrastructure and expertise to connect ethical investors with carefully screened social purpose projects in Brazil that benefitted children and youth in areas of health, literacy, citizenship, education, training, culture, psychosocial care, and environment (Zandee 2004). Importantly, the system involved no transfer of ownership or secondary trading—the return on investment was purely social, making the exchange more of a crowd-donation platform, albeit with specific listing and reporting requirements and as of early 2017, the platform continues to operate as the Socio-Environmental Investment Exchange (BVSA). From BOVESPA’s point of view, the project served an important marketing function as the exchange was looking to improve its public image, explain the operations of a stock exchange to the general public, and thereby attract more people to invest and trade in conventional securities (Zandee 2004).

The BOVESPA SSE, with a stamp of approval from UNESCO and the UN Global Compact, attracted interest not just from other countries in the region but from around the world. In June 2006, a similar project was launched in South Africa—the South African Social Investment Exchange (SASIX) (see CSR 2006; BSA 2006; Chhichhia 2014 for an overview). However, despite the initial plan of developing SASIX into the world's first fully independent SSE (Fury 2010), as of 2017, the platform no longer exists.

Also in the mid-2000s, inspired by these early experiments, a model for a globally standardized social investment market was being developed by a think tank called GEXSI—the Global Exchange for Social Investment. As discussed by Hartigan (2006), this attempt was met with the difficulty of establishing universally accepted performance criteria for listed entities as well as an appropriate accreditation process to generate deal flow. As part of the GEXSI initiative, SSEs were being considered in a number of countries in Europe, Africa, Latin America, and Asia (GEXSI 2017). The idea was to create a global network of platforms focused on funding early-stage projects to help them scale, and thereby make them more attractive to other forms of financing. However, the demand was not sufficient for any of these initiatives to become fully realized (Fury 2010). There might be several reasons why GEXSI did not scale as anticipated. First, it was a charity platform and therefore attracted a different kind of “investor.” GEXSI grew out of a panel discussion on social entrepreneurship at the WEF in Davos, Switzerland in 2002. Investors who were ready and willing to support worthy charities expressed frustration at the difficulty of evaluating charitable projects. While these investors were not looking for a financial return, they did want to maximize the social benefits generated by their investment. Toward this end, they wanted to analyze charitable organizations as rigorously as they assessed for-profit companies. Therefore, GEXSI can be seen more as a complementary stock exchange for not-for-profit organizations, helping to focus on making charity organizations investment-ready as well as help to organize and work on the investment-readiness of not-for-profit special interest projects like biodiversity conservation but is currently not able to attract capital from traditional investors as charities first need to get investment-ready in order to qualify for listing.

Meanwhile in the UK, the topic of SSEs was being actively discussed in reports issued by the Social Investment Taskforce (see Chhichhia 2014) and at events such as the 2006 Skoll Forum (Hartzell 2007, p. 12; cf.

Wheeler 2006). These discussions were followed by the publication of a report by the New Economics Foundation titled “Developing a Social Equity Capital Market” which, among other things, discussed the main fundraising obstacles of social enterprises and offered recommendations for developing a more effective market for both primary funding and secondary trading—“essentially a social stock exchange that’s fit for the needs of the sector” (NEF 2006, p. 6). The report emphasized the need, possibly in partnership with existing exchanges and intermediaries, to establish a common information point, transparent reporting standards, an accreditation process, a network of supportive roles such as social auditors and advisers, and rules and regulations to minimize the threats of speculation and commercialization.

Whereas both the BOVESPA SSE and SASIX were oriented primarily toward mobilizing funds for non-profit organizations, the discussion in the UK was much more focused on companies that combined for-profit activities with a social or environmental mission. This is clearly evident in the landmark publication by Hartzell (2007), ownership structure (cf. Aggrawal and Dahiya 2006), daily running of SSEs, the complexities of price determination, and the need to develop methods for evaluating the social and environmental performance of the listed firms (cf. Barman (2015) and the subsequent development of impact measurement tools such as IRIS and GIIRS) are the key success factors of such an SSE market place. The London SSX therefore details its mission on its website as follows: “Our mission is to create an efficient, universally accessible buyers’ and sellers’ public market where investors and businesses of all sizes can aim to achieve greater impact either through capital allocation or capital raising” (LSE 2016).

Through a unique partnership with regulated investment exchange NEX, the Social Stock Exchange is the only venue of its kind in the world to give impact businesses of all sizes the opportunity to access public financial markets, thus maximizing their capital raising and growth potential. So, the intention is clear: it is a double-blind auction system, designed for businesses and investors seeking to create impact through their core business activity, or through investment, and it is for profit. It is regulated, so the regulators are responsible when listing the asset, that the criteria of the Social Stock Exchange with regard to financials and impact have been met.

In February 2009, a conference initiated by GreaterGood—a South African trust that in 2006 had launched SASIX—met in Bellagio, Italy. The goal was to discuss the possibility of creating a global coordinating

body for SSEs, a Global Social Investment Exchange (GSIX), similar in its structure and functions to the World Federation of Exchanges (Alliance 2009). Although no such organization emerged, with support from the Rockefeller Foundation and various family offices, the idea of SSEs continued to be explored in a number of countries (Campanale 2010).

In addition to SSX, there are a number of additional smaller initiatives to be mentioned, which are thus far too small to be evaluated in a meaningful manner. This includes the Kenya Social Investment Exchange (KSIX) (see Alliance 2010; Butunyi 2011) and the Portuguese Social Stock Exchange (BVS) (see Costa and Carvalho 2012; Bernardino and Santos 2015; Bernardino et al. 2015; Galina et al. 2013).

There have also been reports of planned SSEs in Germany, India, Singapore, New Zealand, Colombia, Thailand, and the US (see Newsweek 2008; Heinecke et al. 2011; RGB 2011; Abraham 2013; Socialab 2013; Chhichhia 2014; Shahnaz et al. 2014; Wilson 2014), but none of these seem to have gotten much further from the drawing board.¹

Another SSE that is regulated and seems to take up speed is NeXii. In 2011, a South African social enterprise advisory firm NeXii, in collaboration with the Stock Exchange of Mauritius (SEM), received regulatory approval to open the world's first stock exchange dedicated entirely to impact investing, called Impact Exchange (IX) (Field 2012; Shahnaz et al. 2014, p. 152). Also in 2011, a private placement platform Impact Partners was launched in Singapore by the Impact Investment Exchange Asia (IIX) to connect social entrepreneurs and impact investors in the Asia-Pacific region. In 2013, NeXii and IIX agreed to collaborate and subsequently merged their efforts to create a fully regulated SSE under SEM—the IX (IIX 2013; Shahnaz et al. 2014, p. 152; OECD 2015, p. 30). In June the same year, the Social Stock Exchange (SSX) opened in London, initially as a platform to aggregate information on publicly listed impact companies but with a clear aspiration to become a fully fledged SSE regulated by the Financial Conduct Authority (FCA) in the future (Shahnaz et al. 2014, p. 152). Later in the year, a private placement platform called the Social Venture Connexion (SVX) opened in Canada, allowing accredited impact investors to connect with local mission-oriented companies (see Spence and Sinopoli 2013; SVX 2013; Ritchie and Emes 2014 for an overview). Backed by the Ontario government, this initiative was originally proposed as early as 2007 (Floyd 2013) and has subsequently expanded to Mexico (Spence 2014).

5.3.5 *Literature Review on Social Stock Exchanges and Their Challenges*

The successful scaling up of SSEs—understood as both primary and secondary trading platforms for securities issued by impact companies—is dependent on a number of enabling conditions and contextual factors. To begin with, there needs to be a broad enough consensus among various stakeholders that SSEs are both necessary and effective in addressing the real needs of impact companies and investors. Whether this will translate into successful scaling depends on the degree of ecosystem synergies and patient financial and political support.

A fully operational SSE would need to perform a variety of functions, such as bring new issues to market, support impact companies in finding and securing start-up finance, attract new investors, provide training to companies in regulatory and compliance issues, and generate liquidity, thus offering the opportunity for investors to disinvest. Performing all these functions requires that SSEs themselves are sufficiently funded. As discussed by Hartzell (2007), SSEs should ultimately be capable of financing themselves through membership and brokerage fees, as well as various professional and marketing services that they could offer to both businesses and investors. In short, an important condition for the success of SSEs is their financial self-sufficiency and being able to charge market rates for their services (Nicholls and Pharoah 2008). Before SSX became operative, Mendell and Barbosa (2013) compared six SSEs that existed in the early 2010s and identified the key barriers and challenges for their future development, such as the problem of transfers of ownership, lack of appropriate legislative and institutional frameworks, low deal flow and liquidity, and the need to develop a more diverse set of financial products to serve the varying needs of different impact companies. Shahnaz et al. (2014) provide a more general introduction to social and environmental exchanges, including the regulatory status and operational mechanics of those that existed in the early 2010s. Dadush (2015) takes a more critical approach, focusing on the regulatory risks and challenges associated with SSEs which she identifies as “transnational rulemaking laboratories for social finance.” After reviewing the governance of three existing SSEs—IX, SSX, and SVX—Dadush argues that none of these impose adequate requirements when it comes to protecting the interests of not only investors and investees but also the ultimate beneficiaries of impact investing, that is, the affected communities.

An important decision in setting up an SSE is whether to establish it as a freestanding structure or as part of an existing stock exchange. This decision may turn out to have implications for avoiding certain threats and challenges later down the road, although both alternatives have their immediate advantages and downsides. Connecting the SSE to an existing exchange has the benefit of allowing access to its infrastructure and technology, thus reducing costs and accelerating the initial setup. So far, this has been the approach taken by most SSEs. However, such a strategy may be discouraging to companies that are worried about risks associated with conventional stock markets. Given that the culture and governance of traditional stock exchanges may not be acceptable to at least some impact companies and their ethically driven investors (Hartzell 2007), an SSE that is connected to an existing exchange should operate as a separate board with its own listing and reporting requirements (Shahnaz et al. 2014).

Setting appropriate eligibility and reporting criteria, and the governance of SSEs in general, are themselves essential determinants of their success. Theoretically, SSEs could be instrumental in creating a sophisticated, transparent, and widely applicable impact measurement and reporting framework for mission-oriented businesses, perhaps with the assistance and continued monitoring of dedicated rating agencies (Egan 2011). Becoming listed on an SSE would require going through a highly customized due diligence process, while staying listed would be conditional on regular standardized reporting on how well the company is serving its social or environmental mission. These mechanisms are of key importance in determining the attractiveness of SSEs to both impact companies and investors (Campanale 2010). Similarly, rules must be in place to coordinate trading, settlement, clearance, and other key operations.

One of the most decisive factors in determining the long-term success of SSEs is their ability to attract new issuances. This is at least partly a function of the types of securities handled by the exchange—a more diverse set of securities would attract a larger group of companies with different financing needs. Similarly, the less the SSE limits itself to particular areas (e.g. renewable energy, healthcare, housing, etc.), the broader the spectrum of potential issuers, leading to bigger deal flow. At the same time, some impact companies may be discouraged to list on SSEs. For example, they may see engaging with a liquid market as an encouragement to their investors to disinvest, or it may seem to them too costly, especially if the company is not planning to make additional issues in the future. Founders

and management may also fear losing control of their company, or the excessive pressure to become more profitable (Hartzell 2007, p. 26).

It is interesting to note that a widely acknowledged challenge among impact investing practitioners is the alleged lack of investment-ready projects and companies (Bertelsmann Stiftung 2016; FASE 2016; GIIN 2016a). This points to a need for capacity-building assistance for social and green entrepreneurs. For example, SSEs could provide services that encourage the creation of new impact companies and raise the professional capacity of existing ones, thus increasing the number of potential issuers. This would include training and support for meeting the strict listing and reporting requirements, a feature of SSEs that demands considerable commitment and resources from companies. As pointed out by Shahnaz et al. (2014, p. 156), operating a fully regulated SSE entails “striking a balance between the benefits to the investors of access to complete information and the corresponding costs to social enterprises of providing rigorous disclosure.”

The flipside of a critical mass of issuers is the demand from investors. As mentioned above, the trend here seems to be positive and thus supportive of the future growth of SSEs. The option of secondary trading is also likely to attract additional investors. Whether the demand for impact assets is sustained over time depends not only on the success of impact companies but also on the motivations and characteristics of impact investors. Here, Gödker and Mertins (2015) offer a useful discussion, pointing out that researchers do not yet have a good enough understanding of what drives impact decisions, although it seems to be a mix of personal values, identity, and political orientation, on the one hand, and expectations regarding return, principles of diversification, and the use of internalized heuristics about investing, on the other. A noteworthy recent development with regard to investor behavior is the emergence of “100% impact” investors who have committed their whole portfolio to impact assets (Toniic 2016). A growing number of such investors could certainly have a considerable effect on the future development of SSEs.

A defining feature of most organizations in the fields of social entrepreneurship and finance is hybridity—trying to combine the goals, principles, and methods of business with those traditionally associated with the non-profit sector (Birkholz 2015). In many ways, SSEs represent a perfect case study of what this might entail in practice. The growth of SSEs is therefore also dependent on how well these institutions combine ideas and practices that may sometimes be difficult to reconcile (see Hartigan 2006). If SSEs

fail in maintaining the delicate balance between the rationales of “profit” and “impact,” they may risk alienating certain investors and companies whose active participation may be essential for the long-term success of SSEs. In other words, “success” may mean different things for different stakeholders. Therefore, a universal underlying framework, as provided by the UN SDGs, is helpful in defining success in a manner that is not arbitrary. As emphasized by Dadush (2015), merely quantitative measures (e.g. deal flow), although important, may not be sufficient to assess the overall performance of SSEs, as many investors and investees may give equal weight to mission alignment, ethical integrity, and whether the SSE itself is ran as a social enterprise which all are expressions of their ToC. Here, healthy competition between SSEs would help ensure that both investors and businesses have the option to choose a platform that is best aligned with their values and purposes.

Finally, effective regulation is another key determinant of the long-term success of SSEs and social finance in general (see Addis 2015). On the one hand, SSEs are embedded in existing judicial frameworks and must therefore abide by the rules and regulations that apply to the legal form that a particular SSE has taken. On the other hand, they are innovative platforms that have considerable self-regulatory leeway. In many ways, SSEs currently under development will set the regulatory standard for years to come. Since these platforms bring together a variety of actors and organizations, this may have far-reaching implications not just for SSEs but for the social enterprise and impact investing sectors more broadly. As pointed out by Dadush (2015), merely “blueprinting” the regulatory model of conventional stock exchanges may prove to be highly problematic and potentially even undermine the fundamental purpose of SSEs.

A more critical interpretation would see the emergence of SSEs as the result of applying a particular politico-economic way of thinking in areas that have traditionally been associated with philanthropic giving and the activities of non-profit organizations, often within the context of considerable state presence; and as a symptom of financialization—the growing role of financial motives, actors, markets, and institutions in the operations of the economy and society at large (Epstein 2005; Thümler 2016; Dowling 2017). According to this interpretation, social purpose organizations are increasingly subjugated to the financial logic of the market while positive impact is turned into a commodified investment opportunity; from a financing point of view, marketable solutions become preferred over alternatives for which it is difficult to present a profitable business

case (Dadush 2015; cf. The Economist 2006). For many philanthropists, however, this may be a desired development as it allows them to use a philanthropic coin many times. At the moment the grant scheme is set up in a way that a coin can be only spent once. When spent it is gone and it is not recuperated to be used again. So the grant scheme does not allow for an informed financial decision where to best spend the philanthropic coin. This is where it can be recouped after a certain time which make projects more transparent and accountable for their success and prevents the waste of grant money. The grant and not-for-profit scheme have been described as a dictator game in behavioral economics.

Another argument is the shift from traditional philanthropy to philanthro-capitalism (Bishop and Green 2015) may be ultimately followed by a shift from philanthro-capitalism to “quarterly philanthro-capitalism” where entrepreneurial activity and managerial decision-making become increasingly affected by the dictates of investors and social finance institutions, including SSEs. This shift is driven by the often unshakable belief that the “forces of the market” (including the financial market) can be successfully harnessed to tackle almost any social or environmental problem. Although this is certainly true in a number of areas, market-fundamentalism combined with the mentality and methods borrowed from the world of finance may also lead to some negative consequences (see Jacobs and Mazzucato 2016)—in this sense, the “impact economy” (Martin 2016) is no different from the rest of the economy. These potentially negative consequences represent legitimate threats to SSEs and avoiding them is a key challenge in the future development of these platforms, as well as social entrepreneurship and impact investing in general.

For example, just like traditional venture capital is often tempted to make speculative gains through a quick exit on a stock exchange (Lazonick and Mazzucato 2012), assuming that the demand for impact assets continues to grow (see GIIN 2016b for an overview of recent market trends), venture philanthropists and other early-stage investors may become increasingly inclined to float impact companies on SSEs in ways that primarily benefit insiders. Strict regulation will be required together with regulating market access to create the respective governance and prevent insider trading. Similar to conventional stock exchanges, regular reporting of both financial and impact data within the context of highly liquid secondary markets will inevitably create short-term pressures to meet the expectations of investors, analysts, and rating agencies, possibly at the expense of long-term goals and planning. As discussed above, such a

system has a number of important strengths and benefits. However, it likewise can create pressures to commercialize, rivalry between ownership and control, mission drift, and a variety of conflicts of interest, including those involved in underwriting and market making (see Ellis et al. 2000; Aggrawal 2002).

The degree to which these threats translate into actual practice depends on, first, whether there will be a “social innovation boom” (Glänzel et al. 2013), leading to a critical mass of profitable impact companies; and second, the evolution of the rules and regulations that are going to govern the operations of SSEs, and by extension, the activities of listed companies and their investors. As emphasized by Hartzell (2007, p. 4), SSEs must be “carefully crafted so that [they are] protected against the exploitation for private benefit, but still remain flexible enough to be treated as genuine exchanges by investors.” In other words, the hybrid nature of SSEs requires the development of innovative regulatory frameworks and principles of governance, the purpose of which would be to ensure that the investment and trading activity on SSEs does not become decoupled from the underlying purpose of the listed firms and that the rights and interests of other stakeholders are well-represented alongside those of investors and investees.

Dadush (2015) has offered a number of recommendations, such as careful design of listing and reporting requirements, explicitly identifying what constitutes malpractice, establishing procedures for the effective enforcement of rules of conduct, setting up safeguards to limit short-term investor behavior and mission-diluting commercialization, and perhaps, most importantly, adopting a definition of success for SSEs that includes the protection of beneficiary interests. SSEs are yet to prove their long-term viability and potential for funding impact companies in volumes that would have a noticeable effect on the real economy. However, the future trajectory of SSEs will be determined by decisions made during setup, some of which may become increasingly difficult to revise later down the road.

5.3.6 *Review of Existing SSXs*

As of April 2019, there are six SSEs under active development: BVSA, BRiX, SVX, IX, GIIVX, and SSX. The first is the continuation of the initial BOVESPA project, making it essentially a donation platform. The second began as a consulting company, and now acts as an information portal

for connecting impact investors with companies showcased on BRiX, of which there are currently five. SVX is registered with the Ontario Securities Commission as a restricted dealer, making it a private placement platform that connects accredited investors with local impact ventures. A new SVX platform was scheduled to open in early 2017, but this has been postponed to later in the year. Meanwhile, an affiliate of SVX was launched in Mexico in 2015, which is currently focused on offering educational services on impact investing. In terms of building a publicly accessible market place for securities issued by social or green enterprises, both BRiX and SVX are still in the early stages of their development.

The Singapore-based organization IIX re-branded themselves in early 2017 and announced plans to expand globally (IIX 2017). The activities of IIX are built around four institutional structures. First, there is the IIX Impact Accelerator, targeting early-stage social enterprises in South and Southeast Asia, helping them with seed finance and capacity building. Second, IIX operates a private placement platform called Impact Partners that connects accredited investors with impact companies. Third, IIX manages an equity investment fund called IIX Growth Fund. Finally, there is the public trading platform IX, operating as a separate board of SEM. As of April 2017, there is very little activity on the IX, with only one product listed, the Women's Livelihood Bond, and the exchange does not seem to be a current priority of IIX (cf. Dadush 2015, p. 209–210).

The Vienna-based Global Impact Investing Foundation (GIIF), in collaboration with the United Nations Industrial Development Organization (UNIDO), is planning to launch a global impact investing platform GIIVX later in 2017. The investment themes on GIIVX are organized around the UN Sustainable Development Goals (SDGs), providing the platform with a wide but easy to understand categorization for the listed initiatives. Impact entrepreneurs will be able to showcase verified projects on the GIIVX website, while agreements are negotiated between investors and investees using the contract documentation and support tools provided by GIIVX. According to its website, GIIVX is also working on developing a new standardized tool for impact measurement that can be used by investors to evaluate the projects listed on GIIVX.

To date, the most highly developed and active SSE is the London-based SSX. The platform is open to impact companies from anywhere in the world as long as they meet SSX's listing requirements. As of April 2017, SSX is registered as a UK Limited Company, making it a for-profit enterprise. In addition, SSX is a Recognized Investment Exchange, regulated

by the UK Financial Conduct Authority (FCA). This was achieved through a partnership with NEX Exchange (formerly ISDX), which made it a segment of NEX where the securities of SSX-listed companies are now being traded. Alternatively, listed companies can have their shares traded either on the London AIM market or on the London Stock Exchange (LSE) main market (All Street Research 2017, p. 15). Although the SSX lists about 50 companies, only 12 of those can be traded. The remaining are private businesses that are currently showcasing their activities through SSX, although they may issue tradable securities in the future. The SSX is also planning to open small localized exchanges, similar to that of their South West Social Stock Exchange, to enable more investment in impact companies that are operating at the community level. Pilot projects for such local exchanges have recently been launched in Wirral and Liverpool, with discussions underway in Edinburgh, Scotland (All Street Research 2017, p. 14).

5.3.7 *Prognosis on the Development of SSEs*

Given that several of the early SSE-type funding platforms have come and gone and most of the remaining ones are limited in size and activity, very little empirical research has been done specifically on SSEs. However, the recent growth of SSX in the UK, continued work on BVSA, IX, BRiX, and SVX in Mexico, as well as the upcoming launch of the new SVX in Canada and GIIVX in Austria, may in the near and mid-term future provide increasing opportunities for studying the nature and operations of these platforms and their relationship to the broader field of impact entrepreneurship and investing. At the same time, the UN SDGs may function as a game changer as they establish a vision, a Theory of Change, and a universally agreed impact goal endorsed by 194 member states, which helps in creating a level playing field in the financial sector at least for the impact investing segment.

Concerning the characteristics of SSEs compared to conventional stock exchanges, the only SSE active enough to allow for at least some meaningful comparison is the SSX in the UK. From a practitioner's point of view, SSX will certainly help inform the design of similar platforms elsewhere.

The study of impact investor behavior creates a bridge between the sociology and economics of SSEs. For example, what characterizes the

investors who are attracted to SSE-type investment platforms (e.g. millennials) and what prevents institutional investors (e.g. funds) from accessing impact investing? The analysis thus far shows that besides the SSX there has been little attempt to set up an SSE which is for profit. When continued successfully as the current volumes seem to suggest, it can serve as a blueprint for other “for profit SSEs.” ISSX solves the problem of retail investors that now for the first time have the chance to invest in impact, if they wish. An open issue is how pension funds can be attracted as they need higher lot sizes due to regulation and policy. Another open issue needing research is what are the corresponding implications for portfolio theory, social and sustainable investing in general, and the future development of the impact economy? In a similar vein, it would be interesting to know the profile of the ventures listed on SSEs and which of them are most successful, both financially and in terms of their social and environmental performance. A connected and potentially important subtheme is the relationship between impact investing and innovation. In the future, SSEs could theoretically play a supportive role in mobilizing finance for growth companies in areas such as renewable energy, sustainable engineering, electric mobility, green materials, and biotechnology all in line with the UN SDGs, which underscore the SSE market. Impact investing and SSEs could also play a considerable role in directing development finance and find models to enhance development aid through public private partnership schemes. It appears that this is the goal of GIIVX in Vienna who has UNIDO as a strategic partner. If SSEs indeed become a channel for cross-border investment for sustainable development, this in itself would open up a whole new area of GDP growth and empirical research.

Building on the early papers by Dadush (2015) and Burand (2015), more work could be done on the regulatory, legal, and policy implications of impact investing and SSEs, including the assessment of existing regulatory gaps and potential policy incentives. There is also ample room for SSE-related theoretical research, especially when examined in the broader context of social and sustainable finance (see Lehner 2016b). For example, do SSEs represent a more fundamental shift in the relationship between business, investment, and society—a prelude for a future in which most companies and investors combine the profit-motive with social and environmental objectives?

5.4 RESULT ANALYSIS OF INVESTOR INTERVIEWS

In their study, Harji and Jackson (2012) mainly differentiate between the supply side asset owner and their manager on one hand and the demand side business owners, social entrepreneurs seeking funds and service providers on the other. Moving from literature review and on previous survey (GIIN 2017a, b; Care and Wendt 2018), the author developed a semi-structured questionnaire tailored to impact investors. To find the relevant study units Family Office and Asset Managers members of the EMPEA impact investing council have been interviewed. The questionnaire has been beta tested by one member of a private equity association and one member of a financial institution working in impact investing. The institutions of the beta testers have not been included in the results and two interviews conducted. Manual coding was used to create categories of answers.

The following section provides the most relevant results from two interviews conducted with experts on the subject.

1. One milestone in impact investment is the delivery of evidence that it is possible to achieve impact alongside risk-adjusted financial returns.
2. Developing a comprehensive financial performance database would help enormously to identify critical success factors and to develop customized benchmarks.
3. Many impact investments are first generation and therefore early in their respective investment cycles. This is one of the reasons why there is no secondary market yet.
4. Impact investors are working together and with partners to collect and analyze data on exits in an attempt to quantify financial returns and key impact metrics (New Philanthropic Capital, KLF, Cambridge Associates, Aqal, PINEO, EMPEA). This could create a standardized approach which would allow the definition of listing criteria for stock exchanges.
5. Robust metrics are needed that demonstrate success in achieving social and environmental impact.
6. The idiosyncratic nature of impact investing presents some specific challenges with respect to the development of metrics, including:
 - Time Scale. Whereas financial returns to investors end once the fund has exited the investment, the social impact continues after a

project has been completed. Some projects create impact throughout the life of the investment, such as an insurance company, whereas others, such as housing or infrastructure, deliver impact over the longer term but in many cases only beginning in the final stage of the investment.

- Finally, scale in private equity impact investing is hindered by a mismatch between investors' preferences and realistic investment opportunities. Institutional investors need to respect fiduciary duties and therefore require lot sizes of USD 100 million or more. As impact investing is in its nascent stages, such lot sizes are hardly available. Furthermore, many investors have minimum commitment sizes (e.g. they want to commit more than USD100 million) and maximum ownership limits (e.g. they cannot represent more than 20% of the fund's interests). By comparison, the average impact investing private equity fund is USD 7 million, and the average underlying investment is USD 2 million.
- Investor preferences for the stage of the business in which they would like to invest is another issue. The majority of impact investees are in the growth cycle. The current impact investors, wealthy individuals or family offices, focus on growth stage businesses. Appetite in seed or start-up capital is much lower.

Impact investments do not yet match the logic of traditional finance tools. Measuring the potential social and environmental impact of investments in a generally accepted manner will thus be a key component of research to be undertaken since impact investing explicitly seeks to intentionally generate quantifiable social and financial returns. The results of the interviews are largely in line with statements from players in the field.

Practitioners like Finanzagentur für Social Entrepreneurship (FASE) address the investment gap in impact investing as follows: According to them, the main reason is that there are not enough investment-ready assets out there in the market place, although increasing amounts of capital from investors around the world are waiting to be invested with social and environmental impact. FASE states that "Compared to the massive investment opportunities in traditional financial assets – actual impact investing assets are still small (60bn)." Roots of impact finds that increasing amounts of capital from investors around the world are waiting to be invested with social and environmental impact.

Ashoka, Impact Alpha and Roots of Impact main players in Impact Investing have recently stated in *Forbes* magazine “The Market is imperfect, let’s deal with it” (Forbes 2018) that, the more one digs into impact investing, the less capital is actually directed toward potentially game-changing sectors and the small and growing businesses within emerging markets that are key to these states’ economic development. Instead of helping to drive a new generation of small and medium-sized goods and services providers integrated into global supply chains, much of impact investment appears to be directed toward efforts to ameliorate the status quo, not change it.

Smaller funds tend to significantly outperform larger funds, which may reflect the difficulty of conducting extensive due diligence on or sourcing of the many investments required to allocate an entire large fund to investments.

5.5 FUTURE RESEARCH DIRECTIONS

Research on Social Stock Exchanges and on whether and how impact investing can enter the stage of being offered on a stock exchange or regulated secondary market is a nascent field and therefore an area not yet explored. Future studies need to deeply analyze the investors attitudes in terms of accessing a secondary market with their impact asset in an IPO or ICO move and explore financial returns required, risks, perceived, risk tolerance, and risk exposure.

The question how to create a functioning impact market with enough investment-ready deals, state of the art due diligence, and enough capital to absorb it remains a top priority, if one wants impact investing to deliver on its promise to be the key for resolving global challenges in a time where the traditional levers of change, including philanthropy and government aid, are insufficient to address the critical issues of our time. Therefore the market mechanisms to translate a compelling concept into a sound market strategy populating both the field of impact investors in search for assets as well as sustainable entrepreneurs in search for capital while ensuring the assets are investment-ready in a traditional investment-based approach, the rules of the games are clear and met, traditional due diligence is done and potentially complemented by additional layers, and a liquid market place is available.

According to Lehner and Brandstetter (2015) investors struggle to allocate capital toward the social sector because the above proposed

performance measurement metrics do neither fully assess risks associated with the generation of impact nor consider relationships and interdependencies between parameters of risks and return. This becomes an aggravated problem when looking at a portfolio level due to inevitable co-variances that remain unaccounted for (Lehner and Brandstetter 2015). Portfolio models can only be applied in situations where risk and return metrics are accurately measurable and comparable. According to the academic research undertaken so far, some researchers find that, “Unfortunately, such consistent metrics are largely absent within the emergent field of social finance” (Geobey et al. 2012). According to Lehner and Brandstetter (2015) “Therefore, since an optimized asset allocation is an indispensable necessity for institutional investors, the expected market growth of impact investing will be dampened as long as impact investments’ characteristics do not match conventional portfolio tools.” One question therefore is how can impact investment characteristics meet conventional portfolio tools, or alternatively the regulatory board of a stock exchange set the rules for impact measurement based on a universally shared framework. Scientific researchers acknowledge that “Across sectors, there are already a number of measurement systems in use, endorsed by various impact investing actors. Among them are the Impact Reporting and Investment Standards (IRIS), the Global Impact Investing Rating System (GIIRS) and the B Impact Assessment powered by B Lab” (Antadze and Westley 2012; Jackson 2013). Those standards can be used to inform the regulation on impact definition and management even more so as for now the UN SDGs can provide the underlying universal framework.

An open question is whether a double auction process could help to resolve the problem of investment-ready assets and the investment gap while impact investors are sitting on piles of money to be invested in the market. The Nasdaq defines a double auction systems by which listed securities are bought and sold through [brokers](#) on the securities exchanges, as distinguished from the [OTC](#) market, where [trades](#) are negotiated. Unlike the conventional auction with one auctioneer and many buyers, double-auction markets consist of many sellers and many buyers.

Again, this requires the creation of “listed securities.”

Could the implementation of the UN SDG justify an own market place? Would such a market place help address the investment gap in impact investing?

Could the application of universal measurement criteria based on SDGs create a level playing field in measuring impact? Such a level playing field could be a necessary and required preliminary to a double auction system. At the moment there is a wealth of impact measurement tools, techniques, and criteria. For creation of a market place a universally agreed ToC as provided by the SDGs could prove helpful in creating a transparent double-auction market place. SSEs then could be regulated on the basis of such a universally shared model. Creating such a level playing field may be a feasible way forward.

While philanthropy has been playing an important role in setting up impact investing, the global challenge is beyond the means of this investor. Framed in this way impact investing has to become not only compatible with traditional investment, but be provided with the same set of structural support in order to make it grow.

How could impact investing therefore draw from the advantages of double-blind auction systems and could Nasdaq be seen as a role model for SSEs in setting the right framework and putting the right systems in place for enabling and growing social innovation, the way Nasdaq was promoting technical innovation? The question may be beyond this chapter, but as a start it is useful to look into the advantages of double-blind auction systems and analyze what can be learned from the so far existing SSEs.

5.6 CONCLUSIONS AND LIMITATIONS

This work analyzed the impact investing landscape by using a double perspective, both theoretical and practical. The interviews provide interesting insights for future studies. Although impact investing is still in the early stages of its development, the growing interest from mainstream financial institutions signal that the field is no longer merely an interesting idea in the minds of a few devoted enthusiasts.

The literature review confirms that there are several instruments and approaches that can be used to make a positive impact in the society. A close connection between social enterprises and impact investing has been detected. With regard to allocation of assets on the secondary market, regulated exchanges little has been known why investors shy away from placing their assets to the market in form of an ICO or IPO. In this regard,

the interviews offered useful insight in identifying small lot sizes, start-up or early growth stage of the assets, and fiduciary duties as hindrances to listing assets. Also no commonly agreed set of listing criteria exists. For this reason, the interviews offer several important insights for future studies.

With regard to the future study of SSEs, when placed within the general context of social and sustainable finance, there is already considerable room for SSE-related theoretical, legal, and policy research. Options for empirical research are currently limited simply because most SSEs are still relatively small. However, there does exist a critical mass of impact investors, while impact assets still have to be further developed and nourished by social entrepreneurs, microfinance, and growth stage assets.

Although the current study has extended our understanding on impact investments, social stock exchanges and the investment gap, it also has a number of limitations. As with all reviews it was limited by the search terms used and the exclusion criteria. Several working papers and conference proceedings have been excluded from our review due to the fact that they do not represent “scientific knowledge” assessed through peer review. However, the papers discussed in this literature review provide a snapshot of research on impact investing, social stock exchanges, and social entrepreneurship, which is representative of the state of the art at the time. From a policy/practitioners perspective, three main conclusions may be drawn from this work: (i) social stock exchanges for impact investing have a great potential for the growth of social enterprises by offering a wide range of financial instruments that span from equity to debt; (ii) social stock exchanges represent a useful instrument to fund many kind of impact assets in time of public budget constraints; and (iii) investors look with great interest at this market. Money is there and waiting to be deployed to impact assets, which are currently in their early stages of seed or growth and will need some time to achieve the status of “investable in the secondary market.” Finally, the results of this work have implications for the development of the impact investing market and its instruments. This is true when we consider the market from the offer side and from the demand side. Only with a better understanding of the entire impact investing landscape, the functioning of secondary markets and the related investment opportunities is it possible to ensure an effective market development.

NOTE

1. A conceptually related development in the late 2000s was the launch of the Sustainable Stock Exchanges Initiative by the UN (see <http://www.sseinitiative.org>), a learning platform to encourage the integration of environmental, social and governance (ESG) considerations into the rules and procedures of conventional stock exchanges. A full consideration of this topic is beyond the scope of this paper

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A Macro-Level Analysis of the Economic and Social Impact of Microfinance in Sub-Saharan Africa

Roberto Pasca di Magliano and Andrea Vaccaro

6.1 INTRODUCTION

Microfinance services are rapidly growing in developing countries to promote economic growth and social redemption in poor and backward areas. Since 2012, the number of average borrowers in the world has increased with an average yearly rate of 7% (Convergences 2019). As to borrowers, South Asia continues to be the largest market in the world, whereas in terms of total portfolio size, Latin America and the Caribbean have outperformed the other regions in the world (Convergences 2019).

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Despite the low initial levels of microfinance in sub-Saharan Africa, the recent growth of microfinance services in the region has been tremendous. Since 2012, the total amount of microfinance institutions (MFIs) in the region has increased by 56% and the number of total borrowers by 46% (Convergences 2019). These encouraging figures have fostered interest in the sub-Saharan region among researchers and practitioners working on microfinance.

Microfinance services are mainly targeted to non-bankable low-income individuals who do not have access to traditional financial services. Globally, the amount of these non-bankable individuals is estimated to be around 40% of total adults (Palmer CC). Potentially, the amount of people who could improve their economic and social status through microfinance is massive. Founded in the 1980s, the well-known and successful Grameen Bank laid the foundations of a worldwide optimism toward microfinance. In particular, the provision of small microloans has been praised as an important tool for poverty alleviation and social development (e.g., Yunus 1999). In sub-Saharan Africa, in 2017, the average microfinance loan balance was less than US\$1000 per borrower (MIX 2019a). While it is plausible that many individual borrowers benefit from the access to microfinance, the aggregate effect of these small-scale microservices remains unclear. Hence, unsurprisingly, empirical evidence on the overall impact of microfinance is limited and inconsistent. In the last decades, several micro-level studies on microfinance have been published. However, micro-level findings in one context are often limited to that specific context. For instance, microfinance might work in a small village in rural Uganda, but not in a poor neighborhood of Dakar.

The amount of cross-national studies on the topic remains limited. Until very recent past, the lack of reliable cross-national data, especially in a time-series perspective, posed serious problems for studies investigating the consequences of microfinance in more general terms. Luckily, improvements in both the availability and quality of cross-national time-series data on the topic allow to examine the impact of microfinance in a more consistent and comprehensive manner. The study at hand can be placed in the increasingly more important strand of cross-national quantitative literature on the socio-economic effects of microfinance. The aim of our study is to examine the role of microfinance in economic and social development with a focus on sub-Saharan Africa. First, we review the literature on the topic and present some of the mechanisms through which microfinance can affect economic and social development in underdeveloped countries.

Second, through two sets of regression models, we estimate the economic and social impact of microfinance in sub-Saharan Africa. Third, before the conclusions, we present the results of the regressions and discuss comprehensively the main results. Our main findings show that microfinance is an important determinant of both economic and social development in sub-Saharan Africa: an increase in microfinance is related to an increase in economic and social development.

6.2 LITERATURE REVIEW

In the very last decades, the debate among scholars, policymakers, and development practitioners on the effects of microfinance on poverty alleviation has become larger and larger. Generally, microfinance is considered to be an important tool to promote the financial and social inclusion of low-income individuals and households in underdeveloped societies (e.g., Morduch 1999) because it enables these non-bankable individuals and households to benefit from banking services (Yunus 1999). “The underlying logic is that by providing financial services to the poor, for example in the form of credit or savings, they manage their money differently, investing, acquiring productive assets, increasing their skills levels, opening new businesses, etc.” (Van Rooyen et al. 2012: 2249). With access to financial services, the individual is expected to acquire greater self-confidence and higher well-being. Moreover, besides being beneficial to individuals and households, the effects of microfinance are likely to be important also for the society as a whole. “Microfinance presents a series of exciting possibilities for extending markets, reducing poverty, and fostering social change” (Armendàriz and Morduch 2010: 3).

The positive impact of microfinance has been also attributed to a distinctive feature of microcredit: the group lending method and its mechanisms of joint responsibility and peer monitoring. These mechanisms can “mitigate moral hazard and adverse selection by harnessing local information and enforcement possibilities and putting them to use for the bank” (Cull et al. 2007: 108). Group lending with peer monitoring incentivizes lenders to monitor each other, since the whole group faces consequences if one of the members is not able to repay the loan (Armendàriz and Morduch 2010). Therefore, it is not surprising that the rate of restitutions of microloans is extremely high (Banerjee 2013). Moreover, evidence suggests that the group lending method can generate trust and strengthen social relationships (Karlan 2007). Lower default rates and improved

relationships among individuals are likely to spread positive effects on production growth. Then again, in case of default, group lending can also be deleterious for social relationships.

Microfinance seems to have a positive impact not only on economic factors, such as consumption and income levels, but also on social factors, such as education and fertility (e.g., Morduch 1999). Moreover, microfinance affects positively women's emancipation and promotes gender equality (Mayoux 1998). Anyhow, it has been argued as well, that the effects of microcredit have been overestimated (Terberger 2013). "Microcredit is not likely by itself to make a major difference to a country's growth path" (Hollis and Sweetman 1998). Instead of empowering the poor, microfinance might exacerbate the economic situation of the poorest (Palmer 2018) and lead to serious indebtedness of the borrowers through its high interest rates (Seng 2018). On the one hand, while in some cases microcredit might empower women, often women do not have full control over the utilization of their loans (Nawaz 2019). On the other hand, even if women would not have full control over the money, "microfinance can increase women's bargaining power within the household" (Armendàriz and Morduch 2010: 227). Several scholars warn that microfinance should not be considered as a panacea for solving endemic problems related to underdevelopment. If not properly organized and managed, the economic conditions of the poor may get even worse as the additional debt burden could exacerbate their poverty conditions.

Empirical findings on the impact of microfinance on economic and social development are based mainly on micro-level studies in specific contexts. Through micro-level studies, it is not possible to get a general idea on the effects of microfinance to the society as a whole. Some of the micro-level studies confirm the positive effects of microfinance. For instance, in one of the early studies on the topic, Wydick finds that micro-enterprise lending has a positive effect on child schooling in Guatemala (Wydick 1999). Based on survey data of Bangladeshi villages from 1991 to 1992, Pitt and Khandker (1998) find that group-based microcredit programs have a significant positive effect on poverty alleviation. However, this positive impact is much stronger when credit is provided to women instead of men (Pitt and Khandker 1998). Through another case study in Thailand, Kaboski and Townsend (2012) find that microfinance increased short-term agricultural investment, consumption, and wages. Imai et al. (2010) find, in a cross-section study on Indian households, that microfinance plays an important role in reducing poverty in both rural and urban

areas. In another study on the topic, based on household panel data in Bangladesh, Imai and Azam (2012) find that microfinance increases food consumption and income. Deloach and Lamanna (2011) find that the presence of MFIs in Indonesian villages improves significantly child health.

Other studies have shown that microfinance is not related to socio-economic development, or that it might even lead to negative social and economic outcomes. For instance, in rural Ethiopia from 2003 to 2006, an increase in borrowing from microfinance institutions (MFIs) was not related to any significant improvement in the majority of socio-economic indicators (Tarozzi et al. 2015). Buchenrieder, Nguefo Gnilachi, and Benjamin (2019) find that in farm households in Cameroon, microfinance has a positive impact on per capita income in the short run, but a negative impact in the long-run. Similarly, through a qualitative case study on microcredit in low-income neighborhoods in Lusaka, Copestake et al. (2001) find mixed evidence on the topic. While some borrowers experienced improvements in business profits and income, many others were actually impoverished by the loans (Copestake et al. 2001). Coleman (2006) finds that although microfinance programs affect positively high-rank villagers in rural Thailand, the impact on lower rank individuals is insignificant. Seng (2018) finds that at best microcredit has no effect on household welfare. A meta-analysis of earlier findings on the topic concludes that “microfinance can, in some cases, increase poverty, reduce levels of children’s education and disempower women” (Van Rooyen et al. 2012: 2259).

The few existing macro-level cross-national studies on the consequences of microfinance suggest mainly that microfinance has a positive impact on various aspects of economic and social development. Microfinance intensity reduces income inequality (Kai and Hamori 2009; Hermes 2014; Bangoura et al. 2016; Lacalle-Calderon et al. 2019) and poverty (Imai et al. 2012; Zhang 2017). Furthermore, Lopatta and Tchikov (2016, 2017) find that MFIs have a positive effect on both economic development and growth.

This brief literature review on the relationship between microfinance and socio-economic development is not intended to be exhaustive, but rather to show that empirical evidence on the matter is inconclusive. For many years, the general idea was that microfinance empowers the poor and is able to influence positively a variety of economic and social outcomes. Anyhow, some recent studies have argued that microfinance should not be considered as a magic formula to reduce poverty. Actually, it might

even worsen the situation under certain conditions. As we have seen, both arguments seem to find support in empirical micro-level studies. Macro-level large-N studies point mainly to a positive effect of microfinance. However, the number of these macro-level studies is still limited and, to our knowledge, none of these studies has focused on sub-Saharan Africa.

We have seen also that the microfinance industry is increasing in developing countries and sub-Saharan Africa. This is good news because at least in theory, thanks to microfinance services, poor non-bankable individuals and households have the possibility to build a better life for themselves. However, so far, the large-scale impact of microfinance has not been examined properly. Sub-Saharan Africa is the poorest region in the world and if the worst poverty scenarios turn out to be correct “more than 90% of the global poor would reside in Sub-Saharan Africa by 2030” (Lakner et al. 2019: 15). More than any other region in the world, sub-Saharan Africa seems to be cursed by endemic poverty. Since access to finance is one of the most important factors in promoting economic development (Schumpeter 1911), and since the importance of MFIs has increased exponentially in sub-Saharan Africa in the last years, perhaps, the worst poverty scenarios could be avoided, if microfinance is able to deliver on its promises. In the next part of this study, we examine, through a set of panel regressions, whether microfinance can play a key role in fostering development in sub-Saharan Africa.

6.3 DATA AND METHODS

In this section of the chapter, we present the selected data and methods employed to examine our main hypotheses. The indicators that we use in this research are selected on the basis of data availability, quality, and previous usage in scientific research. After a careful selection of the data, the hypothesized relationships between microfinance and socio-economic development in sub-Saharan Africa are examined through two sets of regressions. In the first set of models, we assess the relationship between microfinance and economic development. In the second set of models, we assess the relationship between microfinance and social development. In order to add robustness to our results, we test the hypothesized nexus separately with two different indicators of microfinance: active number of borrowers and gross loan portfolio. Unless otherwise specified, the selected data is collected from the World Bank’s World Development Indicators dataset (World Bank 2017).

To measure economic development, we simply select the most popular indicator of economic development: GDP/capita. Therefore, in the first set of regression models, in which we estimate the effect of microfinance on economic development, our dependent variable is *economic development*, measured by the natural logarithm of GDP/capita at constant US dollars (2010). Conversely, in order to measure social development, we use Penn World Table's Human Capital Index (Feenstra et al. 2015). This widely used measure of human capital is based on the average years of schooling in a given country. Hence, in the second set of regression models, in which we estimate the effect of microfinance on social development, our dependent variable is *human capital*, measured by the abovementioned Human Capital Index.

To measure microfinance, we select two indicators from the MIX Market database (MIX 2019b). The first indicator of microfinance is the natural logarithm of *active borrowers*, measured as a share of total population. The second indicator of microfinance is the natural logarithm of *gross loan portfolio*, measured as a share of GDP/capita. Natural log transformation is used to reduce the skewness of the data and the impact of outlier values. MIX Market is the largest database in the world with worldwide cross-national data on microfinance. Despite it outplays other databases on the topic, its data has some limitations that must be acknowledged when interpreting our findings. Above all, MIX Market does not include data on all MFIs because MFIs are not obliged to report their information to MIX. Thus, the database contains data only on MFIs that voluntarily report their information to MIX. While the MIX Market database has an extensive coverage of microfinance customers worldwide (Cull, Demirgüç-Kunt, and Morduch 2007) and it has been employed in several studies on microfinance (e.g., Hermes 2014; Lopatta and Tchikov 2016; Bangoura et al. 2016), we cannot exclude the possibility that the data is biased, for instance, toward large and well-established MFIs that are more likely to report their figures to MIX. We acknowledge that this is a limit of our study but we know as well that it is a limit of all extant large-N cross-national comparative studies on the topic that are based on the most extensive database on microfinance.

Since the nexus between microfinance and socio-economic development might be influenced by many other factors, based on existing literature and theory, we include a set of control variables in our regressions. In the first set of models, where we test the impact of microfinance on economic development, these variables are *foreign direct investment*, *gross*

capital formation, development aid, employment in agriculture, forced migration, and human capital. In the second set of models, where we test the impact of microfinance on social development, these variables are *Internet users, arable land, young population, health expenditure, democracy, and economic development.*

Foreign direct investment is measured by the natural logarithm of net inflows of foreign investment as a percentage of GDP. Gross capital formation is measured by gross capital formation as a share of GDP per capita at current purchasing power parities, and it is collected from the Penn World Table database (Feenstra et al. 2015). To measure development aid, we have constructed an index based on the additive aggregation of two indicators of aid: one for the commitments received from international organizations and one for the commitments received from other donors. After the additive aggregation of these two indicators, the resulting index is divided by the population of a given country and then transformed into a natural log. The initial aid data is taken from AidData's Core Research Release dataset (version 3.1.), published by the AidData Research and Evaluation Unit (AidData 2017). Employment in agriculture is measured by the indicator employment in agriculture as a percentage of total employment (modeled International Labour Organization—ILO estimate). Forced migration is measured by the natural log of the total refugee population by country of origin as a share of total population. Internet users is measured by the number of individuals using the Internet (in the last three months) as a percentage of total population. Arable land is measured by the amount of arable land as a percentage of total land area in a given country. Young population is measured by the population aged 0–14 as a percentage of total population in a given country. Health expenditure is measured by the public domestic expenditure on health as a percentage of GDP in a given country. Since some earlier studies suggest that democratization affects positively human capital, we add also a control variable for the level of democracy, measured by V-Dem Institute's Electoral Democracy index (Coppedge et al. 2017).

The presented data is merged together to create a dataset that includes observations both over time and across countries. The sample employed in our regression models covers a maximum of 37 sub-Saharan countries (see Table 6.1) from 1999 to 2014 (maximum span of years). Due to missing observations, our dataset is unbalanced. To generate unbiased and precise estimates, it is important to select carefully the most adequate and theoretically justified estimation technique for the data at hand. It is likely that

Table 6.1 List of the sample of countries included in regression models

Angola	Ghana	Rwanda
Benin	Ivory Coast	Senegal
Burkina Faso	Kenya	Sierra Leone
Burundi	Liberia	South Africa
Cameroon	Madagascar	Sudan
Central African Republic	Malawi	Swaziland
Congo, Dem. Rep.	Mali	Tanzania
Congo, Rep.	Mozambique	Togo
Ethiopia	Namibia	Uganda
Gabon	Niger	Zambia
Gambia	Nigeria	Zimbabwe

Note: The list of countries refers to the full models reported in Tables 6.2 and 6.3

the error terms in our models are contemporaneously correlated, as it is often the case in cross-national contexts (Beck and Katz 1995). Moreover, our data might be affected by serial correlation and heteroskedasticity. As recommended by Drukker (2003), a Wooldridge test is employed on our models to test for serial correlation. The tests confirm serial correlation in the error terms. The presence of heteroskedasticity in the error terms is tested with a Breusch-Pagan (1979) and Cook-Weisberg (1983) test on our full models. The tests confirm that our models suffer from moderate to severe heteroskedasticity. As a consequence, as suggested by Beck and Katz (1995) for models characterized by contemporaneous correlation, heteroskedasticity, and serial correlation, we use a Prais-Winsten correction for common autocorrelation (AR1) and ordinary least squares (OLS) estimates with panel-corrected standard errors. Beck and Katz's estimation technique is widely employed, especially in political science literature.

Besides the selected variables, it is plausible that certain country-specific time-invariant (or very slowly changing) factors, such as culture, history, and climate might affect the relationship between microfinance and socio-economic development. Omitting these factors from the regressions would lead to biased estimates. Thus, in order to control for these time-invariant aspects, we add country-specific fixed effects in all regression models. The use of unit-level fixed effects means also that the estimation results are based only on within-country variations over time, and thus, not on variation across all countries and all years (as in simple pooled models). Moreover, it is important to recall that it is hard to assess the causal

relationship between the dependent variable and the independent variables. In theory, an independent variable might affect the dependent one, but the causal relationship could work also the other way around. To circumvent this problem, we lag all independent variables and, thus, measure them at time $t - 1$. This procedure allows us to exclude reverse causality, since the dependent variable at time t cannot affect the independent variables at $t - 1$.

We start the regressions by estimating the effect of microfinance on economic development with a set of eight regression models. Then, we proceed by estimating the effect of microfinance on social development with another set of eight regression models. Each set of regressions can be further divided into two sub-groups of four models. Each sub-group of four models begins with a “simple” baseline model, followed by two “intermediate” models with additional control variables, and a “full” model that includes all previously employed controls. The full model (Table 6.2, model 4A), where economic development is regressed on microfinance and the latter is measured by the number of active borrowers, is expressed as:

$$\gamma(GDPpc)_{i,t} = \beta_0 + \beta_1(Borrowers)_{i,t-1} + \beta_2(FDI)_{i,t-1} + \beta_3(GCF)_{i,t-1} + \beta_4(Aid)_{i,t-1} + \beta_5(Agr)_{i,t-1} + \beta_6(HC)_{i,t-1} + \beta_7(Migr)_{i,t-1} + \sum_{j=1}^{j=1} a_j d_j + \varepsilon_{i,t},$$

where $\gamma(GDPpc)$ is $\ln(\text{GDP per Capita})$, β_0 is the constant coefficient, $\beta_1(Borrowers)$ is $\ln(\text{Active Borrowers})$, $\beta_2(FDI)$ is Foreign Direct Investment, $\beta_3(GCF)$ is Gross Capital Formation, $\beta_4(Aid)$ is $\ln(\text{Development Aid per Capita})$, $\beta_5(Agr)$ is Employment in Agriculture, $\beta_6(HC)$ is Human Capital, $\beta_7(Migr)$ is $\ln(\text{Forced Migration})$, d_j is the dummy variable for the j -th cross-unit, a_j is its coefficient, and ε is the error term.

The full model (Table 6.2, model 4B), where economic development is regressed on microfinance and the latter is measured by gross loan portfolio, is expressed as:

$$\gamma(GDPpc)_{i,t} = \beta_0 + \beta_1(GLP)_{i,t-1} + \beta_2(FDI)_{i,t-1} + \beta_3(GCF)_{i,t-1} + \beta_4(Aid)_{i,t-1} + \beta_5(Agr)_{i,t-1} + \beta_6(HC)_{i,t-1} + \beta_7(Migr)_{i,t-1} + \sum_{j=1}^{j=1} a_j d_j + \varepsilon_{i,t},$$

Table 6.2 The effect of microfinance on economic development in sub-Saharan Africa, from 2000 to 2014

	<i>Dependent variable: GDP/capita</i>					
	<i>Baseline</i>	<i>Human Capital</i>	<i>Forced Migration</i>	<i>Full</i>	<i>Baseline</i>	<i>Human Capital</i>
	<i>Model 1A</i>	<i>Model 2A</i>	<i>Model 3A</i>	<i>Model 4A</i>	<i>Model 1B</i>	<i>Model 2B</i>
Ln(Active borrowers) _{t-1}	0.019*** (4.090)	0.011*** (2.653)	0.019*** (4.046)	0.012*** (2.748)	0.021*** (5.557)	0.010*** (3.431)
Ln(Gross loan portfolio) _{t-1}	-0.002* (-1.935)	-0.001 (-1.455)	-0.001* (-1.898)	-0.001 (-1.375)	-0.001** (-2.101)	-0.0005 (-0.888)
Foreign direct investment _{t-1}	0.431*** (4.209)	0.312*** (3.215)	0.411*** (4.077)	0.296*** (3.058)	0.314*** (3.391)	0.270*** (2.827)
Gross capital formation _{t-1}	-0.004 (-0.495)	-0.006 (-1.020)	-0.003 (-0.393)	-0.005 (-0.768)	-0.005 (-0.904)	-0.006 (-1.165)
Ln(Development aid) _{t-1}	-0.010*** (-7.706)	-0.007*** (-4.799)	-0.009*** (-7.354)	-0.006*** (-4.347)	-0.009*** (-8.090)	-0.007*** (-5.411)
Employment in agriculture _{t-1}				0.865*** (9.478)		0.712*** (7.416)
Human capital _{t-1}		0.773*** (7.479)				
Ln(Forced migration) _{t-1}			-0.010* (-1.689)	-0.026*** (-4.708)		-0.010* (-1.799)
Observations	445	411	445	411	444	412
Countries	37	33	37	33	37	33
R ²	0.996	0.997	0.996	0.997	0.995	0.996
Country Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes

Notes: T-values in parentheses; * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Regression models with Prais-Winsten correction for common autocorrelation (ARI), OLS panel-corrected standard errors, and country-level fixed effects. Constant coefficient measured, but not reported. Maximum time-series is 2000–2014. Maximum time-series refers to the dependent variable

where $\gamma(\text{GDPpc})$ is $\ln(\text{GDP per Capita})$, β_0 is the constant coefficient, $\beta_1(\text{GLP})$ is $\ln(\text{Gross Loan Portfolio})$, $\beta_2(\text{FDI})$ is Foreign Direct Investment, $\beta_3(\text{GCF})$ is Gross Capital Formation, $\beta_4(\text{Aid})$ is $\ln(\text{Development Aid per Capita})$, $\beta_5(\text{Agr})$ is Employment in Agriculture, $\beta_6(\text{HC})$ is Human Capital, $\beta_7(\text{Migr})$ is $\ln(\text{Forced Migration})$, d_j is the dummy variable for the j -th cross-unit, a_j is its coefficient, and ε is the error term.

The full model (Table 6.3, model 4C), where human capital is regressed on microfinance and the latter is measured by the number of active borrowers, is expressed as:

$$\begin{aligned} \gamma(HC)_{i,t} = & \beta_0 + \beta_1(Borrowers)_{i,t-1} + \beta_2(GDPpc)_{i,t-1} \\ & + \beta_3(Internet)_{i,t-1} + \beta_4(Land)_{i,t-1} + \beta_5(Young)_{i,t-1} \\ & + \beta_6(Health)_{i,t-1} + \beta_7(Dem)_{i,t-1} + \sum_{j=1}^{j=1} a_j d_j + \varepsilon_{i,t}, \end{aligned}$$

where $\gamma(HC)$ is Human Capital, β_0 is the constant coefficient, $\beta_1(Borrowers)$ is $\ln(\text{Active Borrowers})$, $\beta_2(GDPpc)$ is $\ln(\text{GDP per Capita})$, $\beta_3(Internet)$ is Internet Users, $\beta_4(Land)$ is Arable Land, $\beta_5(Young)$ is Young Population, $\beta_6(Health)$ is Health Expenditure, $\beta_7(Dem)$ is (Democracy), d_j is the dummy variable for the j -th cross-unit, a_j is its coefficient, and ε is the error term.

The full model (Table 6.3, model 4D), where human capital is regressed on microfinance and the latter is measured by gross loan portfolio, is expressed as:

$$\begin{aligned} \gamma(HC)_{i,t} = & \beta_0 + \beta_1(GLP)_{i,t-1} + \beta_2(GDPpc)_{i,t-1} \\ & + \beta_3(Internet)_{i,t-1} + \beta_4(Land)_{i,t-1} + \beta_5(Young)_{i,t-1} \\ & + \beta_6(Health)_{i,t-1} + \beta_7(Dem)_{i,t-1} + \sum_{j=1}^{j=1} a_j d_j + \varepsilon_{i,t}, \end{aligned}$$

where $\gamma(HC)$ is Human Capital, β_0 is the constant coefficient, $\beta_1(GLP)$ is $\ln(\text{Gross Loan Portfolio})$, $\beta_2(GDPpc)$ is $\ln(\text{GDP per Capita})$, $\beta_3(Internet)$ is Internet Users, $\beta_4(Land)$ is Arable Land, $\beta_5(Young)$ is Young Population, $\beta_6(Health)$ is Health Expenditure, $\beta_7(Dem)$ is (Democracy), d_j is the dummy variable for the j -th cross-unit, a_j is its coefficient, and ε is the error term.

Table 6.3 The effect of microfinance on social development in sub-Saharan Africa, from 2001 to 2014

<i>Dependent Variable: Human Capital</i>									
	<i>Baseline</i>	<i>Health Expenditure</i>	<i>Democracy</i>	<i>Full</i>	<i>Baseline</i>	<i>Health Expenditure</i>	<i>Democracy</i>	<i>Full</i>	
	<i>Model 1C</i>	<i>Model 2C</i>	<i>Model 3C</i>	<i>Model 4C</i>	<i>Model 1D</i>	<i>Model 2D</i>	<i>Model 3D</i>	<i>Model 4D</i>	
Ln(Active borrowers) _{t-1}	0.003* (1.829)	0.003* (1.956)	0.003* (1.832)	0.003** (2.031)	0.003*** (3.908)	0.003** (3.038)	0.003*** (3.003)	0.003** (2.522)	
Ln(Gross loan portfolio) _{t-1}									
Ln(GDP/capita) _{t-1}	0.067** (3.800)	0.134*** (8.683)	0.068*** (3.863)	0.136*** (8.948)	0.072*** (4.047)	0.140*** (8.484)	0.073*** (4.130)	0.142*** (8.676)	
Internet users _{t-1}	0.009*** (6.660)	0.008*** (6.999)	0.009*** (6.649)	0.008*** (7.000)	0.008*** (6.715)	0.007*** (6.912)	0.008*** (6.696)	0.007*** (6.913)	
Arable land _{t-1}	0.003*** (4.074)	0.003*** (4.074)	0.003*** (3.698)	0.003*** (3.763)	0.003*** (4.686)	0.003*** (3.982)	0.003*** (4.689)	0.003*** (4.025)	
Young population _{t-1}	-0.032*** (-7.141)	-0.024*** (-7.172)	-0.032*** (-7.098)	-0.024*** (-7.036)	-0.031*** (-6.919)	-0.024*** (-7.101)	-0.031*** (-6.869)	-0.024*** (-7.005)	
Health expenditure _{t-1}		0.001 (0.533)		0.001 (0.599)		0.001 (0.384)		0.001 (0.437)	
Democracy _{t-1}			-0.013 (-0.784)	-0.023 (-1.402)			-0.015 (-0.907)	-0.021 (-1.240)	
Observations	406	382	406	382	407	384	407	384	
Countries	33	33	33	33	33	33	33	33	
R ²	0.994	0.995	0.994	0.995	0.993	0.994	0.993	0.994	
Country fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	

Notes: T-values in parentheses; * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Regression models with Prais-Winsten correction for common autocorrelation (ARI), OLS panel-corrected standard errors, and country-level fixed effects. Constant coefficient measured, but not reported. Maximum time-series is 2001–2014 in all models, except models without variable health expenditure, where maximum time series is 2000–2014. Maximum time-series refers to the dependent variable

6.4 RESULTS AND DISCUSSION

The results of the first set of regressions are reported in Table 6.2.

First, active borrowers is employed as the main explanatory variable. The baseline model (1A) shows that, all other things equal, the number of active borrowers is positively related to economic development. The result is significant at the 99% level of confidence. Moreover, the result for our main explanatory variable remains substantially unaltered in model 2A, where we add a control for human capital, and in model 3A, where we add a control for forced migration. Also in the full model (4A), which includes all our control variables, the number of active borrowers is significantly related to economic development at the 99% level. According to model 4A, a 10% increase in active borrowers increases GDP/capita approximately by 0.1%.

Second, in models 1B–4B, we replace active borrowers with gross loan portfolio. Again, microfinance seems to have a positive impact on economic development. In the baseline model (1B), we find that gross loan portfolio is positively related to the dependent variable at the highest level of statistical significance. The result is robust across all models with gross loan portfolio. Adding human capital (model 2B) or forced migration (model 3B) does not change the estimations substantially. In the full model (4B), gross loan portfolio has a positive and statistically significant effect on economic development at the 99% level. Model 4B shows that, approximately, a 10% increase in microfinance gross loan portfolio increases GDP/capita by 0.1%. To sum up, the estimates of our first set of regressions show that microfinance increases economic development. The result is robust for two different indicators of microfinance. Moreover, the finding is consistent across all models.

As regards to the other independent variables, gross capital formation is positively related to economic development. The result is significant at the 99% level in all models. On the contrary, there is no significant association between development aid and economic development. Foreign direct investment has a very weak negative relationship with economic development, and the result is not significant when human capital is employed as a control variable. Also employment in agriculture is negatively related to economic development. The result is significant at the 99% level in all models. Human capital has a strong positive effect on economic development. The result is significant at the highest level of confidence and consistent in all models in which the human capital variable is included. On

the contrary, forced migration is inversely related to economic development: an increase in forced migration reduces GDP/capita. The result is significant at the 90% level in models 3A and 3B, and at the 99% level in the full models.

Table 6.3 reports a summary of the results of our second set of regressions.

As already mentioned, in this second set of regressions, human capital is regressed on microfinance and our chosen set of control variables. As before, we test two different indicators of microfinance: the number of active borrowers and gross loan portfolio. First, we test the effect of microfinance, measured by the amount of active borrowers, on human capital. *Ceteris paribus*, we find that a 10% increase in active borrowers leads approximately to a 0.003 unit increase in the human capital index. The estimation is consistent across all models, although it is significant only at the 90% level in models 1C, 2C, and 3C. In the full model (4C), the result is significant at the 95% level.

The positive relationship between microfinance and human capital is confirmed by the second sub-group of models in Table 6.2. Gross loan portfolio is positively related to human capital at the 99% level in models 1D and 3D, and at the 95% level in models 2D and 4D. The estimated coefficient shows that, a 10% increase in gross loan portfolio, leads—as before—approximately to a 0.003 unit increase in the human capital index. Regardless of the estimated specification, the additional control variables do not have any significant effect on the slope coefficient of our main explanatory variable.

When it comes to the control variables of our second set of regressions, we find GDP/capita, Internet users, and arable land to be positively related to human capital. The estimated effects are significant at the 99% level of confidence in all models (except for the coefficient of GDP/capita in model 1C). On the contrary, young population is inversely related to human capital in all models, and its coefficient is consistently negative at the 99% level of confidence. Our findings show that health expenditure and democracy do not have a statistically significant effect on human capital.

To sum up, our main findings support strongly the hypothesis that the diffusion of microfinance affects positively both economic and social development in sub-Saharan Africa. Whether microfinance is measured by the number of active borrowers or gross loan portfolio, the relationship is positive and statistically significant. Anyhow, it must be recognized as well

that neither the effect of active borrowers nor the effect of gross loan portfolio is massive. According to the full models, a 10% increase in active borrowers leads to a 0.1% increase in GDP/capita and 0.003 unit increase in the human capital index. Likewise, a 10% increase in gross loan portfolio leads to a 0.1% increase in GDP/capita and 0.003 unit increase in the human capital index. These results remain fairly stable from one model to another, adding robustness to the findings.

While the main focus of our research is on the nexus between microfinance and socio-economic development, we find also some interesting results regarding some of our control variables. First of all, we find robust evidence that economic development and human capital have a strong positive impact on each other in both directions. When it comes to the first set of models, surprisingly, our findings suggest that development aid does not stimulate economic development in the examined sample of countries. The absence of any relationship between development aid and economic development might explain why many countries have not been able to escape endemic poverty, despite large inflows of development assistance. Perhaps, development aid benefits only a restricted amount of people, and thus, does not create economic well-being at the general level. When it comes to the second set of models, unexpectedly, we do not find any significant relationship between democracy and human capital. Perhaps, the type of political regime is not so important as long as public institutions are efficient and uncorrupt.

6.5 CONCLUSIONS

As we have seen, many academics and development practitioners advocate the importance of microfinance on economic and social development, at both the individual and the more general level. However, many others suggest that the positive hype around microfinance is exaggerated. According to these less optimistic views, microfinance alone cannot play any significant role in alleviating poverty and creating social development. It has been argued that in some cases, microfinance can even exacerbate existing conditions of poverty. Existing empirical literature confirms that the impact of microfinance on economic and social development might be twofold. Depending on the context and the selected sample, some studies point to positive effects, while other studies suggest the opposite.

While most studies on the topic have analyzed the impact of microfinance on economic and social development in micro-level contexts, such

as rural villages and low-income neighborhoods, the number of cross-national large-N studies on the topic remains surprisingly limited. This chapter aims to fill this gap in literature by providing new empirical evidence on the nexus between microfinance and economic and social development in sub-Saharan Africa. In recent years, the region has seen an exponential increase in microfinance services and customers, attracting the interest of both researchers and policymakers, who have questioned whether microfinance can really be an effective tool to fight poverty in sub-Saharan Africa. Micro-level studies cannot provide an answer to this question, since their results are contextual by definition. Hence, more general macro-level studies on the issue are essential, if we want to understand more thoroughly the aggregate effects of microfinance to the society as a whole. In order to make good decisions on the topic, policymakers need to be guided by both micro- and macro-level knowledge.

The main findings of our study show convincingly that microfinance has a positive impact on both economic and social development in sub-Saharan Africa. The findings are robust to different specifications and two different measures of microfinance. Thus, microfinance seems to play a role in alleviating poverty and increasing well-being. While the result is robust across models, we must acknowledge also that the magnitude of the impact of microfinance on socio-economic development is relatively small. Anyhow, since our dataset consists in data regarding only some, but not all, MFIs, at least our results cannot be upward biased. It is more than likely that the inclusion of data on further MFIs into our analysis would lead to larger estimated effects. In any case, policymakers know now that microfinance is beneficial not only to the individual microfinance customer but also for the society as a whole.

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Environmental Impact Investments in Europe: Where Are We Headed?

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7.1 INTRODUCTION

Environmental investing is high on the European public agenda.¹ The European Union (EU) is experiencing a funding gap in meeting both the goals of the 2015 Paris Agreement on climate change and the goals of the United Nations 2030 Agenda for Sustainable Development. The funding gap is estimated at approximately EUR 180 billion per year (European

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Commission 2016a), and the resources needed to fill the gap are expected to come from the private sector because the European balance sheet has already committed public resources for the scope (European Commission 2018a).

Thus, since 2016, the European Commission has identified the need to increase private environmental investments and has promoted several expert and technical groups to draft a road map to foster private investments in sustainable environmental activities. The process is still ongoing; however, the European Commission (2018a) has drafted three regulatory proposals on sustainable finance aimed at introducing a taxonomy qualifying an activity as environmentally sustainable, disclosing sustainable investment and environmental risks, and adopting an environmental benchmark with the purpose of evaluating an investment portfolio under climate targets. These proposals may produce extensive changes in the sustainable finance panorama, if definitely approved.

The financing of environmental issues has also captured large interest among scholars and practitioners, who have explored the field under several umbrella terms: green finance (e.g., Lindenberg 2014), environmental finance (e.g., Anderson 2016), carbon finance (e.g., Labatt and White 2011), climate finance (e.g., Buchner et al. 2013), conservation finance (e.g., Huwyler et al. 2016; Kay 2018), and environmental impact investments (e.g., Harold et al. 2015; European Commission 2016b).

The term “environmental impact investments” refers to an investment that intentionally generates a measurable environmental impact and a financial return (Global Impact Investments Network—GIIN 2016). The features of intentionality and impact measurement generally distinguish impact investments from other sustainable investments, such as responsible investments, green finance, and environmental finance.

Impact investing may occur through a set of financial models involving many different asset classes, among them equity and debt (Social Impact Investments Task force—SIIT 2014; Höchstädter and Scheck 2014). Furthermore, impact investing may be realised through a set of traditional financial models (e.g., bonds or investment funds) or innovative financial models (e.g., crowdfunding and impact bonds).

Academic contributions have addressed impact investing in environmental projects through the analysis of single case studies (Pascal et al. 2018; McFarland 2018; Kish and Fairbairn 2018) or environmental sub-sectors (Harold et al. 2015; Carè and De Lisa 2019; Horster 2018; Mangram 2018; McCallum and Viviers 2018). No study has analysed environmental impact investments in Europe in depth.

Thus, given both the gap in the impact investing literature and the regulatory momentum in Europe, the aim of this chapter is to explore the environmental impact investment panorama in Europe in light of the new regulatory process on sustainable finance and of worldwide impact investing practices. Thus, the chapter aims to propose a holistic view of environmental impact investments in Europe, assessing the theme from an academic and regulatory perspective and from a practical perspective by highlighting potentialities and challenges.

The methodology adopted is a multiple case study analysis. The data are collected from publicly available reports and documents.

The chapter contributes to the impact investment literature by showing that the terms sustainable finance and impact investing are increasing their points of contact, especially considering the measurement aspect. However, in Europe, some financial models for environmental impact investments remain at an infant stage. Specifically, innovative financial models such as environmental impact bonds (EIBs) are still in the design stage, while they have been developed in other jurisdictions (e.g., the United States) since 2016. Thus, useful policy recommendations may be drafted because of the need to foster the implementation of innovative impact models, especially those based on public-private partnerships, such as environmental impact bonds.

The chapter is structured as follows. Section 7.2 assesses the academic panorama on environmental investments, focusing on the (un)defined perimeter and on the main financial models. Section 7.3 analyses the first attempt to regulate sustainable investments in the European Union, focusing on the main regulatory steps and on the drafted definition of sustainable finance. Section 7.4 defines the research design, while Sect. 7.5 presents and discusses case studies of environmental impact investments in Europe. Finally, Sect. 7.6 concludes.

7.2 THE PANORAMA OF ENVIRONMENTAL IMPACT INVESTING: DEFINITION AND FINANCIAL MODELS

The environmental (and social) impact investment market has developed for many years in the absence of a regulatory definition. Thus, several definitions have been established by practitioners and academics since the label “impact investments” was coined at the Rockefeller Centre in 2007 (for more details, see, e.g., Höchstädter and Scheck 2014; Rizzello et al. 2016; Chiappini 2017). Among the most relevant definitions of impact investments are some provided by international bodies such as the GIIN (2016), the Social Impact Investments Taskforce promoted by the G8 countries (SIIT 2014), and the Organisation for Economic Co-operation and Development (Wilson et al. 2015). Substantial definitional alignment has been achieved over the years in terms of the main impact investment features: intentionality, measurability of social impact, and a financial return in line with or below the market rate of return of similar investments (Höchstädter and Scheck 2014). Recently, the GIIN (2019a, p. 1) has refined “the fundamental tenets” of impact investments, on the basis of the expectations of worldwide impact investors, to include the following aspects:

- the definition of a transparent social and financial goal and the articulation of the investment goals in the investment thesis and in the strategies used to achieve the goal;
- the setup of qualitative and quantitative indicators to evaluate the achieved impacts against target impacts; and
- the identification of potential risks while implementing the impact goals and the development of mitigation plans.

These elements contribute to strengthening the impact investing perimeter.

Impact investments are realised through investments in several asset classes (Drexler and Noble 2013) and financial models (SIIT 2014). However, the literature has not yet extensively investigated environmental impact models and has not identified a specific taxonomy of impact investment models that is useful for environmental purposes.

In terms of the literature on environmental investments, it is mainly focused on explorative analyses limited to single case studies (Banga 2019; Pascal et al. 2018; McFarland 2018; Kish and Fairbairn 2018) and environmental sub-sectors (Harold et al. 2015; Horster 2018; Mangram 2018; McCallum and Viviers 2018). Only a few studies have focused on European countries (e.g., European Commission 2016b; Migliorelli and Dessertine 2017). The European Commission (2016b), for instance, has recognised both the pivotal role of environmental impact investments and the marginal diffusion of this type of investment.

In terms of model taxonomy, it appears clear that all the financial models generally used in the impact investing field may be used to finance environmental impact projects and/or organisations. Financial models used in the impact investing field present more or less innovative characteristics and different stages of diffusion (Italian National Advisory Board on G8 Taskforce 2014; Global Steering Group for Impact Investment 2018). For instance, microcredit and lending can be considered mature models, while bonds and impact investment funds are considered well-developed models. Impact bonds and crowdfunding appear to be the most innovative impact models.

Similarly, in the environmental panorama, there are more or less innovative financial models, such as environmental/green bonds, environmental impact funds, equity crowdfunding, and EIBs.

Bonds allow investors to finance environmental challenges through debt. The global panorama offers investments in “environmentally aligned” bonds and in “green” bonds. Green bonds can be distinguished from environmentally aligned bonds because the issuers of a green bond must identify a precise green bond framework in advance of issuance, and then they must provide a report about the resulting environmental impact (Shishlov et al. 2016). The International Capital Market Association (ICMA) developed in June 2018 a set of guidelines for green bond issuance: the Green Bond Principles. They aim to “promote integrity to the green bond market through guidelines that recommend transparency, disclosure and reporting” (ICMA 2018). The Climate Bonds Initiative (CBI) identified in 2018 a “universe” of USD 1.45 trillion of climate-aligned bonds, including USD 389 billion in green bonds (CBI 2019).

Investment funds are collective investment vehicles that pool capital from many investors with the aim of channelling them towards several green projects or companies (Chiappini 2017). There are over 400 impact investment funds listed in ImpactBase.² The funds are invested across several asset classes, sectors, and geographies. Several impact funds target environmental impact, while others target both social and environmental projects. Specifically, 140 funds target environmental themes, investing globally (26 funds) or in developing (51 funds) or developed countries (61 funds) (ImpactBase 2019b).

Box 7.1 presents two cases of traditional environmental impact investments. The most innovative financial models in the environmental impact investment panorama include crowdfunding and environmental impact bonds. Equity crowdfunding allows investors to finance investments in public enterprises that are highly involved in environmental projects. Although the number of publicly listed impact enterprises is currently quite small and restricted to few specialised market platforms, such as London's Social Stock Exchange, impact investors demonstrated greater ability to find liquid trading opportunities in impact enterprises through impact-focused, equity-crowdfunding platforms. A relevant case may be represented by the issue, in 2014, of GBP 2 million of Triodos Renewables shares through the crowdfunding platform Trillion. Despite the relevance of the topic, empirical evidence on green crowdfunding is still limited (Adhami et al. 2017), and no evidence is available about the number of environmentally focused crowdfunding platforms. The newest and the most innovative (environmental) impact model is represented by the EIB. In a nutshell, EIBs are financial models built on pay-for-performance contracts. Specifically, impact investors provide upfront capital to start a project able to generate environmentally measurable outcomes. In such a financial scheme, initial impact investments will be triggered only once pre-established impact performance targets are achieved. For these reasons, the measurability of the pre-defined outcomes is an essential requisite of such an impact investing tool. There is only one EIB case registered in the Social Finance Social Impact Bond online database,³ and this was issued in Washington, DC. Box 7.2 reports cases of innovative impact models.

Box 7.1 Traditional Financial Models for Environmental Impact Investments

The World Bank Green Bond

The World Bank is a pioneer in the green bond market. Since the first issue in 2008, the World Bank has issued the equivalent of almost USD 13 billion in green bonds in 20 currencies through 150 transactions for both institutional and retail investors around the world. Since then, the World Bank's green bond framework (including the issuance, impact reporting, and process phases) has pioneered the development of the green bond market and expansion. As of June 30, 2018, World Bank green bonds had financed 91 eligible projects, with the greatest regional exposure in East Asia and the Pacific Region (38% of the total commitments), for a total of USD 15.4 million in commitments (World Bank 2018). The World Bank provides detailed reporting about the impacts of every project on its website as well as in the annual green bond impact report. Indeed, one of the key attractions of green bonds is the transparency and the verification processes that underpin these bonds. Such disclosures provide investors with assurance that their money is being invested in assets that provide environmental benefits.

The Essex EMEF Fund

The Edwards Mother Earth Foundation (EMEF) was started in 1997 by Jane and Robert Edwards as a financial vehicle through which they could promote a healthy earth. In 2014, the EMEF's mission evolved from what the foundation called "checkbook philanthropy" to a singular focus on impact investing for climate change. Equipped with a USD 35 million portfolio, EMEF is a true pioneer in this pursuit by dedicating, since 2015, 100% of its investable assets to impact investments. After this mindset change, EMEF started investing for impact with three different asset managers—Aperio Group, Essex, and Seattle Northwest. With Essex, EMEF invests in more than 40 companies that enable greater natural resource and energy efficiency—while also providing positive returns for investors. Specifically, the fund impact strategy is centred on public companies with an appealing thematic focus. As regards financial performance, from June 2015 to June 2018, the fund obtained an annualised return of 1.90% and cumulative returns of 5.90%.

Source: Author's elaboration

Box 7.2 Innovative Financial Models for Environmental Impact Investments

Triodos Renewable Share

The issue price was GBP 2.28 per share, with a minimum amount of GBP 50.16 or 22 shares. The share issue was successfully underwritten by 1,048 investors for a total of GBP 3.5 million in shares sold (the tipping point was fixed at GBP 2 million). With regard to environmental impact, the platform evidenced that an investment of GBP 3,250 in Triodos Renewable can produce (a) greenhouse gas emission savings equivalent to the emissions produced in a lifetime by one person and (b) clean electricity to power four homes.

The District of Columbia Water Environmental Impact Bond

In 2016, the DC Water and Sewer Authority started the world's first environmental impact bond (EIB) with the aim of funding the construction of green infrastructure to manage stormwater runoff and improve the District's water quality. Specifically, the EIB funded the installation of 20 equivalent impervious acres of green infrastructure designed to mimic natural processes to absorb and slow surges of storm water during periods of heavy rainfall in the Rock Creek sewer shed of the District of Columbia. The environmental outcome selected for the contract is the percentage reduction in storm water runoff per acre. The EIB is expected to reduce storm water runoff per acre by anywhere from a minimum of 18.6% to a top performance of 41.3%. The investments (USD 25 million) were raised (differently from a classical Social Impact Bond funding scheme) by means of a municipal bond and were provided from the Goldman Sachs Urban Investment Group and Calvert Foundation. Throughout the five years of the bond, investors will receive a semi-annual coupon payment of 3.43%. At the end of the project, investors will receive a contingent payment based on the effectiveness of the green infrastructure in reducing stormwater runoff only in case of a reduction over 41.3%. In the case of EIB under-performance (percentage of reduction less than 18.6), investors owe a risk share payment to DC Water of USD 3.3 million.

Source: Author's elaboration.

7.3 ENVIRONMENTAL IMPACT INVESTMENTS IN EUROPE: AN OVERVIEW

An initial attempt to regulate sustainable finance has been in progress in the European Union since 2016, when the European Commission recognised the need to close the gap between investments needed to meet climate targets and current investments in the environmental sector (Technical Expert Group on Sustainable Finance—TEG 2018). A clear perimeter of sustainable finance is recognised to limit the phenomena of sustainable-washing⁴ to increase investor protection as well as the funding of sustainable initiatives. This section traces the fundamental phases of the European regulatory process and identifies the main aspects of the current regulatory proposals.

7.3.1 *The (Ongoing) Regulatory Process*

To meet the goals of the Paris Agreement on climate change and the Sustainable Development Goals of the 2030 United Nation Agenda, the European Commission promoted the establishment of the High-Level Expert Group (HLEG) on Sustainable Finance in December 2016 with the purpose of identifying an overall European strategy. The HLEG (2018) pointed out some policy recommendations to foster the growth of the sustainable finance market in January 2018.⁵ Following the HLEG's (2018) guidelines, the European Commission has published The Action Plan (European Commission 2018a) in March 2018 that included some regulatory proposals on sustainable finance. Specifically, the proposals referred to the introduction of a taxonomy qualifying an activity as environmentally sustainable, the disclosure on sustainable investments and environmental risks, and the adoption of an environmental benchmark with the purpose of evaluating an investment portfolio under climate targets. The regulatory process is still ongoing. In fact, the European Commission, after the release of the “Proposal for a Regulation of the European Parliament and of the Council on the establishment of a framework to facilitate sustainable investments” (European Commission 2018b), established the TEG in July 2018 with the aim of drafting a more exhaustive taxonomy of sustainable finance on the basis of stakeholder consultation. The final report was published in June 2019; however, the TEG will continue the work on the taxonomy until late December, when the final report will be submitted to the European Commission (TEG

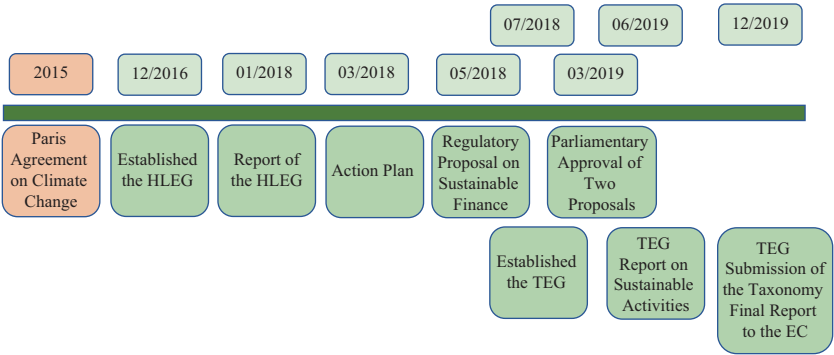


Fig. 7.1 The ongoing regulatory process of sustainable finance in Europe. (Source: Authors’ elaboration)

2019). The other two lines of the European Commission’s regulatory proposals concerning disclosure in sustainable investments and the adoption of an environmental benchmark have, in turn, been approved with some amendments by the European Parliament on March 28, 2019 (European Parliament 2019). Figure 7.1 summarises the regulatory process.

7.3.2 *The Designed Perimeter of Sustainable Finance*

The proposed perimeter of sustainable finance (still partially undefined) is based, first of all, on the determination of whether an economic activity is (or is not) environmentally sustainable. The European Commission (2018b) set a general framework based on the environmental relevance of the economic activity performed by a specific company. If a company performs an economic activity that contributes to environmental objectives—for example, climate change mitigation—the investment in that company can be considered a sustainable investment. By contrast, when a company performs both sustainable activities and other activities, only assets employed to finance environmentally sustainable activity can be considered sustainable investments.

Figure 7.2 summarises the proposed framework of sustainable investments in the European Union.

The European Commission (2018c) also set several information requirements for intermediaries that provide sustainable instruments.

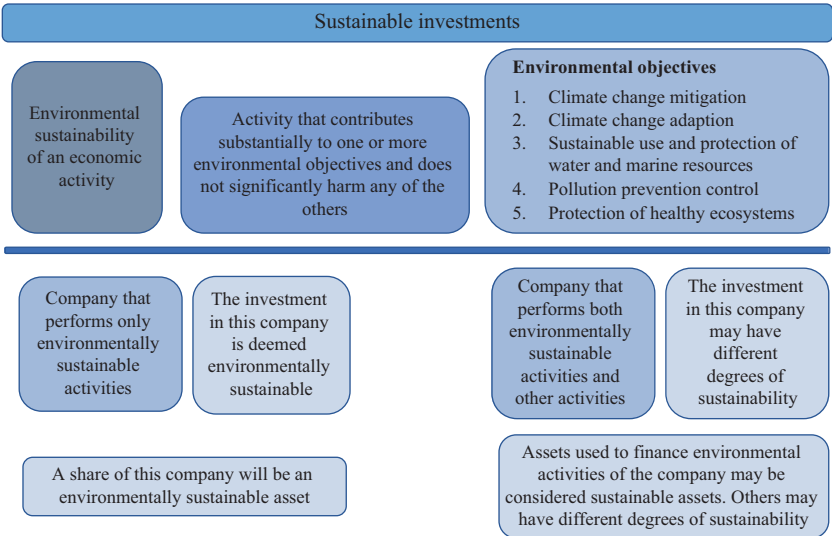


Fig. 7.2 Sustainable investments in the European Commission’s proposal. (Source: Authors’ elaboration based on European Commission (2018b))

According to the European proposal, a list of binding information is needed in the different phases of contracts (pre-contractual phase and post-contractual phase) and should also be available on the intermediary’s website. These information prescriptions regard, for the first time, the measurability of social impact. Article 5, on pre-contractual information, requires that if a financial product has a sustainable aim, it should disclose the targeted sustainable aim (also expressed by an index) and how the aim will be achieved (European Commission 2018c). Post-contractual information must report “(a) the overall sustainability-related impact by the financial product by means of relevant sustainability indicators, (b) where an index has been designated as a reference benchmark, a comparison between the overall impact of the financial product with the designated index and a broad market index in terms of weighting, constituents and sustainability indicators” (p. 25). Moreover, the following information must be included on the website: “(a) a description of the sustainable investment target and (b) information on the methodologies used to assess, measure and monitor the impact of the sustainable investments selected for the financial product, including its data sources, screening

criteria for the underlying assets and the relevant sustainability indicators used to measure the overall sustainable impact of the financial product” (p. 24).

7.4 RESEARCH DESIGN AND METHODOLOGICAL APPROACH

This chapter investigates the environmental impact investment landscape in light of the European regulatory view on sustainable finance using a combination of existing literature and selected case studies. Given the nature of our study, a qualitative approach based on case study analysis appears adequate (Yin 2017).

Currently, the European regulatory process is being completed, but it seems to be going in the direction of environmental impact investing. In addition, the European environmental investment scenario is very promising, although it appears to be characterised by numerous innovative, yet incipient, financial models. Therefore, it would seem that an overview of relevant best practices and initiatives of “environmental impact investments” is ideal for facilitating the development of these financial approaches.

In this vein, our exploration could lead to useful suggestions for regulators and practitioners. The literature overview is able to provide a basis for mapping the empirical evidence on environmental impact investments.

The sample of European environmental impact investments was not selected randomly; we used an information-oriented selection approach (Flyvbjerg 2011). Therefore, our analysis complies with the following criteria (Yin 2003): (a) transparency, (b) reliability, and (c) scientific interest.

Our sample includes cases established in Europe until the date of analysis (March 20, 2019).

7.5 ENVIRONMENTAL IMPACT INVESTMENTS IN EUROPE

In this section, we analyse and discuss four case studies of environmental impact investments in Europe. More specifically, we analyse the Climate Awareness Bond (CAB) issued by the European Investment Bank, the Green for Growth impact fund, and the green project Mar de Fúles, financed through the crowdfunding platform Citizenergy. Finally, we give an overview of the launch of Europe’s first environmental impact bond, scheduled in Finland in 2019.

7.5.1 *The European Investment Bank Climate Awareness Bond*

The European Investment Bank was the first issuer of green bonds in Europe in 2007. The first bond was called the Climate Awareness Bond and supported climate projects. Currently, the European Investment Bank is one of the largest issuers of green bonds, with over EUR 23.5 billion raised across 11 currencies and EUR 4 billion raised in 2018 (European Investment Bank 2019).

Over the years, the Bank has financed 76 projects in 29 countries, with over EUR 3.2 billion in disbursements. The project locations were as follows: 60 projects were in European Union Member States (accounting for EUR 2.8 billion), and 16 projects were in 14 countries outside the European Union (accounting for EUR 374 million). Institutional investors, as fund managers, represent the main investors in green bonds. Demand mainly comes from European investors, who represented 74% of investors in the Climate Awareness Bond over 2014–2018 (European Investment Bank 2019).

The targeted financial returns are in line with the market rate, while the impact themes targeted by the European Investment Bank include renewable energy and energy efficiency. The environmental impact achieved is measured through several indicators (e.g., absolute greenhouse gas emissions, greenhouse gas emissions saved, renewable heat capacity added, and renewable electricity capacity added) and is reported to stakeholders. The reporting is aligned with the guidelines of the Green Bond Principles,⁶ and the report is available on the European Investment Bank website.

7.5.2 *Green for Growth Fund*

The Green for Growth Fund (GGF) was the first specialised fund to advance energy efficiency and renewable energy in Southeast and Eastern Europe, as well as in the Middle East and North Africa. Located in Luxembourg, the fund was begun in 2009 by the European Investment Bank and Kreditanstalt für Wiederaufbau Development Bank. The GGF provides investments in the energy efficiency and renewable energy sectors both indirectly (through financial institutions) and directly (through non-financial institutions, for example, renewable energy companies and energy service companies).

The GGF investments have been made through several financial instruments (e.g., medium- and long-term senior loans, subordinated loans, syndicated loans, letters of credit, guarantees, mezzanine debt

instruments, and local debt securities), and the fund collects money through the issuance of share and note tranches, characterised by different risk-return profiles.

By May 2018, the total available funding was EUR 564.8 million, while the total committed investment portfolio accounted for EUR 482.9 million. The targeted financial returns are in line with the market benchmark.

The measurement and reporting of social impact represent a central element for the transparency and integrity of the GGF. To achieve this objective, the environmental performance of any single loan and sub-loan is individually assessed and monitored by following the relevant European Union directive on energy end-use efficiency and energy services.⁷ More specifically, the GGF uses an Internet-based tool named “*e-save*” to assess the environmental and climate impact of its lending business. Finally, the environmental impacts are published in its annual reports. Since its inception, GGF has made investments that annually saved 1.9 million megawatt hours of energy and reduced CO₂ emissions by 495,551 metric tons (Green for Growth Fund 2018).

7.5.3 Citizenergy: A European Environmental-Focused Impact Crowdfunding Platform

Citizenergy is one of the European crowdfunding platforms that raises money for environmental purposes. Created in 2014 thanks to a funding programme of the European Commission, the platform focuses on renewable energy projects aimed at responding to a variety of needs of both renewable energy source promoters and potential environmental impact investors. This platform allows funders to take part in these projects by equity or debt. One of the main projects financed in this platform is Mar de Fulles. This is an eco-tourism project with the goal of establishing a sustainable eco-management network of a bioclimatic tourist complex, next to a nature park in Castello, Spain. Specifically, the impact goal was to crowd-finance the budget needed for an off-grid solar PV system and batteries. Mar de Fulles sought to obtain all of its electricity through solar PV and energy storage with a 46 kilowatt solar generation system with 592 kilowatt-hours of battery storage. The budget for the entire installation was EUR 0.28 million, with EUR 0.17 million of those funds ultimately coming from the collective investments on the crowdfunding platform. In four months, 129 investors pledged amounts between EUR 50 and EUR 23,000, with an average investment of EUR 1,349. Financial returns to investors appear to be concessionary. It is interesting to note from a survey

conducted among investors after the crowdfunding campaign emerged that 70% (46/65) of them mentioned both financial return and environmental impact as their main investment motivation.

The expected impact, as evidenced in the offer, relates to two dimensions: avoidance of CO₂ and renewable energy generated purely from clean and renewable sources. To estimate the environmental impact metric, the avoidance of CO₂ emissions was calculated by counting the amount of fossil fuel that each solar system or solar lantern will replace. No impact report or information is currently available about the impact achieved.

7.5.4 Towards Europe's First Environmental Impact Bond

To date, no environmental impact bond has been launched in EU countries. However, one EIB is planned to be issued in Finland in the second half of 2019. Indeed, within the targets of Finland's Action Plan for a Circular Economy, the launch of Europe's first EIB is on the agenda of the Ministry of Agriculture and Forestry. The proposal of launching a Finnish EIB came from a 2017 workshop in which more than 50 experts discussed the suitability of the SIB model for the achievement of environmental protection, bio-economy, and circular economy goals. The workshop produced two main streams of discussion with the goal of producing two feasibility evaluations of an EIB launch in one of the two themes. The first area of analysis was concentrated on the environmental problem caused by livestock manure in the Archipelago Sea catchment area. An EIB should aim to reduce emissions of nitrogen and phosphorus into the Archipelago Sea by promoting the transition to a more sustainable production process. The outcomes identified were the increase of the recycled manure business and tourism, as well as the improvement of Finland's nutrient self-sufficiency and the water quality of the Archipelago Sea.

The second line of discussion was related to municipalities and how to help them develop effective solutions to serve as miniature laboratories for innovations oriented towards producing in a carbon-neutral and resource-wise way. The outcomes identified were the reduction in greenhouse gas emissions in the participating towns and cities by at least 80% and the reduction in the use of natural resources. Only one of the projects will be selected for the launch of Europe's first EIB.

The main characteristics of these cases are represented in Table 7.1.

Table 7.1 European environmental impact investment cases

<i>Name</i>	<i>Asset Class</i>	<i>Impact Investor/ Asset Issuers</i>	<i>Environmental Targets</i>	<i>Total Amount of Capital Raised</i>	<i>Financial Returns Profile</i>	<i>Impact Strategy</i>	<i>Social Impact Disclosure Profile</i>
European Investment Bank Climate Awareness Bond	Green bond	European Investment Bank	Renewable energy; energy efficiency	EUR 23.5 billion (in ten years)	Market rate	Product-/ process- based	Expected environmental impact not made explicit analytically Environmental impact measured analytically ex post Annually reported
Green for Growth Fund	Impact Fund	Initially partnered by European Investment Bank and KfW Development Bank (at end 2018 includes 58 financial partners)	Renewable energy; energy efficiency	EUR 482.9 million	Market rate	Product-/ process- based	Expected environmental impact not made explicit Environmental impact measured analytically ex post and periodically reported (by following innovative measurement standards)

Mar de Fúles project	Alternative investment (reward based-crowdfunding)	Citizenenergy—crowdfunding platform	Renewable energy/energy efficiency and natural resources protection	EUR 0.174 million	Concessionary	Place-/territory-based	Expected impact made explicit analytically in the offer
Europe's first Environmental Impact Bond in Finland	Environmental Impact Bond	—	—	—	—	—	No ex post specific measurement available

Source: Authors' elaboration

With the exception of the environmental impact bond, for which information is not publicly shared, the other cases of European impact investments show some common features, synthesised as follows:

All financial models recognise renewable energy and energy efficiency as specific environmental aims. At the same time, all financial models target concessionary financial returns or market rate returns. By contrast, the models present some differences in terms of environmental impact measurement.

Those characteristics can be analysed through the lens of the new European regulatory process and of impact investment best practices. Specifically, all the models appear perfectly in line with impact investment best practices in terms of intentionality of achieving the environmental impact and target financial returns. Indeed, the analysed cases do not target speculative returns, as highly auspicated by international practitioners and organisations (e.g., Wilson et al. 2015).

However, the analysed cases do not appear completely in line with best practices, and the new European regulatory proposal on sustainable finance when the considered feature is the measurement of social impact and reporting. In particular, the processes adopted by the Green for Growth Fund and by the European Investment Bank bonds appear compliant with such practices and regulations, while the equity-crowdfunding model examined does not adopt measurement or reporting practices. This may be attributable to underdeveloped measurement practices connected to such innovative models (Gajda and Mason 2013).

Figure 7.3 represents the European case studies in light of impact investing best practices and European regulatory momentum. Specifically, Fig. 7.3 shows that green bond and environmental impact funds fall within the perimeter of impact investing, while crowdfunding gravitates in the orbit of sustainable finance. The current study did not assess the transparency character of financial models for impact investments.

7.6 CONCLUSIONS

This chapter contributes to the existing literature on impact investing in the following ways. First, the chapter highlights that the emergent European regulation seems to be going in the direction of environmental impact investing. Indeed, although the European Commission refers to “sustainable finance” in the proposed regulation, the attention paid to the measurement topic echoes the typical feature of impact investments. Other

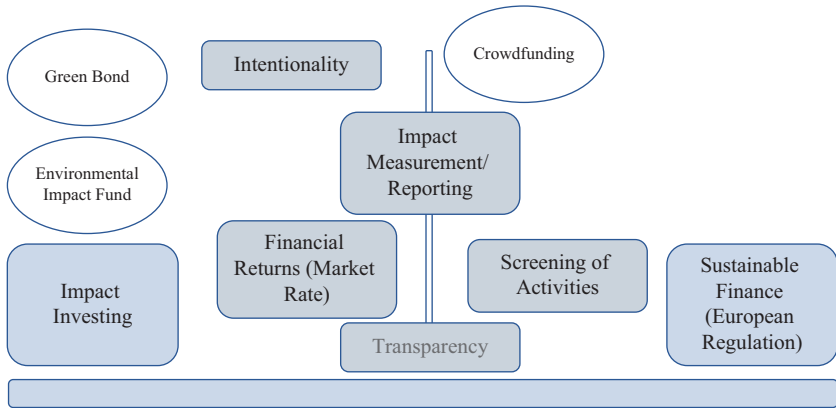


Fig. 7.3 The positioning of the European case studies. (Source: Authors' elaboration)

elements, however, remain typical of sustainable finance, such as the screening between environmental and non-environmental activities. Practitioners seem to have already benefited from the European regulatory proposal through, for instance, the GIIN (2019a) redefinition of “the four fundamental tenets” of impact investments, designed principles that seem to share some aspects of the proposed European regulatory framework, such as transparency and the need for qualitative and quantitative impact targets. Thus, regulation may be working as a “game changer” on a large scale. Indeed, regulation—as highly recommended for many years by practitioners and scholars (e.g., SIIT 2014; Chiappini 2017; Chiappini 2018; GIIN 2018)—will be essential to spurring environmental impact investment growth and facilitating efficient capital allocation.

Second, this study provides a more holistic overview of the evolution of environmental impact investments by including financial models not universally included in market reports or academic contributions. In particular, we include green bonds and crowdfunding. The reasons for such a lack of uniformity may be varied. Not all green bonds may be labelled as impact investments, especially green bonds issued outside any international impact standard reporting and measurement. On the other hand, crowdfunding for impact projects and enterprises have seen only in the last few years the birth of specific impact-oriented platforms that follow the impact industry standards.

Third, this study analyses the European environmental impact investment panorama in light of the new European regulatory framework on sustainable finance and of worldwide impact investing practices. The European panorama, pioneering in terms of regulation, does not, by contrast, appear equally innovative from the perspective of financial models. Specifically, environmental impact investing is experiencing a delay in Europe with environmental impact bonds (EIBs). A first European EIB is currently under design by Finland, while the first EIB in the world was developed in 2016. However, even in the absence of an EIB in the European environmental impact investment arena, other innovative models are at work in the area. This is the case of crowdfunding. The confirmation of such an impact investing market trend is the growing creation of crowdfunding platforms focused exclusively on impact investments, especially in continental Europe.

Finally, the analysis demonstrates that the European panorama of environmental impact investments is not fully compliant both with the European proposal on sustainable finance and with the overall guidelines of impact investments. The crowdfunding platform appears to be less compliant, especially in terms of impact measurement. In other words, the results show that European green bonds and environmental impact funds fall within the perimeter of impact investing, while European crowdfunding moves within the orbit of sustainable finance.

Future research should strengthen our analysis through the evaluation of whether these investments are also in line with the regulatory proposal on transparency (European Commission 2018c). Thus, future studies may analyse in depth the pre- and post-contractual information as well as websites of intermediaries offering environmental impact products with the purpose of assessing whether European products are already compliant with the proposed regulation. Moreover, future research may assess the overall panorama of environmental impact investing, here represented by case studies. The exhaustive assessment of European impact investing may be useful to policymakers involved in the promotion of sustainable products.

The study suggests some policy recommendations. European governments should consider an environmental impact bond within the financial architectures that are able to play a critical role in the financing of environmental targets. Indeed, this type of model allows public administrations to set up specific impact targets and to manage the overall investment process, paying a financial return only if the environmental target is achieved. The

collaborative scheme may produce benefits for all parties, but especially in terms of impact achievement (La Torre et al. 2019). Thus, an EIB should be seen as a way to complement both public and private investments (and commitments) towards European environmental goals. Thus, a rethinking of European strategies towards a green economy should also include considerations of which financial models may be fostered and supported, including through ad hoc fiscal policies. This appears essential to help the growth of the European environmental impact investment industry.

NOTES

1. This study represents a research output within the research project (SIF16_00055) “An Italian platform for impact finance: financial models for social inclusion and sustainable welfare” (funded by the Italian Ministry of Education, Universities and Research).
2. ImpactBase is “a powerful online search tool, created to bring order to a fragmented and inefficient marketplace of impact investing funds and products” (GIIN 2019b). Additional information is available at <https://www.impactbase.org/learn-more-about-funds>
3. The Social Impact Bond global database is a full list of social impact bonds issued worldwide. The map is available on the Social Finance website. Social Finance is an organization specialised in impact finance advising. The database is available at: <https://sibdatabase.socialfinance.org.uk/>
4. The term sustainable-washing refers to all marketing actions aimed at including a financial instrument under the lens of sustainable finance even if the financial instrument does not present features of a sustainable instrument. Chiappini (2017) showed how much the theme of investment-washing is relevant for impact investment funds in the international panorama, focusing on environmental, social, and social-environmental funds.
5. Specifically, the HLEG (2018) highlights eight recommendations: (a) the identification of a robust classification of sustainable finance; (b) the need for clients’ informed consent and disclosure in sustainable practices and investments; (c) the need for disclosure of climate change risk; (d) the development of European sustainable finance standards; (e) the establishment of a “Sustainable Infrastructure Europe facility” to expand the quality of sustainable assets; (f) the rethinking of governance in favour of sustainable finance practices; and (g) the enlargement of powers of the European Supervisory Authority.
6. The Green Bond Principles (GBP) clarify the approach for the issuance of a green bond. Specifically, an issuance aligned with the GBP should promote a step change in transparency that facilitates the tracking of funds into environmental projects, while simultaneously aiming to improve insight into the estimated impact of the projects.
7. The Energy Efficiency Directive contains a set of measures to help the European Union reach its 20% energy efficiency target by 2020.

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The Increasing Importance of Green Bonds as Instruments of Impact Investing: Towards a New European Standardisation

Maria Cristina Quirici

8.1 INTRODUCTION

In recent years, the Green Bonds market has grown rapidly, and also the composition of green bond issuances has evolved considerably over time. Green Bonds are a particular category of Sustainable Development Bonds that represent financial instruments useful to reach the Sustainable Development Goals (SDGs) of United Nations (UN) 2030 Agenda and, at the same time, one of the most important instruments of Impact Investing. In fact, Green bonds' use of proceeds that are specifically aimed at financing environmental or climate-change projects makes them perfectly aligned with the SDGs.

But the current level of investments is not sufficient to support an environmentally and socially sustainable economic system. It's necessary to

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reorient capital flows towards sustainable investments, in order to achieve sustainable and inclusive growth. The existing gap can be considered a consequence of the lack of clarity among investors regarding what constitutes a sustainable investment and also of the lack of clarity about what makes a bond green. There isn't a univocal definition of Green Bond, and the various existing definitions and labels for green bonds cause problems to the investors, who could have benefits from more consistent standards. Moreover, there is another problem: how can investors be sure that the proceeds of green bonds are invested in an environmentally friendly way and not merely *green-washed*? There are many ways of assessing the bond greenness, and various organisations have started to provide green label certifications to certify as green a bond issuance: it's possible to consider both Climate Bonds Certification, Centre for International Climate and Environmental Research (CICERO) Second Opinions and rating agencies' valuations, such as *Moody's Green Bond Assessments* or *Standard & Poor's Green Evaluations*. So, a better and, above all, a standard way of monitoring by second opinion providers, rating agencies and other forms of third-party verification can be considered really necessary.

Surely, *Green Bond Principles* (*breviter* GBPs) can be considered an important step towards the promotion of green finance: since the introduction of the GBPs by the *International Capital Market Association* (*breviter* ICMA) in January 2014, the issuance of labelled green bonds has increased rapidly, with a growing number of issuers from the private sector. Several Green Bond Indices have been introduced too. But even if Green Bonds market is evolving rapidly, it accounts only for a little part of the whole bond market, and to increase it more and more, GBPs are no more sufficient, being simply voluntary issuance Guidelines, Recommended but not Required.

An answer to these needs is now coming from the European Institutions: in fact, the European Commission, recognising the need to develop and strengthen an economic and financial strategy oriented towards long-term sustainable and climate-resilient development, in September 2016 decided to establish a High-Level Expert Group (HLEG) on Sustainable Finance, having the aim to provide a road map towards a sustainable financial system. According to the recommendations of HLEG Final Report (presented on 31 January 2018), the European Commission published on 8 March 2018 its new *Action Plan: Financing a Sustainable Growth* that underlines the necessity to realise ten actions in 2018–2019, where the first is *Establishing an EU Classification System for Sustainability Activities*

(the so-called *EU Sustainability Taxonomy*), while the second is just *Creating standards and labels for Green Financial Products*.

An analysis of the Guidelines for the creation of EU standards for Green Bonds and of the other connected elements in the Action Plan will be useful to understand how they can help in solving the exiting issues.

8.2 GREEN BONDS AS INSTRUMENTS OF IMPACT INVESTING: A LITERATURE REVIEW

It's difficult to give a clear definition of what makes a bond green, and so it's possible to find different ways to define them. There isn't an official and univocal definition of Green Bond.

In a first meaning, Green Bonds can be considered as instrument of Impact Investing (Revelli and Paraque 2017). But surely it's also necessary to have more clearness regarding the same concept of Impact Investing that can be considered one of the Investment Strategies adopted by the Socially Responsible Investment (*breviter* SRI), in particular, the last strategies presented for the first time in the European SRI Study by European Union on Sustainable Investment Forum (EUROSIF) (EUROSIF 2014). As a consequence of its recent introduction as SRI strategy in Europe, *There is no common definition of Impact Investing among individuals, financial advisors, or even those currently in the Impact Investing universe* (Simon and Barmeier 2010). Consequently, we can find in literature several different definitions of Impact Investing, such as: *Investments intended to create positive impact beyond financial returns* (O'Donohoe et al. 2010); *Investment specifically targeted to create development outcomes in addition to a financial return* (Simon and Barmeier 2010); *Actively placing capital in business and funds that generate social and/or environmental good and at least return nominal principal to the investor* (Freireich and Fulton 2009); *Actively placing capital in enterprises that generate social or environmental goods, services, or ancillary benefits such as creating good jobs, with expected financial returns ranging from the highly concessionary to above market* (Brest and Born 2013); *An investment approach that intentionally seeks to create both financial return and positive social or environmental impact that is actively measured* (Drexler and Noble 2013). But the most referred definition is that one by Global Impact Investing Network (GIIN) as *Investments made into companies, organizations, and funds with the intention to generate social and environmental impact alongside a financial return* (GIIN 2017).

Several definitions can be found in literature regarding Green Bonds, such as *Green Bonds are fixed income securities which finance investments with environmental or climate-related benefits* (Ehlers and Packer 2017) or *bonds or debt securities specifically issued to finance environmental protection, sustainability or specific climate mitigation and adaptation measures* (Sean and Padraig 2014); or *a Socially Responsible Investment (SRI) instrument* (Panda Pradiptarathi 2017); *when considering if a bond is green is what it's going to be used for (use of proceeds), not the issuer (...)* (Labbé 2017). According to Kidney and Boulle, the term climate bond can be used interchangeably with the term green bond *when the use of proceeds is used to finance – or refinance– projects addressing climate (...)* although technically the use of proceeds from a green bond could be allocated to wider environmental projects with no impact on climate (Kidney and Boulle 2015).

But surely, the most referred one is the definition given by *The Green Bond Principles* (breviter GBPs) that are voluntary process guidelines released by ICMA—first in 2014 and then updated in 2015, in 2016 and 2017—to promote integrity in the Green Bond market, recommending transparency, disclosure and reporting.

Considering that the Green Bond market aims to develop the key role that debt markets can play in funding projects able to contribute to environmental sustainability, the *Green Bond Principles* want to fight against the so-called *greenwashing* that can be defined as *the selective disclosure of positive information about a company's environmental or social performance, without full disclosure of negative information on these dimensions, so as to create an overly positive corporate image* (Lyon and Maxwell 2011).

Surely, investors, banks and other stakeholders are well aware of potential greenwashing, so *the goal of the market is to mobilize finance for environmental challenges at scale* (Kidney and Boulle 2015, p. 593). Ensuring that the market maintains its credibility, *investors need to be clear about why they are investing in green bonds and what they expect to achieve. (...) work is still needed around standards, wording and definitions before green bond investments become mainstream* (Baker 2018). In this direction, GBPs by ICMA are working.

According to GBPs 2017, *Green Bonds are any type of bond instrument where the proceeds will be exclusively applied to finance or re-finance, in part or in full, new and/or existing eligible Green Project (...) and which are aligned with the four core components of the GBP* (ICMA 2017a).

It's understood that certain Green Projects may have social benefit too and the classification of a use of proceeds bond as a Green Bond should be

determined by the issuer, according to its primary objectives for the underlying projects. Bonds that intentionally mix green and social project are referred to as Sustainable Bonds, according to the definition of Sustainability Bond provided by ICMA in the Sustainable Bond Guidelines (*breviter* SBG). These guidelines, in fact, underline that *Sustainable Bonds are bonds where the proceeds will be exclusively applied to finance or re-finance a combination of both Green and Social projects. Sustainable Bonds are aligned with the four core components of both the GBP and the SBP with the former being especially relevant to underlying Green Projects and the latter to underlying Social Projects* (ICMA 2017b).

It's important to point out that Sustainability Bonds should not be considered fungible with bonds that aren't aligned with the four core components of the GBP and/or the SBP.¹

The GBPs clarify the approach for issuance of a Green Bond, being intended for broad use by the market: in other words, *they provide issuers with guidance on the key components involved in launching a credible Green Bond; they aid investors by promoting availability of information necessary to evaluate the environmental impact of their Green Bond Investment; they assist underwriters by moving the market towards expected disclosures that will facilitate transactions* (ICMA 2017a).

The GBPs recommend—but it's necessary to underline that it's a voluntary recommendation—a clear process and disclosure for issuers, useful for the other actors of the investment to understand the characteristics of that given Green Bond, emphasising the required transparency, accuracy and integrity of information that will be disclosed and reported by issuers to the stakeholders.²

The GBPs have four core components³:

- 1) *Use of Proceeds;*
- 2) *Process for Project Evaluation and Selection;*
- 3) *Management of Proceeds;*
- 4) *Reporting.*

In the GBPs, it's recommended also that issuers use an external review to confirm the alignment of their Green Bond with the key features of the same GBPs. There is a variety of ways for issuers to obtain outside input into the formulation of their Green Bond process, and there are several levels and types of review that can be provided by the market. Such external reviews might include (ICMA 2017a):

- *Consultant Review*: an issuer can seek advice from consultant and/or institutions with recognised expertise in environmental sustainability or other aspects of the issuance of a Green Bond. Second-party opinions may fall into this category.
- *Verification*: an issuer can have its Green Bond or underlying assets independently verified by qualified parties, such as auditors. In contrast to *certification*, verification may focus on alignment with internal standards or claims made by the issuers. The evaluation of the environmentally sustainable features may be termed verification and may reference external criteria.
- *Certification*: an issuer can have its Green Bond or Use of Proceeds certified against an external green assessment standard if qualified third parties/certifiers can test the alignment with the criteria defined by the assessment standard.
- *Rating*: an issuer can have its Green Bond or associated Green Bond framework rated by qualified third parties, such as specialised research providers or rating agencies. Green Bond ratings are separated from an issuer's ESG rating as they typically apply to individual securities or Green Bond framework.

It's also necessary to underline that an external review may be partial, covering only certain aspects of an issuer's green bond, or full, assessing in this case the alignment with all four core components of the GBPs.

8.3 GREEN BONDS: EXAMPLES OF EXTERNAL REVIEWS RECOMMENDED BY GBPs

8.3.1 *Climate Bond Certification*

The Climate Bond Initiative is an international non-profit organisation that provides an important certification, namely *Climate Bond Certification*. For a bond to be considered as a green one, it has to satisfy the Climate Bond Standard (Climate Bonds Initiative 2015, and the update Climate Bonds Initiative 2016, 2017).

First, it's strictly necessary to underline that this certification process has two distinctive phases:

- *Pre-issuance certification*
- *Post-issuance certification*

Let's see which is the standard necessary to obtain this green label. Focusing first on the pre-issuance requirements, it is possible to underline that the issuer should specify the environmental goals of the bond. In addition to that, it is mandatory to provide evidence regarding a suitable process of tracking and managing the proceeds as well as an earmarking process of that resources coming from the issuance. Moreover, a reporting activity is needed, regarding the area in which the projects fall as well as the temporary investment made with the proceeds not being allocated yet.

In the case the issuer is looking for a post-issuance certification, it has to provide evidence of its commitment of channelling the proceeds to the projects indicated before the issuance, as well as an effective managing of the proceeds that are to be set aside in particular account or moved into a sub-portfolio. Those are only some of the requirements needed for the post-issuance certification, a full description of these requisites is provided by Climate Bond Initiative (Climate Bonds Initiative 2017).

The Climate Bond Standard surely represents an important step, moving from broad integrity principles to a robust and effective Certification scheme:

- standard with clear mandatory requirements (use of proceed, tracking, reporting);
- specific eligibility criteria for low carbon- and climate-resilient projects and assets; and
- assurance framework with independent verifiers and clear procedures.

8.3.2 *Green Bond Indices*

After understanding the real importance and the promising future of Green Bonds, Green Bond indices were created by some of the leading player of the sector, such as Bank of America, Merrill Lynch, Barclays MSCI, Standard & Poor's and Solactive (ICMA 2017c). Considering that each of these leading players provides also a certification, it's possible to point out that a bond can be inserted in these indices only if it satisfies the requirements set out by the organisation providing that index (Ehlers and Packer 2016).

Green Bond indices are very interesting for investors since they allow an effective risk diversification. In fact, a lot of bonds are included in them, and it is widely known the importance of a broad number of assets in order to lower the risk.

On the other hand, we cannot forget to underline the necessity of hedging, since the bonds that are part of these indices are issued in different currencies. For this reason, if a hedging strategy isn't provided, the performance of Green Bond indices ends up, being worse than the one an investor could obtain investing in the same number of bonds not having a green label (Ehlers and Packer 2017).

We have also to consider that these indices provide a full ongoing assessment of each bond, since the bond that isn't compliant with the provider's disposition has to be excluded from the index. So an ongoing evaluation is supposed to be present in relation to bonds inserted in Green Bond Indices even if, knowing that assessing the bond greenness is a very onerous process, it's difficult to believe that their providers can monitor so many bonds for their whole life in a perfect way.

Anyway, these indices provide different criteria, and this could lead to a lack of clarity, since a bond could be considered as a green one for an organisation and not green for another one. For this reason, the indices cannot represent the definitive step of the green bond evaluation, considering that the market needs more harmonisation and, above all, a standard of evaluation.

8.3.3 *Second-Party Opinions*

Reading the Green Bond Principles, it is possible to notice that an evaluation from a second party is highly recommended since this choice could enhance investors' trust in the actual bond greenness. We are talking about the *second opinions* that are provided by some important organisations, such as Deloitte, Ernst & Young, KPMG, Oekom, Sustainalytics and Vigeo (Ehlers and Packer 2016).

The market leader in second opinions is surely *CICERO*, an institution based in Oslo that provided the second opinion for the first Green Bond issuance by the World Bank in 2008. The second opinion provided by *CICERO* is characterised by four colours (or, better, four shades of green) given to a certain emission. The significance of the four shades of green are so described (*CICERO* 2016):

- **dark green** is allocated to projects and solutions that correspond to the long-term vision of a low-carbon and climate-resilient future (e.g. wind energy projects with a governance structure that integrates environmental concerns);

- **medium green** is allocated to projects and solutions that represent steps towards the long-term vision, but are not quite there yet (e.g. plug-in hybrid busses);
- **light green** is allocated to projects and solutions that are environmentally friendly but do not by themselves represent or contribute to the long-term vision (e.g. efficiency in fossil fuel infrastructure that decreases cumulative emissions); and
- **brown** for projects that are in opposition to the long-term vision of a low-carbon and climate-resilient future (e.g. new infrastructures for coal).

One interesting advantage of the second opinions is represented by the more granularity of the assessment. In fact, they solve a Green Bond Principles significant problem: GBPs say only if a bond can be considered green or not, so there is no shade in the evaluation. But considering the characteristic of CICERO's Second Opinion, that we have just remarked, it's easy to understand that it is able to provide a more accurate assess of the bond greenness (Clapp et al. 2016).

However, it is essential to underline a drawback of these second opinions, regarding not only the CICERO's one but the entire category of this kind of certification: they are focused only on the time of issuance, and they don't provide information in relation to the actual compliance to the standard after bond emission.

8.3.4 *Rating Agencies' Valuations*

Since investors require an ongoing assessment of green bond and the second opinions, as well as the Green Bond Principles don't provide this service, it could be useful to turn to the rating agencies. In fact, these organisations are able not only to give an initial assessment at the time of issuance but also to keep on looking into the bond, in order to check if the issuer is following the best practices to maintain the bond greenness.

To this extent, it's necessary to mention *Moody's agencies*. Moody's evaluation has the aim to measure the likelihood that proceeds will be channelled in projects that can be considered environmentally friendly. This valuation, called *Green Bond Assessment*, is based on five points:

- 1) organisation;
- 2) use of proceeds;

- 3) disclosure on the use of proceeds;
- 4) management of proceeds; and
- 5) ongoing reporting and disclosure on environmental projects financed or refinanced with such securities.

Moody's gives a mark from 1 to 5 (1 is the excellent valuation, while 5 is the worst evaluation) to each of these factors, and by averaging these marks, it is possible to obtain the global score (Moody's Investors Service 2016). With the exception of the Use of Proceeds, each factor is composed of five sub-factors, and the factor score depends on the number of sub-factors that are satisfied, in accordance to Moody's evaluation.

It is also fundamental to point out that if a bond obtains a low mark in the use of proceeds, it cannot have a good global score, even if the average is pretty high, and this is because the weights given to the different factors are various. In particular, these weights are as in succession described: organisation (15%), use of proceeds (40%), disclosure on the use of proceeds (10%), management of proceeds (15%) and ongoing reporting and disclosure on environmental projects financed or refinanced with such securities (20%).

Apart from Moody's, Standard & Poor's has a relevant role in the Green Bond evaluation; as a matter of fact, it has been providing an assessment called *Standard & Poor's Green Evaluation* since 2017. This evaluation deals with three scores (Standard & Poor's Global Rating 2017):

- 1) transparency;
- 2) governance; and
- 3) mitigation or adaptation.

In the first score (transparency), Standard & Poor's considers the quality of disclosure and the managing of the bond proceeds. So, a high quality in the reporting activity could enhance the investor's trust in the greenness of the bond. In addition to this, an effective disclosure allows investors to understand if the issuer's targets will be able to be achieved.

Considering the second score (governance), the procedures used to manage the proceeds and to evaluate the environmental impact during the whole life of the asset are investigated. This evaluation deals with the whole process that will be financed, providing also a valuation about what can prevent the issuer from investing in activities different from those

indicated. In addition to this, the compliance with environmental regulation has to be checked.

Focusing on the mitigation score, we have to underline that it reflects the environmental impact during the life of the asset. In order to evaluate the projects, environmental key performance indicators (EKPIs), such as carbon, water and waste, are taken into account. So, for each EKPI, it's provided a net benefit ranking that takes into account every possible positive or negative impact of the project. Moreover, the projects are assessed, checking if they fit within the carbon and water hierarchy provided by Standard & Poor's: this comparison will lead to an effective environmental valuation.

The last score is the adaptation one: it measures the resilience increase due to the use of proceeds. We are referring to the reduction in the cost of expected damages caused by extreme weather events.

After marking each aspect, it is possible to achieve an overall score from 0 to 100. It is important to underline that transparency and governance scores have only a negative impact on the assessment, so it is possible to say that a good score in these fields cannot enhance the overall score, but a negative mark will cause the score to be lower.

Unlike Moody's *Green Bond Assessment*, *Standard & Poor's Green Bond Evaluation* does not provide an ongoing valuation unless the issuer clearly requires that service.⁴

In conclusion, we have seen a wide range of green bond assessments and certifications, and this is the proof of how important Green Bonds are becoming (Ehlers and Packer 2017). In fact, nowadays, the environmental issue is a relevant problem that is becoming more and more important and worthy of the best account from the international organisations and companies. However, just a too high number of certifications could prevent the green bond market from reaching a full evolution, since all the existing certifications may give to investors different indications about each bond (see Table 8.1).

Investor demand for Green Bond is strong, and certainly, it will increase just in line with the delivery of quality products into the Green Bonds market. Standards, assurances and certifications can represent fundamental keys to improve confidence and transparency, making consequently possible a further growth within the mainstream debt capital markets (Smalling and Emerson 2015).

In this process, the Green Bond Principles—released, first, in January 2014, and successively updated in 2015, 2016 and 2017—represent surely an important step to encourage the development and the use of standards

Table 8.1 Characteristics of different Green Bond identification and certification schemes

	<i>CBI Climate Bonds certification</i>	<i>CICERO second opinions</i>	<i>MOODY's Green Bond assessments</i>	<i>Standard & poor's green evaluations</i>
Use of funds must be tied to green investment	O	O	O	O
Eligibility criteria differ by sector	O			O
Ex post monitoring and assessment			O	
Granular assessments of greenness		O	O	O
Quantitative weights for specific sectors			O	O

Source: Adapted from Ehlers and Packer (2017), p. 93

for certification,⁵ but they are, and remain, only recommended, and this represents surely a limit for the development of the Green Bonds market. So, it's possible to underline that the various existing definitions and labels for Green Bonds represent a problem for investors, who could have benefits from more consistent standards.

And just in this direction the European Institutions are going, in the consciousness of the essential importance to build up a common taxonomy in sustainable finance: the recent *Action Plan: Financing Sustainable Growth*, adopted in March 2018 by the European Commission (European Commission 2018a), will probably enhance the European Green Bond market's chance to take off.

8.4 THE NEW EUROPEAN INSTITUTIONS' INITIATIVES FOR THE GROWTH OF SUSTAINABLE FINANCE

8.4.1 *A Road Map Towards a Sustainable Financial System: Some Important Steps*

Sustainability is the model for Europe's future development, and finance can be considered an essential lever for achieving ambitious goals for economic prosperity, social inclusion and environmental regeneration. For

the financial system, sustainability has a dual imperative: the first is to ensure that ESG factors are at the heart of financial decision-making; the second is to mobilise capital to help in solving society's key challenges that require long-term finance, considering that a sustainable European economy must be characterised not only by a better protection of natural resources but also by higher employment levels and greater financial and economic stability (UN-Environment 2017; G20 Green Finance Study Group 2017; UN-Environment and World Bank Group 2017; Global Green Finance Council (GGFC) 2017; OECD 2015, 2017).

The transition to a sustainable financial system has started, but urgent action is now required (UN-Environment 2018; World Economic Forum 2018). Positive steps into this process are already present, but they are clearly insufficient. The signature of the Paris Agreement on climate change on 12 December 2015—that marked a milestone for the world and the global economy—and the United Nations 2030 Agenda, with its 17 Sustainable Development Goals (SDGs) (United Nations 2015a; MSCI Esg Research 2017), can be considered the foundations for Europe's next transition. The European Union (EU) has taken sustainability concerns into account in its financial policy since 2013, and much effort has been done to strengthen the financial system, following the financial and sovereign debt crises, but it isn't enough. Sustainability requires a long-term perspective, in terms of both providing long-term funding for critical infrastructure and responding to long-term threats. Incorporation of climate risks into financial decisions is therefore the litmus test for finance.

The EU has been giving a positive and constructive contribution to the development of the UN 2030 Agenda for Sustainable Development (Eurostat 2017; HUAWEI 2017). At the core of this Agenda are surely the SDGs, but there are also important elements on the means of implementation, follow-up and review. The UN 2030 Agenda incorporates follow-up from the Rio+20 Conference on Sustainable Development (United Nations 2012a, b) and also addresses issues which were reflected in the Millennium Declaration and in its Millennium Development Goals (*breviter* MDGs) (United Nations 2015b). If the concerns of the MDGs are part of the new framework released by the UN 2030 Agenda, it's possible to underline that it also goes further, including other issues—such as effective institutions, good governance, the rule of law and peaceful societies—that weren't present in the MDGs. The UN 2030 Agenda, in other words, addresses both poverty eradication and the economic, social

and environmental dimensions of sustainable development in a balanced and integrated manner. A new departure is also its universality, meaning that it applies to all countries at all levels of development, taking into account their different capacities and circumstances. The implementation of the 2030 Agenda will be driven by a new Global Partnership characterised by shared responsibility, mutual accountability and engagement by all. The Means of Implementation for the new Agenda are outlined in the 17 SDGs. The EU has been leading on this Agenda, taking ambitious steps towards decarbonisation and the transition to a sustainable European economy. But what has been missing is an overarching strategy for delivering innovative solutions that respond to the scale of the task.

So, the European Commission has recognised the need to develop and strengthen an economic and finance strategy oriented towards long-term sustainable and climate-resilient development. Consequently, in September 2016, the European Commission decided to establish a High-Level Expert Group (HLEG) on Sustainable Finance, with the aim to provide a road map towards a sustainable financial system that fosters sustainability in economic, social and environmental developments. In other words, the HLEG had to *provide recommendations on how to hardwire sustainability into the EU's regulatory and financial policy framework and how to mobilise more capital flows towards sustainable investments and lending* (EU High-Level Expert Group on Sustainable Finance (HLEG) 2018).

The HLEG was formed by bringing together experts having various profiles and expertises, representing different approaches to this broad and complex topic. The group was asked in the first place to have particular regard for harnessing financial markets in response to climate and environmental challenges.

8.4.2 *The High-Level Expert Group Final Report (31 January 2018)*

The High-Level Expert Group (HLEG) on Sustainable Finance, that is an example of involving different stakeholders in financial reform, elaborated an *Interim Report*, presented on July 2017, and then a *Final Report*, presented on 31 January 2018. The HLEG *Final Report* offers a comprehensive vision on how to build a sustainable finance strategy for the EU. This report argues that sustainable finance has two urgent imperative goals (EU High-level Expert Group on Sustainable Finance 2018):

- 1) improving the contribution of finance to sustainable and inclusive growth by funding society's long-term needs and
- 2) strengthening financial stability by incorporating Environmental, Social and Governance (ESG) factors into investment decision-making.

The HLEG Final Report proposes a set of eight key recommendations, addressed to the European Commission, considered as essential building blocks for wider actions.⁶

Considering, in particular, the recommendations regarding the Green Bonds, it's possible to point out that, as a first step, the HLEG believes that the European Union should introduce an official EU Green Bond Standard (EU GBS); considering, as a second step, an EU Green Bond label or certificate as fundamental to help the market to develop fully and to maximise its capacity to finance green projects that can contribute to wider sustainability objectives (Cox 2018).

In the HLEG's point of view, the EU Green Bond Standard would incorporate all the existing best market practices, addressing, at the same time, the main uncertainties and areas of concern that may require greater prescription or more explicit criteria. Considering the relevant role represented by the Green Bond Principles (GBPs), the HLEG Final Report has provided a comparison between GBPs and the arising EU Green Bond Standard. As we can notice looking at Table 8.2, it is clear that EU Green Bond Standard will try to make a lot of steps compulsory. In fact, we can see that all the recommendations provided by GBPs are instead required by EU Green Bond Standard. It is an enhancing of the compulsory criteria that are necessary in order to be considered as a green bond by the EU. In other words, for a bond, in order to be included in the EU Green Bond list, the issuance documentation should provide an intended alignment to the EU Green Bond Standard; then an independent and accredited external reviewer should verify if the bond has really fulfilled all the required duties. The external reviewer role ought to become central by just considering its compulsoriness (EU High-level Expert Group on Sustainable Finance 2018).

So, the prime objective of the standard is to help in raising overall investments in green projects and activities, and its success should be monitored and assessed against this benchmark. In this contest, a number of issues that have been raised about green bonds should also be addressed, such as uncertainty on the application of some aspects of best practices;

Table 8.2 Comparison between GBPs and EU Green Bond Standard

<i>Specific topic</i>	<i>Green Bond Principles Provision</i>	<i>EU Green Bond Standard Provisions</i>
Reference of alignment with GBPs/EU GBS in legal documentation	Recommended	Required
Eligibility criteria for green projects	Guidance on high-level categories	Compliance with a detailed EU sustainability taxonomy
Disclosure of proportion of proceeds used for refinancing	Recommended	Required
Impact monitoring and reporting	Recommended, wherever possible	Required to report whether issuer is monitoring impact or not and, if so, disclose estimated/actual impact
External review requirements	Recommended External review may be partial, covering only certain aspects of an issuer’s green bond or associated Green Bond framework or full, assessing alignment with all four core components of GBPs	Required External review must confirm, at a minimum, the alignment, at issuance, of the EU Green Bond with all four core components of the EU GBS, or alternatively, confirm the alignment of the EU Green Bond Programme as a whole
Publication of external review	Recommended	Required
Accreditation of external reviewers	Not addressed in GBPs	Sets out accreditation requirements for external reviewers

Source: Adapted from EU High-level Expert Group on Sustainable Finance (2018)

confusion on green project definitions; doubts on the addition of certain green projects and their impact; insufficient disclosure and data on how green bonds lead to the scaling up of investments in green projects and activities; inconsistencies in the quality of certain external reviews and verification, and the qualification of their providers too (Hoffmann 2016).

Moreover, it is possible to point out that all the projects being able to be financed with the bond proceeds should be compliant with the European Taxonomy in order to create an evolving list of activities that a

green bond could finance. This taxonomy will help Europe to fulfil its environmental goals being aligned with the Paris Climate Agreement and the 2030 Sustainable Development Goals dispositions.

8.4.3 *The European Commission Action Plan: Financing Sustainable Growth (8 March 2018)*

The European Commission, building upon the HLEG Final Report' recommendations, has set out an EU strategy for sustainable finance presenting on 8 March 2018 its *Action Plan: Financing a Sustainable Growth* that underlines the necessity to realise ten actions⁷ in 2018–2019 (really in a short time), specifically with the aim *to*:

- 1) *reorient capital flows towards sustainable investments in order to achieve sustainable and inclusive growth;*
- 2) *manage financial risks stemming from climate change, resource depletion, environmental degradation and social issues; and*
- 3) *foster transparency and long-termism in financial and economic activity* (European Commission 2018a, p. 2).

Current level of investments is not sufficient to support an environmentally and socially sustainable economic system. Europe has to close a yearly investment gap of almost EUR 180 billion to achieve EU climate and energy targets by 2030 (European Commission Press Release 2018; European Commission 2018b). A lack of clarity among investors regarding what constitutes a sustainable investment is a contributing factor behind this investment gap, representing also an obstacle in financing the social infrastructure that is necessary to address inequality and inclusiveness issues. Being fundamental that investors begin to channel their money into sustainable projects in order to achieve the 2030 SDGs, the existing relevant investment gap can be reduced through a clarification about the meaning of sustainability. In other words, *a shift of capital flows towards more sustainable economic activities has to be underpinned by a shared understanding of what sustainable means. A unified EU classification system –or taxonomy– will provide clarity on which activities can be considered sustainable. It is at this stage the most important and urgent action of this Action Plan* (European Commission 2018a, p. 4). In fact, just considering this, the first action of the EC Action Plan is the following:

Action 1: Establishing an EU classification systems for sustainable activities.

- 1) *Subject to the results of its impact assessment, the Commission will table in Q2 2018 a legislative proposal on the development of an EU taxonomy for climate change, environmentally and socially sustainable activities (L);*
- 2) *In addition, as a first intermediate step, the Commission will set up a Technical Expert Group on sustainable finance. The group will be asked, on the basis of broad consultation of all relevant stakeholders, to publish a report providing a first taxonomy with a particular focus on climate change mitigation activities by Q1 2019 (NL)**, extended to climate change adaptation and other environmental activities by Q2 2019 (NL).*

**L = Legislative measures **NL = Non legislative measures*

Building on the future EU sustainable taxonomy, EU standards and label for sustainable financial products would protect the integrity of sustainable financial market, giving the possibility of an easier access for investors seeking those products. For instance, green bonds allow entities (companies, banks, governmental organisations, etc.) to borrow money from investors in order to finance or refinance green projects, assets or business activities. While the green bond market is expanding rapidly, it still accounts for less than 1% of total bonds outstanding worldwide (G20 Green Finance Study Group 2017). Drawing on current best practices, an EU standard accessible to market participants could and also should facilitate more investments into green projects, representing a basis for the development of reliable labelling of financial products (Horsch and Richter 2017).

The importance that the *EC Action Plan* (8 March 2018) gives to Green Bonds can be understood by reading the following Action 2 of the Plan:

Action 2: Creating standards and labels for green financial products

1. *As a first step, the Commission's Technical Expert Group on sustainable finance will be responsible, on the basis of the results of a public consultation, for preparing a report on an EU green bond standard by Q2 2019, building on current best practices (NL).*

2. *Within the framework of the Prospectus Regulation, the Commission will specify by Q2 2019 the content of the prospectus for green bond issuances to provide potential investors with additional information (L2).*
3. *The Commission will explore, as of Q2 2018, the use of the EU Ecolabel framework for certain financial products, to be applied once the EU sustainability taxonomy is adopted (NL).*

**NL = Non legislative measures **L2 = Level 2 measures.*

So, we have to wait in order to see how these actions will be set up and what kind of effects will be produced by them. We really need a legislation that is able to promote environmentally friendly activities in order to achieve SDGs and through this way a new financial development, sustainable and attentive to environmental issues. The environmental risk has been increasing for so long, and their impact in relation to companies' activity is becoming so relevant that we cannot keep on ignoring them. In fact, if we consider the deadlines of these actions, it's possible to point out that the EC Workplan indicates a very short time to provide both a European Taxonomy and a European ecolabel for financial products based on this taxonomy, and this reflects the necessity to realise these actions really in a very fast way (European Commission 2018a; Climate Bonds Initiative 2018d).

8.5 THE FIRST EFFECTS ON GREEN BOND MARKET OF THE NEW EUROPEAN STRATEGY ON SUSTAINABLE FINANCE GROWTH

The European Commission has provided new initiatives focused on creating a new taxonomy and on promoting an EU Green Bond Standard. But is it possible to see further developments since the issuance of the EC Action Plan? Looking at the data provided by Skandinaviska Enskilda Banken (SEB), it is almost clear that European Union is gaining a fundamental role in the international Green Bonds market, since the share of green bonds issued in Europe is becoming higher. It is possible to appreciate it in Figs. 8.1 and 8.2, where we can notice the increase in the European share, arrived to the 50,09% against the 33,4% of the 2017 (SEB 2018).

This evolution is an effect of the increased attention to this relevant market tool from the European Institutions. As seen previously, European

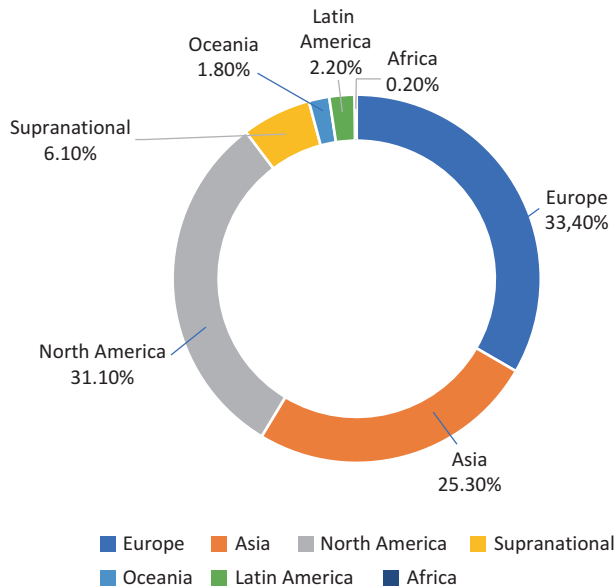


Fig. 8.1 Regional distribution of Green Bond Issuances 2018. (Source: Adapted from SEB 2018)

Commission's goals presenting its Action Plan on Financing Sustainable Growth are, among the others, to foster the investment in sustainable projects and create standards and labels for green financial products and, in particular, an EU Green Bond Standard. So, the green bond role in European's policy can be considered central.

What we have just asserted is also confirmed, considering the Green Bond issuances by currency. In fact, we can notice that the number of green bonds issued in Euro has risen, reaching the 46% in 2018, while the average share from 2008 to 2017 was only 33% (SEB 2018).⁸

So, the European Commission interventions seem to have boosted the European Green Bond market, as effect of the EC Action Plan that can be considered part of broader efforts to connect finance with the specific needs of the European and global economy for the benefit of the planet and of all our society.

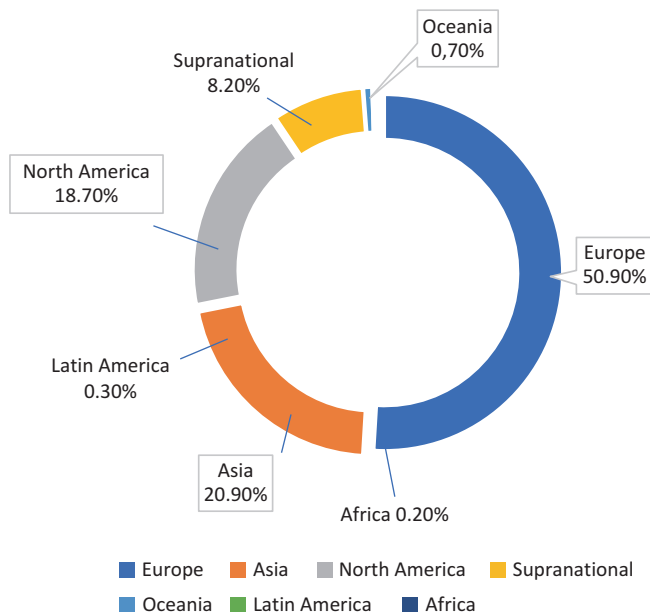


Fig. 8.2 Regional distribution of Green Bond issuances 2018 YTD. (Source: Adapted from SEB 2018)

8.6 CONCLUSIONS

The present work shows as Green Bonds can offer new possibilities for investors who are looking for opportunities that incorporate environmental, social and sustainable considerations. Finance projects with clear environmental benefits are on the rise all around the world. They can be a valuable tool for issuers to amplify sustainability strategy, forecast risks more aptly and communicate value to the investors. So, for these last ones, Green Bonds represent an opportunity for a diversification of their investments oriented towards sustainable and inclusive growth. But there are some problems to solve: at this moment, it is difficult for an investor to have information about the effective use of proceeds from the issuer, and so it's difficult for him to understand if an activity is really environmentally friendly or not. In fact, a too broad number of certifications can confuse investors, since each certification provides different sustainable and green criteria. Consequently, the absence of a unique reliable certification can

increase the greenwashing issue that, as seen at the beginning of this study, happens whenever an issuer pretends to channel bond proceeds in environmentally sustainable activities but, instead, doesn't invest those resources in green projects.

Consequently, it's possible to understand why the European Commission in its Action Plan underlines that *A unified EU classification system – or taxonomy – will provide clarity on which activities can be considered sustainable. It is at this stage the most important and urgent action of this Action Plan* (European Commission 2018b). So, providing a harmonisation of what can be considered sustainable represents a significant advantage both for investors and for financial markets that need certainties.

Building on the future EU sustainability taxonomy, the introduction of standards and label for sustainable financial products, that represent the second Action scheduled by the EC Action Plan, will be particularly useful for retail investors who would like to express their investment preferences on sustainable activities. In other words, labelling scheme created by the European Commission could facilitate retail investors' choice, taking into account climate, environmental and social consideration, while the lack of labelled financial products may prevent investors from directly channelling their funds into sustainable investments. But in this way, it's possible also to reorient capital flows towards a more sustainable economy, reducing the gap in investments supporting an environmentally and socially sustainable system. Realising these actions, Green Bonds will be able to represent really a bridge to reach the UN Sustainable Development Goals (Climate Bonds Initiative 2018c). Surely, an urgent action to combat climate change and minimise its disruption is integral to the successful implementation of the UN SDGs, but the rapidly growing green finance sphere is already providing capitals for assets that simultaneously contribute to climate action (SDG 13) and to many of the other SDGs.

NOTES

1. Using Social Bond Principles (SBP), we refer to *The Social Bond Principles* released by ICMA—as last update is possible to see (ICMA 2018)—and that replace the Guidance for Issuers of Social Bonds issued by the Green Bond Principles (GBPs) in June 2017.
2. *The European Green Bond market is growing quickly though industry-wide standards are still lacking. But plans to bolster investor protection need to ensure that they do not act as a deterrent to issuers in a similar way to the*

US. Stringent US regulation, in fact, has deterred banks and issuers. Europe need to be weary (Jackson 2018).

3. For a deeper analysis of these four components and of the various types of Green Bonds too, see (ICMA 2017a).
4. It's possible to see an example of the Standard & Poor's Green Bond Evaluation scheme in Standard and Poor's Global Rating (2017).
5. Just in November 2015, an informal working group of some *International Financial Institutions* (IFIs) released a document in which they underlined the importance *to outline a harmonized framework for Impact Reporting on projects to which green bond proceeds have been allocated* (IFIs 2015). The aim of this document was to catalyse a broader discussion with other issuers and investors about the core principles and recommendations in order to their practical application. This work, that reflected requests by the investor community and was welcomed and encouraged in the 2015 update of the GBPs, outlining core principles and recommendations aimed to provide issuers with a reference useful in developing their own reporting, in the awareness that *Working towards a harmonized approach requires the identification of shared principles and indicators*. In particular, the document recommended core indicators for two sectors, energy efficiency and renewable energy, and referenced reporting templates that issuers could adapt to their own circumstances. According to the document, *Promoting the integrity of the market through increased transparency and impact reporting, as well as supporting further diversification of both issuers and investors* can represent a key of fundamental importance for the development of the Green Bonds market, having this market the overall goal *to help mobilize private sector financing for sound climate – and environmentally- sustainable investments and help enhance transparency on environmental finance* (IFIs 2015).
6. These recommendations have been drawn considering all the responses received through the consultation processes following the presentation of the HLEG Interim Report in July 2018. The priority recommendations of the HLEG Final Report are: (1) *to introduce a common sustainable finance taxonomy to ensure market consistency and clarity, starting with climate change*; (2) *to clarify investor duties to extend time horizons and bring greater focus on ESG factors*; (3) *to upgrade Europe's disclosure rules to make climate change risks and opportunities fully transparent*; (4) *to empower and connect Europe's citizens with sustainable finance issues*; (5) *to develop official European sustainable financial standards, starting with one on green bonds*; (6) *to establish a "Sustainable Infrastructure Europe" facility to expand the size and quality of the EU pipeline of sustainable assets*; (7) *to reform governance and leadership of companies to build sustainable finance competencies*; and (8) *to enlarge the role and capabilities of the ESAs to promote sustainable finance as part of their mandates* (EU High-level Expert Group on Sustainable Finance 2018, p. 13).

7. The ten actions of the European Commission *Action Plan on Financing Sustainable Growth* are the following: (1) *Establishing an EU classification systems for sustainable activities*; (2) *Creating standards and labels for green financial products*; (3) *Fostering investment in sustainable projects*; (4) *Incorporating sustainability when providing investment advice*; (5) *Developing sustainability benchmarks*; (6) *Better integrating sustainability in rating and research*; (7) *Clarifying institutional investors and asset managers' duties*; (8) *Incorporating sustainability in prudential requirements*; (9) *Strengthening sustainability disclosure and accounting rule-making*; and (10) *Fostering sustainable corporate governance and attenuating short-termism in Capital Markets*.

For the deadlines of these actions, it's possible to see the relative Annex III, *Workplan of the initiatives set out by this Action Plan* (European Commission 2018a).

8. To analyse the recent evolution of Green Bond Market in an international prospective, see, among others (Eurosif 2018, pp. 50–52; Climate Bond Initiative 2018a, b, c; International Finance Corporation (IFC) 2017; Sustainable Banking Network (SBN) 2018; Sustainable Stock Exchanges Initiative (SSE) 2018).

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Green Banking in Italy: Current and Future Challenges

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9.1 GREEN BANKING, SOCIAL RESPONSIBILITY, AND SUSTAINABILITY: SETTING THE SCENE

In the past decades, several streams of research have converged to identify the growing importance of sustainability and socio-ecological responsibility for the financial industry (Jeucken and Bouma 2001; Walker et al. 2018), devoting significant efforts to deepen our knowledge about a wide range of interlinks between finance and the environment, sustainability, and social impact concepts, as well as their implications for a more sustainable financial system.¹ In this regard, over the past years, new ways of thinking and doing

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business have been emerging in theory and practice in the international arena. Terms such as green finance, green banking, climate finance, carbon finance, environmental finance, green venture capital, and sustainable environmental funding can be found with increasing frequency. Among these, *green banking* is receiving growing interest from academia, the industrial community, and policymakers. According to Bal et al. (2014:96):

(i)n the banking industry, green finance implies that it should not only reduce environmental impacts in its financing, but also that the banking industry should proactively finance green companies and technologies, develop new green financial products, as well as further develop a market for low-carbon economic growth.

It is beyond doubt, thanks to their special functions—and, in particular, thanks to both the intermediary and monetary functions—that banks have a fundamental role in sustainable development, even if sometimes ambivalent (Wiek and Weber 2014).

Sustainable issues are strictly related to the responsible behaviour of banks—currently under the magnifying glass—which find their foundation in the Corporate and Social Responsibility (CSR) movement.

Ryszawska (2016:188) states that sustainable finance can be defined *as a finance supporting sustainable development in three combined dimensions: economic, environmental and social* while with regard to “sustainable” banks, Jeucken and Bouma (2001:13) affirm that they *do not look for the highest financial rate of return, but for the highest sustainable rate of return, while being profitable in the long run*. In light of these considerations, thus, *sustainable banking refers to delivering financial products and services, which are developed to meet the needs of people and safeguard the environment while generating profit* (Yip and Bocken 2018:150).

In the real world, a growing number of banks and financial intermediaries is disclosing how environmental, social and governance (ESG) factors contribute both to long-term value creation of their financial products (see, among others, BlackRock 2016) and engagement of stakeholders (Venturelli et al. 2018).

The interrelations between these themes are crucial in understanding changes that are occurring in the financial system: the transition towards alternative forms of finance (Carè et al. 2018)—grounded on sustainable

philosophy—is occurring at the international level, also facilitated by the Sustainable Development Goals (SDGs) of the United Nations (UN), which represent a tremendous achievement (Stewart 2015).

It is no wonder that banks play a crucial role in achieving the SDGs, also directing their investment choices in eco-sustainable projects (see, among others: Weber and Remer 2011; Jeucken 2010; Lindenberg and Volz 2016). Banks are exposed to various risks related to their business of lending, and environmental risks represent a matter of concern (Carè 2017).

Banks can strongly influence the environment, both directly and indirectly. Direct impacts are *related to the internal operations of the banks that may increase greenhouse emissions, like energy consumption from lights, use of computers and ATM machines, water, waste disposal, business travels etc.* (Tara et al. 2015:1032), while indirect impacts (or external environmental impacts) refer to environmental impacts of clients' performance (Tara et al. 2015:1032) that are engaged with banks' product and services (Bal et al. 2014:93). If direct impact initiatives are easier to implement and less costly for banks that would immediately have a green image, indirect impact initiatives are the heart of the matter, according to many scholars: *(f)ar more critical, ... thus less visible, is the indirect impact of banks through the clients and projects they finance* (Paulet et al. 2015:1).

Generally, banks go green when they responsibly integrate the principles of environmental sustainability in all their processes and operations and promote environmental sound practices and financial products and services. In this way, we can affirm they adopt a more sustainable business model, useful to favour direct and indirect impacts, contributing to the development of the green economy.

Several factors contribute to the success of green banking at the international level, but the main ones are the following: (1) the pressure from the activists and the expectations of stakeholders regarding a more responsible approach to environmental issues; (2) the growing importance of digital technology, both in the financial industry and in the economy; (3) the role of regulation, standards and policies (including legal incentives ad hoc) that encourage banks to adopt "green" behaviours.

As has been said, increasingly more banks are integrating environmental aspects into their strategies. With regard to that, a wide range of green strategies, actions, practices, products and instruments have been identified, and these depend not only on banks' internal factors (such as size, governance, business models) but also on external factors (such as laws, regulations, guidelines, social and economic trends). The best doctrines (Weber 2018), which underline the role of both the voluntary sustainability codes of conduct and sustainability regulation (and the enforcement

mechanisms) in helping to stimulate the development of green banking, are interesting.

In this light, the need for exploring green banking practices has emerged—those can differ from country to country and from bank to bank—and further studies are required (Shaumya and Arulrajah 2016) to investigate concrete green banking implementations.

Moving from the above considerations, our chapter investigates the frontier of green banking practices in Italy, by highlighting a number of ways in which the Italian banking system is going green.

To achieve this, the research follows three related steps: (1) conducting a literature review on the issue of “green banking”, focusing on “green” approaches, initiatives, and products and services; (2) looking at one of the most crucial aspects of green banking across the world, which is the main extant regulations, standards, and guidelines in the field; and (3) exploring the main practices adopted by two major Italian banking groups.

The remainder of the chapter is structured as follows. Section 9.2 describes the research design and methods. Section 9.3 gives the reader an overview of the main definitions of “green banking”, by underlining the key characteristics. Practical examples of strategies, initiatives and actions on “how banks go green” are presented in Sect. 9.4. A framework of regulations, policies and guidelines at the international level for green banking is outlined in Sect. 9.5. Sections 9.6 (and its sub-sections) explore some of the main advanced green strategies, initiatives, and products of two Italian major banking groups. Finally, Sect. 9.7 provides some concluding remarks and proposes future lines of research.

9.2 RESEARCH DESIGN AND METHODOLOGICAL APPROACH

This chapter investigates the greening of the Italian banking industry using a qualitative approach. In greater detail, in addition to the literature search, a descriptive and exploratory study (Yin 2003) of two interesting case studies is realized to collect data for deepening the understanding of the topic of interest. The overview of relevant literature regarding green banking can represent an appropriate basis for mapping empirical evidence on green practices and initiatives in the banking sector. The literature review analyses books, scientific journals and institutional reports. Given the nature of the study, the case studies approach seems appropriate (Eisenhardt 1989; Yin 2017), providing tools for researchers to explore complex phenomena within their contexts (Baxter and Jack 2008:544).

Italy—one of the founding countries of the European Union (EU)—appears to be a good laboratory for examining green banking practices because important critical issues exist in terms of sustainable development, but at the same time, interesting changes concerning this field are currently underway.

According to the Italian Alliance for Sustainable Development (ASviS)'s report (2017:6–7):

notwithstanding the progress made in certain areas throughout the last few years, Italy continues to fall short of a condition of sustainable development, as defined by the 2030 Agenda for sustainable development (...). The country will therefore not be able to achieve the Targets set for 2020, nor those for 2030, unless it radically alters its development model. (...) With respect to the 17 SDGs, Italy has displayed some progress, but is also lagging behind with regard to the adoption of fundamental strategies for the future of the country, such as those related to energy or combating climate change. (...). Italy seems to lag behind many European countries, as evidenced in the analysis conducted by the Bertelsmann Foundation and other international organizations, and the country's strong territorial, socio-economic and gender inequalities are in sharp contrast with the motto of the 2030 Agenda, "leaving no one behind".

The ASviS Report seems to confirm *the country's unsustainable condition from economic, social, environmental and institutional points of view*. More in detail, we can read that *(e)ven where significant progress has been achieved, Italy is still very far from reaching the Goals and in some cases the observed trends go in the wrong direction(...). What still seems to be missing is an integrated policy vision to build an equitable and sustainable future for Italy* (ASviS Report 2018:6).

However, Schroders (2017) has stated that there are interesting findings with regard to how Italian investors consider sustainability factors in investment decisions. This statement is confirmed in the ASviS Report (2018:6): *(t)he good news is that the Italian society looks increasingly interested in sustainable development*.

In this regard, it is necessary to underline that some changes in the Italian sustainability regulations have been occurring during the past three years (as detailed in Sect. 9.5), particularly with regard to the Italian listed companies and the regulation of non-financial reporting.

According to the report of the Italian Commission for Listed Companies and Stock Exchange (Consob 2017):

non-financial reporting can significantly stimulate the transition to a sustainable business strategy, which in turn may enable companies to create value not only for their shareholders but also for the society as a whole (p. 38). More in detail, *the majority of FtseMib companies (26 out of 33) published a report on non-financial issues related to 2016 fiscal year, i.e. either a Sustainability Report (18 cases) or an Integrated Report (4 cases) or both (4 cases). Among the 26 firms reporting on non-financial issues, 24 have conducted a materiality analysis.* (p. 41)

The case studies analysed follow an information-oriented selection approach (Flyvbjerg 2011) based upon expectations about information content. Considering the fact that recent works have shown that large banks with strong financial performance are more likely to engage in environmental actions (Laguir et al. 2018), we decided to focus on two major Italian banking groups: Intesa Sanpaolo Group (ISP) and UniCredit, which are selected with respect to their market capitalization and total assets. This approach is in line with that of Eisenhardt and Graebner (2007), in that case study analysis is particularly suitable for exploratory research, when empirical evidence is insufficient and far from conclusive. In addition, because this work involved investigating a research field characterized by complex dynamics and global “grand challenges” (Eisenhardt et al. 2016), an in-depth case study investigation (of two major significant Italian banks) offered the best opportunity to deeply comprehend the Italian green banking scenario and obtain interesting information. In selecting cases, we have been guided by the following criteria: (1) scientific interest and (2) transparency (Yin 2003). Therefore, we use sources of information publicly available, by collecting empirical evidence through direct observation of public data and information (based on the banks’ official websites and reports), with adequacy and certainty availability.

9.3 LITERATURE OVERVIEW

In recent years, the “green banking” concept has emerged as a strategic way to value creation (Biswas 2011; Bahl 2012; Choudhury et al. 2013), and environment-friendly approaches and sustainability issues are interrelated (Ullah 2013; Amin 2014; Tara et al. 2015; Sharma 2016; Tu and Dung 2017).

The literature review allows us to identify the numerous definitions of green banking provided by academia, as can be seen in Table 9.1. A consensus has emerged.

Table 9.1 Main definitions of green banking

<i>Authors (year:page)</i>	GREEN BANKING...
Sahoo and Nayak (2007:83)	<i>...is an effort by the banks to make the industries grow green and in the process restore the natural environment.</i>
Bahl (2012:178)	<i>Defining green banking is relatively easy. It means “promoting environmental-friendly practices and reducing your carbon footprint from your banking activities. This comes in many forms. Using online banking instead of branch banking, paying bills online instead of mailing them open up CDs and money market accounts at online banks, instead of large multi-branch banks or finding the local bank in your area that is taking the biggest steps to support local green initiatives”.</i>
Savu (2012:63)	<i>...as a term, covers several different areas, but in general refers to how environmentally “friendly” the bank is, and how committed to green and ethical policies they are.</i>
Singh and Singh (2012:41)	<i>...means combining operational improvements, technology and changing client habits in banking business. It means promoting environmental-friendly practices and reducing carbon footprint from banking activities.</i>
Ahmad et al. (2013:241)	<i>...is the term used by banks to make them much more responsible to the environment. The term green banking means developing inclusive banking strategies, which will ensure sustainable economic development.</i>
Institute of Development and Research in Banking Technology—IDRBT (2013:6)	<i>...is an umbrella term referring to practices and guidelines that make banks sustainable in economic, environment, and social dimensions. It aims to make banking processes and the use of IT and physical infrastructure as efficient and effective as possible, with zero or minimal impact on the environment.</i>
Ullah (2013:74)	<i>...activities include using all of the banks resources with responsibility and care, avoiding waste and giving priority to choices that take sustainability into account.</i>
Rajesh and Dileep (2014:137)	<i>...is the efforts of the banking sector to keep the environment green and to minimize greenhouse effects through in-house operational activities and green finance</i>
Bihari and Pandey (2015:2)	<i>...is being practiced by all banks, which consider all the social and environmental/ecological factors with an aim to protect the environment and conserve natural resources.</i>
Hossain et al. (2015:48)	<i>...involves the environmental and social responsibility of banks in terms of the contribution they make towards ensuring sustainability of the environment and ecological system, through the wide range of financial products and services that they offer.</i>
Lalon (2015:34)	<i>...is any form of banking from that the country and nation gets environmentally benefits. An orthodox bank becomes a green bank by directing its core operations toward the betterment of environment.</i>
Pal (2015:50)	<i>...indicates the eco-supportive products innovation as well as application by creating awareness to the people.</i>

Source: Author's elaboration

Summarizing, the literature analysis suggests that a number of key characteristics of the green banking process can be identified, including (1) digital banking (Biswas 2011; Ullah 2013; Amin 2014; Lalon 2015; Rahman et al. 2017); (2) engagement with stakeholders (IDRBT 2013; Lalon 2015; Bose et al. 2017); (3) the development of sustainable practices, policies and initiatives, such as paper-free practices, low energy consumption, and the efficient management of waste (Biswas 2011; Nath et al. 2014; Ahuja 2015; Rahman and Barua 2016; Bose et al. 2017); and (4) the creation of new (green) financial products and services (Labatt and White 2003; Biswas 2011; Bhardwaj and Malhotra 2013; Nath et al. 2014; Lalon 2015). In particular, it is worth noting that technology represents a fundamental opportunity for those banks that go green. The ongoing digitalization of the banking industry can lead to improved internal environmental impacts (Islam and Das 2013) and external impacts (Biswas 2011).

9.4 HOW BANKS GO GREEN: STRATEGIES, ACTIVITIES, AND INITIATIVES

It is interesting to explore how the banks go green, in concrete terms. This section represents an attempt to address some of these aspects and the main strategies that emerge from the literature review can be synthesized in the following ways:

1. to set specific, measurable, attainable, realistic, and timely (SMART) green goals and plans on in-house environment management as the internal target (Singh 2015; Kavitha and Rani 2016);
2. to incorporate social and environmental strategies into the development goals of the banks to improve the financial and non-financial performance (Grigoryeva et al. 2007; Nath et al. 2014; Kavitha and Rani 2016);
3. to increase engagement with key stakeholders and strengthen involvement in environmental and social sustainability (Grigoryeva et al. 2007; Singh 2015; Pariag-Maraye et al. 2017);

4. to assess and manage environmental and social risks involved before investing in different projects (Grigoryeva et al. 2007; Biswas 2011; Sudhalakshmi and Chinnadorai 2014);
5. to develop innovative financial products and services (Grigoryeva et al. 2007; Biswas 2011; Sudhalakshmi and Chinnadorai 2014; Lalon 2015; Kavitha and Rani 2016; Pariag-Maraye et al. 2017) and to implement ecologically friendly practices (Singh 2015); and
6. to develop and implement green policies to reduce both internal and external environmental impacts (Biswas 2016; Kavitha and Rani 2016; Jayabal and Soudarya 2017).

To develop an instrument useful for measuring green banking practices, Shaumya and Arulrajah (2016:1011) focus on four key dimensions relating to one or more key stakeholders of green banking: (1) Employee-Related Practices (such as environmental training and education, green performance evaluation, and green reward systems), (2) Daily Operations-Related Practices (such as paper usage, energy efficient equipment, e-waste management, and eco-friendly banking), (3) Customer-Related Practices (such as green loans, green projects, facilitating green enterprises, and green credit evaluation), and (4) Bank Policy-Related Practices (such as green branches, green policies, green partnerships, green strategic planning and green procurement).

One of the main consequences of the green phenomenon is a significant increase in green products and financial services worldwide. Green banking products and services are variable in relation to the region, the level of development, the market, the structure of the sector and the preference of the consumer/customer (UNEP FI 2016). Several works propose a classification of green banking products and services (Labatt and White 2003; Noh 2010; Mitić 2012; Bahl 2012; Ahmed 2012). Among these, Noh (2010) and UNEP FI (2007) distinguish four macro-classes: (1) Retail Finance/Banking (including personal and business products and services designed for individuals, small and medium-sized enterprises (SMEs) and families), (2) Corporate and Investment Finance/Banking (providing solutions to clients—e.g. big companies, institutions, governments and other public entities—with complex financial needs and that

typically act internationally), (3) Asset Management (providing financial advice and management on behalf of investors with rigorous financial analyses), and (4) Insurance (allowing an insurance premium differentiation on the basis of environmentally relevant characteristics or tailoring for clean technologies and emissions-reducing activities).

9.5 MAPPING THE FIELD OF GREEN BANKING: THE ROLE OF REGULATIONS, STANDARDS, AND POLICY

In recent years, green finance regulation has grown considerably, including in developing economies (Lindenberg and Volz 2016). The centrality assumed by climate changes and the increased exposure of the financial sector to climate, environmental and social (E&S) risks have resulted in a growing trend in regulatory standards (Oyegunle and Weber 2015). The current regulatory framework on green banking is therefore quite extensive and diversified. For this reason, it appears appropriate to classify the most recent regulatory initiatives in the following macro-categories: (1) *market-based initiatives*, (2) *international initiatives*, and (3) *disclosure initiatives*. Finally, a focus is dedicated to *Italian initiatives*.

Market-Based Initiatives

The first and an important market-based initiative aimed at integrating sustainability strategies into the financial sector is the *United Nations Environment Programme Finance Initiative* (UNEP-FI) signed in 1991, to which followed the next year, the *UNEP Statement by Financial Institutions on the Environment & Sustainable Development*. The objectives of this project aim to understand the environmental, social, and governance challenges; why they matter to finance; and how to actively participate in addressing them. For the first time, indeed, more than 200 global financial institutions, belonging to three main sectors of finance (banking, insurance and investment) and balanced between developed and developing countries, have undertaken to implement the best environmental practices within their organizations, additionally realizing an adequate *environmental disclosure*. In summary, the merit of this agreement is to have recognized the strong link between finance and environmental challenges by giving financial institutions a key role in achieving sustainability objectives (see: Box 9.1).

Box 9.1 UNEP-FI

The UNEP-FI project was launched in 1991 by a small group of commercial banks including Deutsche Bank, HSBC Holdings, Natwest, Royal Bank of Canada and Westpac. At present, instead, it counts over 200 members among leading banks, investors, and insurance companies. In more detail, financial institutions' members of the UNEP-FI project are committed to (1) considering sustainable development as a fundamental aspect of sound business management; (b) recognizing, identifying, and quantifying environmental risks as part of the normal process of risk assessment and management, and (c) implementing environmental management policies. Initially, the UNEP-FI involved only the banking industry. Since 1997, insurance companies have also started to take an interest in environmental issues and launched their own initiatives. In 2011, the instances of the banking and insurance systems merged to perfect the UNEP-FI agreement still in force.

Source: Author's elaboration.

Another important initiative, characterized by the strong participation of the financial community on the themes of green and sustainable finance issues, is the *United Nations Principles for Responsible Investments* (UN-PRI) launched in 2006 in partnership with the Global Compact and the UNEP-FI. This agreement comprises six principles aimed at binding all members: (1) to incorporate ESG issues into investment analysis and decision-making processes (*principle 1*), (2) to be active owners and incorporate ESG issues into their ownership policies and practices (*principle 2*), (3) to seek appropriate disclosure on ESG issues by the entities in which they invest (*principle 3*), (4) to promote acceptance and implementation of the Principles within the investment industry (*principle 4*), (5) to work together to enhance the effectiveness in implementing the Principles (*principle 5*), and (6) to report on activities and progress towards implementing the Principles (*principle 6*). At present, these principles have been signed (on a voluntary basis) by approximately 1900 financial institutions

(institutional investors, asset management companies, and service providers), which have made sure the financial sector plays a significant role in reducing the negative consequences of climate change through a proactive attitude in its investment choices. Closely related to the UN-PRI Initiative, we note two other relevant market initiatives—Montréal Carbon Pledge and Portfolio Decarbonization Coalition—that indirectly involve banks because they mainly interest institutional investors and asset managers. Boxes 9.2 and 9.3 offer a brief description.

Moreover, a similar initiative also involved the insurance industry. In 2012, indeed, UNEP developed the Principles for Sustainable Insurance (PSI) to address environmental, social and governance risks and opportunities.

Finally, the Equator Principles (EPs) launched in 2003 also deserve mention. Adopted by now by 92 financial institutions in 37 countries, they are voluntary guidelines aimed at supporting financial companies in project financing activities. Indeed, these principles allow banks' members to better manage the environmental and social risks associated with the financing of some important investment projects (e.g. projects related to large infrastructures and industrial and/or energy plants, infrastructures in the field of transport and telecommunications (Weber and Acheta 2014).

Box 9.2 Montréal Carbon Pledge

Launched on 25 September 2014 in Montréal, this initiative is supported both by UN-PRI and UNEP-FI. By signing the Montréal Carbon Pledge, members pledge to measure and publicly disclose the carbon footprint of their investment portfolios. Disclosure must be annual and can be done through several instruments: website, annual report, sustainability report or other publicly sustainability reporting channel. As of 31 December 2017, the Montréal Carbon Pledge included 142 signatories, including Etica SGR, the only Italian signatory.

Source: Author's elaboration.

Box 9.3 Portfolio Decarbonization Coalition

Co-founded by the UNEP-FI, AP4, Amundi and CDP (Carbon Disclosure Project), this initiative was launched at UN Secretary-General Ban Ki-moon's Climate Summit in September 2014. It is a multi-stakeholder initiative aimed at reducing greenhouse gas emissions through decarbonization of investment portfolios. Indeed, by signing the Portfolio Decarbonization Coalition, institutional investors are committed to disinvest from companies characterized by high carbon impact and to reinvest in companies, projects and technologies more eco-friendly. Therefore, members of this initiative aim to reduce the carbon risks and impacts of their portfolios, and playing a key role in tackling climate change.

As of 1 November 2017, PDC included 28 asset owner and asset manager signatories, representing over US\$3 trillion in assets under management.

Source: Author's elaboration on data of PDC—Portfolio Decarbonization Coalition (2017).

International Initiatives

A first and important government initiative aimed at strengthening the link between environmental protection and the financial system occurred in 2000, when the former UN Secretary General Kofi Annan promoted the UN Global Compact project. This is a voluntary initiative to encourage companies and organizations around the world to adopt sustainable and socially responsible policies and to report on the progress made with regard to the implementation of ten fundamental principles, of which three are concerned with environmental sustainability. In detail, these principles urge companies to (1) support a precautionary approach to environmental changes (*principle VII*); (2) undertake initiatives to promote greater environmental responsibility (*principle VIII*); and (3) encourage the development and diffusion of environmentally friendly technologies (*principle IX*). At present, adhesion of the financial system to this initiative is very high. More than 530 financial intermediaries (including 177 banks and 105 insurance companies) have signed the UN Global Compact and regularly report on the progress made in implementing the ten expected principles.

Another important international initiative on green banking occurred in 2014. In that year, UNEP initiated the *Inquiry into the Design of a Sustainable Financial System* to accelerate the green transition of the financial system (UNEP 2015). Specifically, the inquiry aims to identify best practices and policy options for guiding the global financial system to invest and support the development of a green and inclusive economy. Therefore, the focus regards the environmental aspects (reduction of greenhouse gas emissions, fight against climate change and development of renewable energy), while the approach is strongly oriented towards the analysis of national best practices and the identification of the most improvement options in accordance with the characteristics of each country. The two reports published so far by UNEP show a progressive alignment of the financial system, at the international level, with the sustainable development objectives. Indeed, over the last five years, regulatory initiatives on green finance have increased considerably, additionally involving an increasing number of countries (UNEP 2018).

Further developments in the green finance regulatory framework have characterized the years 2015–2016. In September 2015, 17 SDGs that form the core of the “2030 Agenda” were adopted by the UN General Assembly. These objectives, articulated in 169 sub-objectives (targets), indicate what are the future priorities of sustainable development and define an integrated action plan for people, the planet, the prosperity and the peace. Particular attention is addressed to climate change. Objective 13, indeed, urges the development of actions, at all levels, to contrast climate risk and preserve the environmental ecosystem. To this end, it is essential that the financial system (1) sets a new inclusive and low-carbon intensity strategic model and (2) commits to breaking down the barriers that prevent the growth of financial flows towards sustainable investments. To achieve these ambitious goals, the World Business Council for Sustainable Development (Wbcsd) has recently published some reports (“CEO Guide to the SDGs” and “SDGs Compass”) to support companies and their leaders in aligning corporate strategies with the SDGs.

No less important was the Paris Climate Conference (COP21) held in December 2015. On that occasion, approximately 195 countries adopted the first universal and legally binding agreement on the global climate. The main commitment aims to avoid dangerous climate change by limiting global warming to well below 2 °C.

Finally, another recent initiative worth mentioning is the *High-Level Expert Group on Sustainable Finance (HLEG)*, a group of 20 experts set up in December 2016 by the European Commission, with the aim of developing guidelines for the development of a common strategy on sustainable finance at the European level. After the Interim Report published in July 2017, the High-Level Group released, in January 2018, a Final Report, whose main objectives are (1) *to improve the contribution of finance to sustainable and inclusive growth as well as the mitigation of climate change, and (b) to strengthen financial stability by incorporating ESG factors into investment decision-making* (HLEG 2018:6).

In greater detail, the High-Level Group urge: (1) the promotion of clearer, extensive and standardized reporting of non-financial assets; (2) the inclusion of ESG criteria in the investment process of pension funds; (3) the incorporation and enhancement of sustainability expertise into the role of the board of director; (4) a greater commitment by European stock exchanges to support a more ethical and sustainable finance; and (5) the implementation of a “sustainability test” in order to verify the compliance level of the upcoming EU legislation to the achievement of sustainability objectives (HLEG 2017, 2018).

To make operational the recommendations expressed by this group of experts, in March 2018, the European Commission adopted *The Action plan on Sustainable Finance* to promote a comprehensive strategy for a sustainable economy. This plan consists of the following ten key actions: (1) establishing an EU classification system for sustainability activities; (2) creating standards and labels for green financial products; (3) fostering investment in sustainable projects; (4) incorporating sustainability into the provided financial advice; (5) developing sustainability benchmarks; (6) better integrating sustainability into ratings and market research; (7) clarifying institutional investors’ and asset managers’ responsibilities; (8) incorporating sustainability into prudential requirements; (9) strengthening sustainability disclosure and accounting rule-making; and (10) fostering sustainable corporate governance and attenuating short-termism in capital markets (European Commission 2018).

To implement these important measures, since the first half of 2018, the European Commission has launched several legislative procedures that still are being completed.² Among these, we can cite (1) the European Parliament legislative resolution of 28 March 2019, proposing a regulation of the European Parliament and of the Council on the establishment

of a framework to facilitate sustainable investment and (2) the amendments to delegated acts under the MiFID II (*Markets in Financial Instruments Directive*, 2014/65/UE) and the IDD (*Insurance Distribution Directive*, 2016/97/UE) to include ESG considerations into the advice that investment firms and insurance companies, respectively, offer to their clients. In other words, according to these proposed rules, the regulator is urging investment and insurance firms to also consider the sustainability preferences of clients when assessing whether a financial product meets their investment needs and expectations.

Disclosure Initiatives

Important regulatory initiatives have also been adopted on environmental disclosure in order to enrich this information and show to stakeholders the greatest commitment assumed by companies on these issues. Climate risk, indeed, is increasingly felt among investors, both for ethical reasons (an increasing number of funds choose not to invest in polluting companies) and for economic reasons. Increasingly, more frequent meteorological catastrophes, the progress of green technologies, and more stringent environmental regulations attribute to the climate change a key value in the implementation of business strategies (World Economic Forum 2017).

The first and an important framework on sustainability and environmental disclosure is the Global Reporting Initiative (GRI). Adopting a multi-stakeholder approach, since 2000, GRI has developed as one of the most recognized international frameworks for sustainability reporting. The last major update dates back to October 2016 when the new GRI Sustainability Reporting Standards were published, which from 1 July 2018 will definitively replace the G4 Guidelines for sustainability reporting. More specifically, G4 Guidelines were reorganized to form a set of interrelated, modular GRI standards. The new structure includes (1) 3 “universal” Standards applicable to every organization that prepares a sustainability report (GRI 101: Foundation; GRI 102: General Disclosures; GRI 103: Management Approach) and (2) 33 topic-specific Standards, based on the G4 Aspects and organized into three series (GRI 200: Economic topics; GRI 300: Environmental topics; GRI 400: Social topics). This reorganization aims, on the one hand, to facilitate the updating of the guidelines and, on the other hand, to simplify their application by companies. Environmental indicators are incorporated by the 300 series of the GRI Standards. Such standards cover firm performance related to inputs (material, GRI 301; energy, GRI 302; water, GRI 303) and outputs

(emissions, GRI 305; effluents and waste, GRI 306). In addition, they cover performance related to biodiversity (GRI 304), environmental compliance (GRI 307) and supplier environmental assessment (GRI 308).

Further guidelines on environmental disclosure have also been recently drafted by the Financial Stability Board (FSB) through the establishment, in 2015, of the Task Force on Climate-related Financial Disclosures (TCFD). In this case, the focus is on climate change reporting models. The objective is to urge companies to strengthen the climate risk disclosure to allow investors, lenders and insurance companies to correctly assess climate-related risks and opportunities. “*Climate change – said Michael R. Bloomberg, Chairman of the Task Force – is not only an environmental problem, but a business one as well. We need business leaders to join us to help spread these recommendations across their industries in order to help make markets more efficient and economies more stable, resilient, and sustainable*” (TCFD 2016:2). At September 2018, the FSB’s TCFD recommendations are globally recognized by 457 companies with a total market capitalization of over \$7.9 trillion (TCFD 2018).

Finally, very important is the EU Directive (2014/95/EU) on the disclosure of non-financial and diversity information. Under this new EU initiative, large companies have to publish reports on the policies they implement in relation to environmental protection, social responsibility and treatment of employees, respect for human rights, anti-corruption and bribery, and diversity on company boards (in terms of age, gender, educational and professional background). With this directive, for the first time, in Europe, the reporting of social and environmental performance becomes a duty for companies and no longer an independent choice.

Italian Initiatives

Important regulatory initiatives on green finance have recently also been adopted in Italy. Among these, the following are worth mentioning:

1. The National Dialogue for Sustainable Finance, launched in February 2016, in response to the new regulatory framework established by the SDGs and the Paris Agreement. The final report *Financing the future* reveals important signs of changes due to (1) a net increase in bank loans to support energy efficiency investments; (2) an important improvement of Italian Stock Exchange (*Borsa Italiana*) in the 2016 ranking of sustainability disclosure on 45 stock exchanges; (3) a net

growth of investments in bonds to support projects against climate change and assets managed with ESG criteria; (4) a greater diffusion of ESG factors in the management of private equity funds; (5) a greater dissemination of the Principles for Sustainable Insurance signed by over 22% of Italian insurance companies; (6) the use of the Sustainable and Equitable Well-being (BES) indicators (for a Fair and Sustainable Welfare) as a barometer to measure the sustainable growth of the country (in addition to GDP).

2. The National Sustainable Development Strategy (SNSvS) promoted by the Ministry of the Environment in compliance with the SDGs and approved in December 2017. The main elements of the strengths and weaknesses of Italy have been identified to show the opportunities and challenges that the SNSvS will undertake. A full realization of the SDGs requires a systemic approach as well as partnerships between the public and private sectors.
3. The Consob Regulation on non-financial information adopted to implement the EU Directive (2014/95/EU).
4. The Law n. 232/2016 (Italian Parliament 2016), which recognizes and promotes ethical finance by introducing the figure of sustainable banking operator in the Italian legal system. It is the first law of this type approved in Italy and in Europe.
5. The several initiatives supported by the Italian Stock Exchange (*Borsa Italiana*) that during the last years:
 - has joined to the Sustainable Stock Exchanges Initiative backed by the United Nations, with the aim of supporting the transition to a low environmental impact economy;
 - has joined the Climate Bonds Initiative through the London Stock Exchange Group;
 - has issued a guidance for issuers on the integration of ESG into investor reporting and communication together with the London Stock Exchange Group. In particular, from the last years, ESG considerations increasingly have addressed global investment decisions;
 - starting from March 2017, the establishment of a dedicated green and social bond segment on MOT (the only Italian-regulated market dedicated to corporate and government bonds) and ExtraMOT (the multilateral trading system of Italian Stock Exchange) markets in line with the Green Bond Principles, the principles of transparency and accountability developed by the International Capital Market

Association (ICMA). To be included in this section, the issuer must observe two main requirements (1) to produce a certification issued by independent entity with high ESG expertise aimed at confirming the environmental and social nature of the bonds issued, and (2) at least once a year, the issuer must disclose its use of the proceeds of projects of an environmental and social nature. In the absence of such communication, the Italian Stock Exchange may remove the financial products from the section dedicated to the green and social bonds; and

- the inclusion, in the latest version of the Corporate Governance Code for Listed Companies (July 2015), of some explicit references to sustainability as a key principle in addressing company's corporate governance system and long-term oriented strategies (Italian Corporate Governance Committee, 2017).

Table 9.2 summarizes the main milestones of the new regulation framework on green banking at the European and Italian levels.

Table 9.2 Green banking regulations: main milestones

Market-Based Initiatives				
UNEP-FI	Equator principles	UN-PRI	PSI	UN environment inquiry
1991	2003	2006	2012	2014
International Initiatives				
UN Global Compact	SDGs	COP 21	HLEG	
2000	2015	2015	2016	
Disclosure Initiatives				
GRI	TCFD	UE Directive 2014/95		
2000–2016	2015	2014		
Italian Initiatives				
National Dialogue for Sustainable Finance	National Sustainable Development Strategy	Consob Regulation on Non-financial Information	Budget Law 2017	Italian Stock Exchange Initiatives
2016	2016	2017	2016	Different years

Source: Author's elaboration

9.6 GREEN INITIATIVES: ITALIAN BANKS CASE STUDIES

This section provides a snapshot of two cases of Italian listed banks with international relevance that are developing a comprehensive approach to green banking. In this part of the chapter, we examine in detail how these large and international groups are facing the challenges and the opportunities to make a real difference for a more sustainable financial system.

According to the Bank of Italy Annual Report (2018:161) *at the end of 2017 there were 113 banks belonging to 60 banking groups, 347 stand-alone banks and 78 subsidiaries of foreign banks operating in Italy*. The Single Supervisory Mechanism (SSM) classifies 11 of these banking groups as significant, and their assets represent 74% of the system total. Compared to 2016, as of December 2017, there were three fewer significant banking groups, following the merger between Banco Popolare and Banca Popolare di Milano (which created Italy's third largest banking group) and the exit of Banca Popolare di Vicenza and Veneto Banca from the market. Mutual banks (*banche di creditocooperativo*—BCC) represent the largest category of stand-alone banks. However, the recent corporate governance reform of Italian cooperative and mutual banks enacted in 2016, the financial crisis and technological progress are causing a reduction in both the active banking groups and the number of branches—which decreased by 20% between 2008 and 2017 (see: www.ebf.eu/about-us/italy).

Despite this transformation process, UniCredit and ISP remain very global financial institutions and bank leaders in the Italian banking system. They represent not only the first two Italian banks for total assets and market capitalization but also the only Italian Global Systematically Important Institutions (according to EBA, European Banking Authority). Moreover, in October 2017, UniCredit and ISP together held approximately 30% of the domestic loan market shares (Moody's 2017).

9.6.1 Case Study I: Intesa Sanpaolo Group

According to the data available on the website *Borsa Italiana* (accessed on 26 July 2019), the Intesa Sanpaolo Group (ISP)—with 11.8 million customers—is one of the largest banking groups in Italy and among the top banking groups in the Eurozone, based on market capitalization of €36.672 billion. ISP has a specialized international network that covers several countries; it is the leader in Italy in financial activities for families and businesses. On 31 March 2019 (Borsa Italiana 2019a), ISP had total assets of almost €829.280 million.

ISP Engagement with Environmental Issues: A Focus on the Official Website

In this section, we realize an explorative analysis of the main contents of the ISP official website and documents publicly available (last consultation: 26 July 2019), showing some information, data and examples of initiatives and green products, and, in this regard, it is worth to clarify that the information reported should not be considered conclusive and/or exhaustive.

ISP through its website provides several pieces of data and information about its engagement in the social and environmental context, in order to ensure transparency and professionalism in its relationship with stakeholders. In fact, ISP recognizes their high social and environmental values and therefore provides detailed disclosures on the website (Paltrinieri et al. 2016).

More in detail, the Corporate Social Responsibility process involves the entire company structure, and the CSR management model rests on two prior pillars: the Code of Ethics and the Sustainability Report (Paltrinieri et al. 2016:155). The Code of Ethics (approved by 2007 and updated in 2016) lays down the principles of conduct.

To allow the transparency and the comparison of non-financial information provided by large companies—from 2002 to 2017—the Group has drawn up a voluntary annual *Sustainability Report (SR)*. On March 2018, ISP published the first *Consolidated Non-financial Statement (CNFS)*—in accordance with art. 4 of Italian Legislative Decree 254/2016—which includes and extends the content of the previous sustainability report, introducing a sub-section on its institutional website.

Accountability is enhanced even further with the publication of several *Papers*. One is dedicated to the Community; the other is specific for the Environment, witnessing the commitment to tackle climate change time; and, finally, in July 2018, ISP published the first *People Paper* that proposes a brief account of the Corporate welfare, *starting from the point of view of people and their basic needs: life time, family, support for the future, health, solidarity, health and safety at work* (ISP 2018c:3).

In addition, other publications (the latest version of the *Stakeholder Engagement and Improvement Objectives* and the *Green Bond Framework*) are provided by ISP.

Finally, the Group endorses the Business Plan every three years, containing objectives and forecast estimates that reflect the current views of management regarding the future. In February 2018, ISP's Board of

Directors approved the *2018–2021 Business Plan* in which the digital transformation is a key determinant (ISP 2018a).

A *Sustainability* section is present on the website. In this section, there is a sub-section entitled *Environment*, with a focus on the following topics (the information reported below summarizes the text available on the ISP website (see: http://www.group.intesasanpaolo.com/scriptIsir0/si09/sostenibilita/eng_wp_sostenibilita.jsp#/sostenibilita/eng_ambiente.jsp):

1. *Climate change*: the Group is committed to reducing their emissions, which is a goal of the *Climate Change Action Plan* presented in September 2017 that establishes targets for 2022 and 2037, and supporting the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD).
2. *Our environmental policies*: ISP expressed its commitment to the environment with various policies, such as rules for the environmental and energy policy; rules for the purchase and use of paper and derivative materials; rules governing the organization of communication events and training courses; sustainability rules for the purchase of office machines; and sustainability rules for the setting up of sustainable branches.
3. *Environmental impacts monitoring*: this task is reserved for a specifically created pilot group, the Environmental Management System, which is integrated with an energy management system and enriched by various roles such as the Energy Manager and Mobility Manager (ISP 2018b).
4. *Environmental aspects*: particular consideration is given to direct environmental impacts, paying for each environmental aspect a sub-section to indicate the main initiatives, which will be widely described below, undertaken by the group to reduce its impact and results in several areas (such as energy, mobility, paper, water, waste and biodiversity).
5. *Best practices*: in this part, the main renovation to reduce emissions and consumption and to enhance energy performance are described. Environmental responsibility, efficiency and sustainability represent the guidelines that have marked the work conducted by ISP. In greater detail, ISP illustrates the best practices: *New Headquarters Turin*; *ISP Vita Milan*; *Gallerie d'Italia Museum Milan*; *Technology centre Moncalieri*; and *Zero energy branch VEMarghera* (see: https://www.group.intesasanpaolo.com/scriptIsir0/si09/sostenibilita/eng_biodiversita.jsp#/sostenibilita/eng_best_practice.jsp).

6. *Green products and services*: it provides an overview of the green products and services offered by ISP, in both Italy and abroad. It seems important to underline that the Group devotes an entire portal (called *IMPRES@AMBIENTE*) to Small and Medium Enterprises (SMEs) that want to develop a green business. ISP paid particular attention to *supporting individuals and businesses committed to reducing their environmental footprints through the promotion of green products and services* (ISP 2018b:112), and in the last year, ISP “disbursed 1,922 million euro to the green economy (over 18 billion between 2010 and 2018) (ISP 2019b:146).
7. *Training and awareness*: The Group pays particular attention to the training of employees. In this part, we find two areas of focus: *Environmental research*—with a number of studies on the green economy—and *Participation in environmental events*—which includes several events in which ISP takes part, for example, World Environment Day promoted by UNEP and European Week for Waste Reduction promoted by the European Commission (ISP 2019b).

Finally, it is worth noting that the environmental issues are recurrent in many other sub-sections of the *Sustainability* section, such as *Our commitment*, *Dialogue with Stakeholders*, *Risk management and control*, *Sustainability Indices*, *Responsible Investment*, *Documentation and resource*, *Awards and Publications*.

More in details, in the subsection *Sustainability indices*, ISP offers an overview on the main Sustainability Indexes and Rankings, which is included, such as Dow Jones Sustainability Indices (DJSI) World e DJSI Europe Indices, Sustainability Yearbook 2018 di Robeco SAM and received the Bronze Year Sustainability Yearbook Award 2019, FTSE4Good Index Series, CDP “Climate Change A List” 2018 index, Corporate Knights—2019 Global 100 Most Sustainable Corporations in the World Index, Morgan Stanley Capital Index—Environmental, Social and Governance (MSCI ESG) Leaders Indexes, the MSCI Low Carbon Indexes, Euronext Vigeo Europe 120 and Euronext Vigeo Eurozone 120 indices, Ethibel Excellence Investment Register—Ethibel Excellence Index Global e Europe, Gender Equality Index (GEI), Standard Ethics Italian Banks index, Standard Ethics Italian index, Standard Ethics European Banks index, Energy Consumption and Pollution Index (ECPI) indices, STOXX® Global ESG Environmental Leaders, STOXX® Global ESG Social Leaders and STOXX® Global ESG Governance Leaders, 2019

Bloomberg Gender-Equality Index—GEI (see: https://www.group.intesasanpaolo.com/scriptIsir0/si09/sostenibilita/eng_wp_sostenibilita.jsp#/sostenibilita/eng_indici.jsp), 2018 Equileap Ranking Top 200 (ISP 2019a:8).

In the subsection *Dialogue with stakeholders*, ISP devotes a part on the *Materiality Matrix* that it is an annually updated map that compares the views of stakeholders with the key elements of the company's business strategy (Paltrinieri et al. 2016:158).

In more detail, in the *Materiality Matrix* of 2016 and 2017, climate change was considered to be one of the priority areas in terms of both its importance for stakeholders and its impact on the group's strategy (ISP 2017a; ISP 2018b), while, in 2018, the aspect of green economy has grown in importance (compared with 2017)—on the strategies axis—*thanks to the inclusion of specific commitments in the Business Plan to support the Circular Economy, and following the bank's decision to support the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) for the promotion of transparent reporting on the risks and opportunities linked with climate change* (ISP 2019b:34).

In the sub-section *Risk management and control*, ISP dedicates a part to the control of environmental and social risks in financing. Investment decisions must consider the associated non-financial risks—in line with the *Code of Ethics* and the rules for the environmental and energy policy—adhering to the Equator Principles (ISP 2018b; ISP 2019b). With reference to the sensitive sectors, the positive outcome of the pilot phase of the Questionnaire on Environmental Risks—launched in July 2017 and terminated in June 2018—*based on a sample of customers of the Corporate and Investment Banking Division* (ISP 2019b:48)—allowed to include this initiative in the Operating Guidelines on lending activities, including environmental risk in traditional valuation approaches. Moreover, to respond to the challenges of climate change, ISP entrusts environmental responsibility to the Chief Governance Officer (CGO), who reports to the Chief Executive Officer (CEO). The CGO is supported in this responsibility from the CSR Unit, which serves as the “coordination centre at Group level” on the environmental issue, highlighting the importance attributed to climate change by the Group (ISP 2015).

The corporate social responsibility (CSR) structure—which aims to monitor the Group's social and environmental responsibilities—supports the CFO and CEO *in making proposals to the Corporate Bodies on social and environmental responsibility strategies in line with corporate strategies*

and objectives, and the Top Management in defining its sustainability policies (ISP 2019b:43).

In the sub-section *Documentation and resources*, the Group lists the sustainability policy—in which there are also Environmental Policies and the various certifications such as *Certification for greenhouse gases emission (GHG)*, *Energy Management System (SGE) certification* and *Environment management system certification*.

Finally, the environmental theme is also present in the sub-section *Awards*, where ISP shows year by year, and from 2010, the many awards won in various fields such as the environment. In greater detail, Box 9.4 lists some of the sustainability awards obtained by the Group during the years from 2016 to 2019.

Box 9.4 ISP's Main Sustainability Awards

- January 2016: ISP for its sustainability performance was included in the Sustainability Yearbook 2016 of Robeco SAM and received the Bronze Class Sustainability Award.
- June 2016: ISP was included among the best green companies in the world in rankings created by Newsweek in collaboration with Corporate Knights and HIP Investor.
- October 2016: ISP won the “Green Globe Banking Award” in the Indirect Impact category. The winning project was the “energy efficiency” program for the non-profit organization launched by Banca Prossima with the Federation of Italian Energy Service Company (Federesco).
- December 2016: ISP won the “2016 ET Carbon Industry Leader award” promoted by ET Index Research.
- January 2017: ISP obtained the “Robeco SAM Bronze Class Sustainability Award 2017”. In the same month it ranks 20th in the Global 100 ranking drawn up by Corporate Knight.
- June 2017: ISP ranks 13th in “CSR Online Award 2017 – TOP 100 Italy” in the 7th edition of the research issued by Lundquist, on the digital communication of sustainability.
- January 2018: ISP—only the Italian group—is confirmed in the Canadian Corporate Knights magazine as among the 100 most sustainable companies in the world.

(continued)

Box 9.4 (continued)

- February 2018: ISP was included in the “Sustainability Yearbook 2018 di Robeco SAM. Robeco SAM is the company that every year evaluates enterprises for their inclusion in Dow Jones Sustainability Indices”.
- January 2019: “the Canadian Corporate Knights magazine confirms Intesa Sanpaolo—the only Italian bank—as among the 100 most sustainable companies in the world”.
- February 2019: ISP “received the Robeco SAM Bronze Class Sustainability Award 2019 and has been included in the Robeco SAM Sustainability Yearbook 2019”.
- June 2019: ISP obtained the “Diversity & Inclusion Award” for having distinguished itself, in the last twelve months, in the recruitment and support of resources belonging to protected categories.

Source: Our elaboration from ISP website. (See: https://www.group.intesasanpaolo.com/scriptIsir0/si09/sostenibilita/eng_riconoscimenti.jsp?tabId=2019&tabParams=cyd0YWJJZCc6JzIwMTknLCdkZWZhdWx0JzondHJlZSd9#/sostenibilita/eng_riconoscimenti.jsp%3FtabId%3D2019%26tabParams%3Deyd0YWJJZCc6JzIwMTknLCdkZWZhdWx0JzondHJlZSd9).

A Focus on Green Strategies, Initiatives, Products, and Services

The Group’s strategy aims at creating solid and sustainable values from the economic and financial, social and environmental standpoints, built on the trust of all our stakeholders (ISP 2016:7).

With regard to the social and environmental theme, ISP aims to be:

“(a) Bank with a distinctive identity/reputation, committed to contributing to the growth and development of the economy and society” with a “CSR deeply rooted in all business areas and staff functions, embedded in the Bank’s strategy, supporting social and environmental value creation for a long-term economic development and respecting all stakeholders” (see: http://www.group.intesasanpaolo.com/scriptIsir0/si09/chi_siamo/eng_strategia.jsp#/chi_siamo/eng_strategia.jsp).

As emerges from information coming from several documents (available on ISP website), it is possible to outline that environmental and social factors are considered in some of the main strategies:

1. *To be a real-economy bank to achieve sustainable profitability, reinforcing multichannel and digital banking with all customers* (ISP 2017a:15; ISP 2018b:64; ISP 2019b:75).
2. *To consider the management of environmental risk and the mitigation of relative impact to be an integral part of business strategy* (ISP 2017a:120), activating a process of issuing advisory opinions about social, environmental and reputational risks in sensitive sectors (ISP 2018b:51; ISP 2019b:48).
3. *To include an assessment of the social and environmental variables of financing activities, applying the assessment criteria of the Equator Principles* (ISP 2017a:27; ISP 2019b:50).
4. *To seize strategic opportunities to become an innovative and exclusive financial leader for the circular economy, redefining traditional financial tools to support the transition to a new model for economic and sustainable development* (ISP 2017a:123; ISP 2018b:24; ISP 2019b:147).
5. *To complete a digital transformation* (ISP 2018a:19; ISP 2019b:74).
6. *To promote new digital services (Smart Save, Smart Invest, Smart Future, and Smart Insurance available both online and on the app) to increase customer acquisition, facilitate access to services* (ISP 2018a:59) *and strengthen the digitalization of the payments ecosystem (digital wallet, instant payment)* (ISP 2018a:68).
7. *To consolidate its central role in sustainability and social and environmental and responsibility as part of its global strategy* (ISP 2017a:25; ISP 2018b:16; ISP 2019b:14). In fact, ISP has included in its strategy the Sustainable Development Goals (SDGs) set by the United Nations to provide a concrete response not only in wording but also in implementing the commitments undertaken, whose results have now become an integral part of the Bank's sustainable and responsible business model (ISP 2019b:14).

The Group has undertaken a very wide range of important initiatives and practices. With regard to Employee Related Practice, some of the green initiatives promoted by ISP include, among others, the following:

- *The “Ambientiamo” platform* (ISP 2017a:124) promotes several training courses on climate change, renewable energy and correct waste management (ISP 2018b:114; ISP 2019b:149).
- Promotion meetings and road shows based on the green economy (ISP 2017a:124; ISP 2018b:114).

- Adhesion on various green initiatives to disseminate a culture of sustainability and good practices (ISP 2017a:125; ISP 2018b:115; ISP 2019b:149).
- *The July 2018 launch of #People, the new services and processes portal for Group employees and an important step in the digital transformation process* (ISP 2019b:124).

In relation to Daily Operation-Related Practice, to reduce electricity consumption, some of the various initiatives are, among others:

- *Modernization of conditioning systems* (ISP 2017a:129; ISP 2018b:114; ISP 2019b:142). In detail, during 2018, the replacement of heating, ventilation and air conditioning (HVAC) systems (Italy, Croatia, Hungary, Albania and Serbia) delivered 2,158,000 kWh in energy savings and reduced potential CO₂ emissions by 846 tonnes, saving up €315,000 (ISP 2019b:142).-
- *Replacing conventional lamps with energy saving LED lamps* (ISP 2017a:129; ISP 2018b:114; ISP 2019b:142). In particular, the replacement of lighting systems (Italy, Croatia, Egypt, Serbia and Ukraine) delivered 293,000 kWh in energy savings and reduced potential CO₂ emissions by 130 tonnes, saving up €24,000 (ISP 2019b:142).

To reduce mobility, some of the initiatives are, among others:

- *Monitoring the use of the shuttle service run in Italy* (ISP 2017a:129; ISP 2019b:143). During the last year, these services—available in Turin/Moncalieri, Milan/Assago, Naples, Padua/Sarmeola di Rubano and Venice/Mestre—had a *positive impact on the environment* (ISP 2019b:143), avoiding 508 tonnes of CO₂ and improving people's quality of life.
- Promoting the Mobility Office platform to encourage *use of public transport* (ISP 2018b:109; ISP 2019b:143).
- *Supporting car-sharing during the convention with “Car2go”* (ISP 2017a:129–130) or the “Car City Club” in Turin (ISP 2018c:5). During 2018, the project was extended to *all employees working within the municipality of Milan and Assago, Turin New Headquarters, Moncalieri Data Centre and Florence – Novoli sites* (ISP 2019b:144).

With regard to reducing the use of paper, ISP started various digitalization initiatives, including several projects such as:

- *The “Danube Project” (currently underway at Privredna Banka Zagreb), which includes the use of biometric signatures to eliminate paper (ISP 2017a:130) or “the “Zero Carta project” in training initiatives”, which involved the reduction of data sheets, the consultation of information sheets on screens, online statements (ISP 2018b:110). This initiative has contributed to approximately 6330 tonnes in CO2 emissions savings and avoided the use of over 3265 tonnes of paper, with cost savings of over 4.7 million euro (ISP 2019b:144).*
- *The “Digical” project for the Group’s international banks (ISP 2017a:130; ISP 2018b:110; ISP 2019b:144) avoided the use of approximately 159 tonnes of paper in 2018 (ISP 2019b:144).*
- *Multichannel projects in Italy (ISP 2017a:130; ISP 2018b:64; ISP 2019b:144) contributed to a reduction in the use of paper per staff member of approximately 1.3% compared with 2017 (ISP 2019b:144).*

To reduce the consumption of water, an important example of efficient water management in Italy is the new headquarters; in 2017, *water consumption was again well below the Group average at around 7 cubic meters per employee. Thanks to the drinking water dispensers, it was possible to avoid the use of 192,000 half-litre plastic bottles, which corresponds to a 3.8-tonne reduction in plastic consumption and an 18-tonne reduction in CO₂ emissions (ISP 2018b:110); these benefits were again confirmed in the 2018 CNFS (ISP 2019b:145).*

In relation to the reduction of waste, some of the initiatives promoted by the Group are, among others:

- *Donating personal computer it was replacing to non-profit associations (ISP Bank Ireland) (ISP 2017a:132). This was the primary cause of a 27.6% increase (compared with 2017) in the special waste produced by the group and followed the integration of the former Banca Popolare di Vicenza and former Veneto Banca (ISP 2019b:145).*

- *In Italy, toner is regenerated, which involves the partial replacement of black ink cartridges with recycled cartridges* (ISP 2018b:111; ISP 2019b:145).

With regard to Customer-Related Practice, some of the initiatives adopted by the Group are, among others, the following:

- *Activating several training courses, such as “Think Green”,* (ISP 2017a:125; ISP 2018b:114; ISP 2019b:149);
- *Promoting crowdfunding donation platforms* (ISP 2018b:72; ISP 2019b:88) such that, since the launch in September 2017, 18 projects have been presented, with a total of almost 670,000 euro collected from donors (ISP 2019b:88);
- *Supporting third-sector businesses through Banca Prossima that invest in projects with solutions supporting an increase in the overall sustainability of social activity. These initiatives generated savings of around 593 tonnes of oil equivalent (toe) in 2018, corresponding to around 1,270 tonnes of CO2 avoided* (ISP 2019b:148);

Finally, with regard to Bank’s Policy-Related Practice, it is worth noting that ISP translates its commitment into various environmental policies that outline the strategic and operational areas within which (the) Group carries out its initiatives to protect the environment and reduce its carbon footprint (Available in ISP official website, subsection Our Environmental Policies. See: http://www.group.intesasanpaolo.com/scriptIsir0/si09/sostenibilita/eng_policy_ambiente.jsp#/sostenibilita/eng_policy_ambiente.jsp).

The Group has developed a wide range of innovative green products and services dedicated to all categories of customers. According to the ISP website (subsection: Green products and services, consulted on 26 July 2019) and 2018 CNFS (ISP 2019b:146), in the last year, the Group has allocated 1,922 million euro to the green economy (over 18 billion between 2010 and 2018). As confirmed in the Green Bond Report (ISP 2018d:8), ISP paid attention to climate change issues *with the awareness that innovation, the development of new products and services and corporate responsibility may contribute to tackling environmental changes and have related social impacts*.

In Box 9.5, we report green products and services that have attracted our interest.

Box 9.5 A Focus on Selected Number of Green Products and Services

Green Bond: according to Press Release (ISP 2017b), published on 16 June, 2017 and available on the official website: *ISP is the first Italian bank to issue Green Bonds*. As stated in the official website: *In June 2017 Intesa Sanpaolo issued a 500 million euro Green Bond connected with environmental sustainability projects. The commitments undertaken by Intesa Sanpaolo are defined in a set of guidelines (Green Bond Framework) inspired by the Green Bond Principles, a voluntary protocol that favours the transparency of the operation and involves the close monitoring of the environmental projects that receive the funds.* (see: http://www.group.intesasanpaolo.com/scriptIsir0/si09/sostenibilita/eng_prodotti_verdi.jsp#/sostenibilita/eng_prodotti_verdi.jsp).

On June 2018, the Group makes the “Green Bond Report” available. This is the first of an annual document *based on the Intesa Sanpaolo Green Bond Framework* (ISP 2018d:2) and aiming to support green projects, considering their positive environmental impact and ability to improve energy efficiency. As stated in the Green Bond Report (ISP 2018d), ISP has financed 77 loans, investing €500 million that led to the production of 615,820 MWh of renewable energy, saving 29,297 MWh of energy and avoiding 213,314 metric tonnes of CO₂ greenhouse gas emissions.

Fonditalia Ethical Investment: is the new socially responsible investment solution of Fideuram which integrates income objectives with financial sustainability and social value aspects. The sub-fund invests in the bonds of those States that stand out for their focus on social and environmental issues, in bonds issued by Supranational Bodies in favour of developing economies and in funds specialised in micro-finance, fair trade funds, equity funds and shares with a positive impact at the social and/or environmental level (ISP 2017a:66). In CNFS (ISP 2018b:79), *In terms of funding, the ethical funds sector registered significant growth in managed assets (+32% from 39 million euro in 2016 to nearly 52 million euro in 2017) as a result of a growing interest from customers, including Italian customers.*

ISP Fundfor Impact (€250millions): *enabling lending of €1.2bn to categories with difficulties accessing credit* (ISP 2018a:9). The Group aspires to promote a positive impact on society.

(continued)

Box 9.5 (continued)

Fideuram Intesa Sanpaolo Private Banking: service specializes in offering advisory in order to “*meet the financial, pension and insurance needs of Private customers and High Net Worth Individuals*”.

During 2018, Fideuram Omnia Portfolio Management introduced the Ego Sustainable line, which *invests in assets relating to a respect for social and environmental issues* (ISP 2019b:99). Since 2017, this service has offered its customers the GP Mix Sustainable portfolio management line, *which involves an investment process aimed at identifying financial instruments using not only financial and economic criteria but also specific sustainability assessments* (ISP 2019b:99).

The Group devotes an entire portal, *IMPRES@MBIENTE*, to SMEs that want to develop a green business. In this portal, ISP offers several green products and services, such as *Leasenergy*, *EdificaBioedilizia*, and *Desk Energy Mediocredito Italiano*.

Source: Our elaboration from: ISP (2017a; 2017b; 2018a; 2018b, 2018d, 2019b) and official website (See: http://www.group.intesasanpaolo.com/scriptIsir0/si09/sostenibilita/eng_prodotti_verdi.jsp#/sostenibilita/eng_prodotti_verdi.jsp).

9.6.2 Case Study II: UniCredit

In this section, we realize an explorative analysis of the main contents of the UniCredit official website and documents publicly available (last consultation: 26 July 2019), showing some information, data and examples of initiatives and green products. In this regard, it is worth to clarify that the information reported should not be considered conclusive and/or exhaustive.

According to the data available on the website of *Borsa Italiana* (accessed on 26 July 2019), UniCredit is one of the largest banking groups in Italy and is a leading European commercial bank, with market capitalization of €25.768 billion, operating in 17 countries, with over 143,000 employees, over 7800 branches and with an international network

spanning some 50 markets (Borsa Italiana 2019b). As of 31 December 2018, UniCredit had total assets of € 831,469 million (UniCredit 2019a:12).

UniCredit Engagement in Environmental Issues: A Focus on the Official Website

Since the year 2000, the Group has voluntarily published the *Integrated Report* (IR³), using it as a communication tool to ensure greater transparency and to tell how its activities have created value for both the shareholders and the stakeholders; this report combines the Group's analysis of financial and non-financial performance.

In March 2015, UniCredit posted the *Environmental Commitment*—approved by the Executive Management Committee (EMC)—with the aim of summarizing: *UniCredit's Environmental Commitment, the approach, roles and responsibilities as well as the principles, rules, procedures and systems adopted by UniCredit to comply with generally accepted international and local standards and regulations for preventing, managing and, where possible, reducing environmental impacts* (UniCredit 2015:1), in order to promote a dialogue on social and environmental issues with all stakeholders.

UniCredit pays particular attention to environmental issues. In this regard, according to *Environmental Commitment* (UniCredit 2015:1):

(a) as a leading European financial institution, the cornerstone of our mission at UniCredit is to not only generate value for customers and shareholders, but also to contribute to the development of the communities in which we operate. Systematically, our Group is working to define a reliable and inclusive approach that allows UniCredit to prevent and manage environmental impacts caused directly or indirectly through our operations, financial transactions, supply chains and other business activities.

UniCredit submits the Integrated Report as its annual Communication on Progress (COP), publicly disclosing to stakeholders also on progress made in implementing the Ten Principles promoted by the UN Global Compact and in supporting broader UN development goals, in its core business. The table included in this Report provides connections among GRI-G4 indicators and UN Global Compact Principles (UniCredit 2017a:95).

It is worth noting that the Code of Ethics (in paragraph 5.5 entitled “Protection of the Environment”) stipulates:

The Addressees are required to fully and substantially comply with legislative requirements on the environment. In this respect, they must carefully consider the environmental consequences of each choice made in the course of their work, both in relation to the consumption of resources and the production of emissions and waste directly related to their activities (direct impacts) as well as those related to activities and conducts that are not directly controlled, as they are carried out by third parties, customers and suppliers (indirect impacts) (UniCredit 2017b:14).

Subsequently, as a mandatory regulation starting in 2017, UniCredit published the Integrated Report (IR) *in compliance with the requirements of Articles 3 and 4 of the Legislative Decree 254/2016, which implements European Directive 2014/95/EU in Italy* (UniCredit 2018:2; UniCredit 2019b:2).

As stated in the latest IRs (UniCredit 2017a, 2018, 2019b), the Group realizes a *materiality matrix* whose results are useful *to consolidate and study signals from all of the bank's stakeholders. It not only takes into account their needs and expectations, but also monitors our investment in and capacity to address the issues they care about* (UniCredit 2017a:29).

The Group provides a materiality matrix, which is an important tool for improving stakeholder engagement; in the last IR, it had made significant progress in ensuring greater attention to the most relevant aspects, aiming to integrate the perspective of several stakeholders. The Group used the “Datamaran platform” in addition to the other sources utilized in previous years, such as sustainability rating agencies and research on global risks and opportunities. Thus, to complete and consolidate the opinions of their stakeholders, the *Datamaran platform* includes benchmarking analysis based on reports published by other financial institutions, regulatory analysis of the main mandatory and voluntary regulations applicable to the financial sector—especially for the countries in which UniCredit operates—and, finally, analysis of the most recent news in the press and social media, addressing main topics of the financial sector (UniCredit 2019b).

UniCredit provides detailed information regarding its engagement in social and environmental issues on the website, on which there is the *Sustainability Section*, in turn subdivided into several subsections. Among these, the first subsection *A Sustainable Bank* introduces the theme of sustainability, highlighting “what the Group do” through several parts, such as *Our capitals*, *Sustainability Governance*, *Integrated Reporting*, *Interactive sustainability graphs*, *Key milestone in sustainability*,

Sustainability in our countries, and *ESG approach*—object of the subsequent subsection. Moreover, in this section, there are several focus points that explore also the theme of sustainability as *Social Impact Banking* and *Sustainable Development Goals*.

More in detail, in the subsection *Our Capital*, UniCredit devotes a part called *Natural Capital* to highlight the role of environmental issues. The *Milestones* of the environmental commitment of the Group are particularly important and significant (see: <https://www.unicreditgroup.eu/en/a-sustainable-bank/our-capitals/natural-capital.html>). In addition, this part (*Natural Capital*) provides useful information about: (1) *Environmental Management System*; (2) *Climate Change*; (3) *Natural Capital Finance Alliance*; and (4) *Suppliers* (see: Box 9.6).

Box 9.6 Focusing on “Natural Capital”

1. *Environmental Management Systems*: offer a framework for all of our environmental programs, as well as a full set of procedures and rules that apply to all related undertakings.
2. *Climate Change*: outlines the commitment of UniCredit on climate change that is based on a three-tiered approach, as stated in the website (<https://www.unicreditgroup.eu/en/a-sustainable-bank/our-capitals/natural-capital/climate-change.html>)
 - (a) *Shrinking the carbon footprint of our operations*;
 - (b) *Financing renewable energy sources*; and
 - (c) *Developing ways to reduce financed emissions*.
3. *Natural Capital Finance Alliance*: in June 2012, UniCredit—among the first 37 financial institutions—endorsed the Natural Capital Declaration (NCD), launched at the United Nations Conference on Sustainable Development, also known as Rio+20.
4. *Suppliers*: highlight procurement based on sustainable models. In more detail, *Under the guidelines specified in our Green and Social Procurement Policy*, preference is given to suppliers who are able:
 - (a) *to demonstrate significant reductions in their greenhouse gas emissions, resource consumption and waste generation*

(continued)

Box 9.6 (continued)

- (b) *to show compliance with the labour standards of the International Labour Organization (e.g. freedom of association, collective bargaining, prevention of child labour and forced or compulsory labour)*
- (c) *to demonstrate progress in mitigating the health and safety impacts of their entire supply chain.*

Source: our elaboration based on information available on the UniCredit website (<https://www.unicreditgroup.eu/en/a-sustainable-bank/our-capitals/natural-capital.html>).

Finally, in another subsection, called *Sustainability Governance*, the Group discloses important information about the governance characteristics.

In this way, as stated in the 2018 IR (UniCredit 2019b), the Group has introduced a governance system to reinforce the management of environmental and social risks and has assigned sustainability issues to the committee, which, in 2018, was called the *Corporate Governance, Nomination and Sustainability Committee* (CGN&SC).

The CGN&SC is responsible for sustainability issues, offering proposals on the *Group's environmental and social strategy, annual objectives and targets, monitoring their implementation and examining related reporting* (UniCredit 2019b:13). In 2018, the CGN&SC met several times to learn more about and to examine the topic of sustainability; in particular, the committee intervened to integrate this theme into the materiality matrix—grouping the material issues based on their area of common impact and reducing them from 28 to 12—to learn more on the progress of the IR and development in the field of business ethics (UniCredit 2019b).

A Focus on Green Strategies, Initiatives, Products, and Services

In the 2016 IR (UniCredit 2017a:32), we read that: *Our Group presented the 2016–2019 Strategic Plan, Transform 2019, to the market on December 13, 2016. The three-year plan calls for us to build on our existing competitive advantages, making us more efficient and allowing us to better serve our customers, who represent our highest priority.*

Already in 2016 IR (UniCredit 2017a:81) stated that: *UniCredit is aware that the interdependences between economic activity, ecosystems and natural resources present risks and opportunities (...). Economic development, human survival and well-being require conservation of the earth's ecosystems. Coherently with our commitment to contribute to the well-being of the communities in which we operate, we systematically work to prevent and mitigate any environmental impact of our operational activities and to promote best practices in our sphere of influence.*

Thus, the Group *aims to anticipate these changes and, whenever possible, turn them into opportunities to enhance our customer focus. This is how we will continue to achieve sustainable, long-term profitability and contribute to the prosperity of the territories where we operate* (UniCredit 2018:28).

It is important to highlight that the vision—*One Bank, One UniCredit*—has emerged in both 2017 IR (UniCredit 2018) and 2018 IR (UniCredit 2019b), which observe that *the banking industry is operating in an era of constant flux, as regulations, macroeconomic conditions and customer behaviours change at a rapid pace.*

In the 2018 IR (UniCredit 2019b), we read that the main objective is *to meet the challenges of the future, with a strong commitment to achieving sustainable results and engaging with our clients* (UniCredit 2019b:28). Thus, in the 2018 IR (UniCredit 2019b), the Group makes an important statement, highlighting that it has contributed to the achievement of the *United Nations' Sustainable Development Goals (SDGs)* (UniCredit 2019b). From the information coming from several documents (available on the UniCredit website), it is possible to outline that environmental and social factors are considered in some of the main strategies. In this regard, some of the evidence are listed below:

1. *To continue to develop group wide strategic projects and initiatives that promote the efficient use of natural resources and reduce paper and waste* (UniCredit 2015:5).
2. *To encourage and develop specific environmentally friendly products and services* (UniCredit 2015:11).
3. *To increase the use of remote channels* (UniCredit 2016b:5).
4. *To enhance communication and training on environmental & social (E&S) topics* (UniCredit 2017a:27).
5. *To support constructive dialogue among stakeholders* (UniCredit 2017a:20).
6. *To seize green economy opportunities* (UniCredit 2017a:84).

7. *To promote business that supports natural capital* (UniCredit 2018:59).
8. *To digitize processes* (UniCredit 2017a:83; UniCredit 2018:19; UniCredit 2019b:39).
9. *To enhance energy efficiency and manage sustainability mobility* (UniCredit 2017a:82–83; UniCredit 2018:58; UniCredit 2019b:70).
10. *To advance environmental risk management* (UniCredit 2017a:85; UniCredit 2018:16; UniCredit 2019b:71).
11. *To manage environmental and social risks by implementing and integrating the Equator Principles (EP)* (UniCredit 2018:S16; UniCredit 2019b:S16).
12. *To implement sectoral policies for environmental, social and reputational risk* (UniCredit 2018:S17; UniCredit 2019b:S14).
13. *To reduce environmental impacts* (UniCredit 2018:57; UniCredit 2019b:17).
14. *To be open to business opportunities that arise from the need to address environmental challenges* (UniCredit 2019b:71).

The Group has undertaken a very wide range of important initiatives and practices. With regard to Employee-Related Practice, some of the green initiatives promoted by UniCredit are, among others:

- *Promotion of digital training initiatives to increase the digital competencies and skills* (UniCredit 2017a:58; UniCredit 2018:S13). In the last year, the Group has continued its promotion of innovation, and in January 2019, it announced the creation of a *Transformation & Innovation Advisory Board* (UniCredit 2019b:74).
- *Engagement of “employees” on various environmental topics*, for example: *Green House Gas (GHG) emissions, renewable energies, etc* (UniCredit 2017a:20) or on several policies regarding environmental and social issues (UniCredit 2018:16; UniCredit 2019b:17).

In relation to Daily Operation-Related Practice, UniCredit has promoted several initiatives. To reduce electricity consumption, some of the initiatives are, among others:

- *Promotion of new models of sustainable energy development through financial support, innovative technologies and technology partners* (UniCredit 2015: 11).
- *Activation of UniCredit Bank Austria's Procurement Policy which makes it mandatory to purchase electricity from renewable sources* (UniCredit 2018:59).
- *Installation of centralized, remote-controlled Heating, Ventilation, and Air Conditioning (HVAC) systems in approximately 1,000 branches and energy monitoring devices in 800 branches* (UniCredit 2019b:69).

Some of the various initiatives to reduce mobility are, among others:

- *Substitution of bus shuttle with e-bicycles in Munich* (UniCredit 2017a:83).
- *Conduction of the "No Travel Week initiative" regarding non-customer related travel, thereby further encouraging remote meetings* (UniCredit 2017a:83).
- *Promotion of online meetings through video conferences among all employees at UniCredit headquarters* (UniCredit 2018:58; UniCredit 2019b:70).
- *Promotion of the use of bicycles or public transport rather than car or motorcycle by employees in Austria* (UniCredit 2018:58; UniCredit 2019b:70).
- *Prohibition of non-customer-related travel for one week each month* (UniCredit 2019b:70).

With regard to reducing the use of paper, some of the various initiatives are, among others:

- *Promotion of digital signatures for routine in-branch transactions* (UniCredit 2017a:83).
- *Promotion of "Centralized Document Dematerialization (CDD)" project to make the use of branch documents more efficient and secure through a process based on a new IT platform* (UniCredit 2017a:83). *In 2018, the CDD securely stored nearly nine million documents* (UniCredit 2019b:70).
- *Activating "Firma Mia" system, that allowed to save 445 tons of paper in 2017* (UniCredit 2018:58) *and 573 tons of paper in 2018* (UniCredit 2019b:70).

Finally, to reduce the use of Water and Waste, some of the various initiatives are, among others:

- *Redevelopment of 3 water service networks* (UniCredit 2017a:75).
- *Separation and recycling of valuable materials* (UniCredit 2017a:S71; UniCredit 2018:S55; UniCredit 2019b:S53). In 2018, in Italy, the recycling data improved, from 97.14 in 2017 to 97.93 (UniCredit 2019b: S53).

The customer-related practices emphasize the *customer-centric* approach. Specifically, some of the main initiatives adopted by UniCredit are, among others:

- *Promotion of dialogue tools with stakeholders* (UniCredit 2017a:29) to improve *engagement with customers* (UniCredit 2018:47; UniCredit 2019b:24). As stated in the IR (UniCredit 2019b:58), *investor engagement included 507 meetings and 27 roadshow days with institutional, retail and socially responsible investors*.
- *Adoption of a tailored approach to distribution and sales channels that improves interactions with customers and applies innovation and digitalization to day-to-day banking products and services* (UniCredit 2017a:38). The Group deployed a more efficient, innovative and digital service model with a sustainable, lower-cost structure (UniCredit 2018:32) to further enhance their customer focus (UniCredit 2019b:40).
- *Promotion of a program in Italy to raise environmental awareness among employees and clients* (UniCredit 2017a:82). Thus, as stated in the UniCredit 2018 (p. 17), the Group *has adopted a structured and comprehensive approach to strengthening its risk culture*.
- *Promotion of a Social Impact Banking project that finances and promotes initiatives that have a positive social impact* (UniCredit 2018:54; UniCredit 2019b:27).

These initiatives focus on creating customer value, such as the *promotion of a program in Italy to raise environmental awareness among employees and clients* (UniCredit 2017a:82) and/or the promotion of digitalization and innovation to increase customer value (UniCredit 2019b).

Finally, with regard to the Bank's Policy-Related Practice, to ensure that transactional and related risks are properly addressed, UniCredit

develops detailed guidance policies for relevant sectors that are susceptible to environmental and social risks (UniCredit 2017a:S26; UniCredit 2018:S17). These policies are directed to all Group enterprises that engage in lending or other forms of financial assistance in sensitive sectors, *including water infrastructure (dams, in particular), nuclear energy and coal-fired power generation* (UniCredit 2019b:S15).

UniCredit has developed a wide range of innovative offerings of green products and services, dedicated to all categories of customers. With regard to the green investments, it is worth stating that UniCredit increasingly invests in renewable energy sources: by the end of 2016, the (...) *exposure to the renewable energy sector exceeded €9.4 billion. Overall, the largest portion of (...) financing for renewable projects goes to photovoltaic plants, with a share of 46 %. Wind energy comprises 33% of the portfolio, with other renewable energy sources making up the remaining 21%* (UniCredit 2017a:84).

In addition, as stated in 2016 IR (UniCredit 2017a:84), the bank is *the first-ever lead manager of a Green Bond issuance (...). In 2016 we acted as joint book runner or joint arranger of 10 issues for a total placement of over €7 billion. Among these, UniCredit acted as joint lead manager in the €500 million EIB 2037 Climate Awareness Bond, the longest maturity outstanding green bond to date.*

Then, it is important to underline that UniCredit *participates in industry association and public-private partnerships that seek to design and implement a new business model that can address the environmental challenge humanity now faces.* In this regard, it is worth reporting that UniCredit continued to support WWF initiatives by donating more than €430,000 to the WWF Italy Oasis System in 2016. These donations are part of a sponsorship that since its inception, has raised close to €1.9 million by donating 0.3 percent of all UniCredit Flexia Card WWF transactions as well as the issuing fees of Genius Card WWF to a special WWF fund managed by (...) Group (UniCredit 2017a:86).

During 2017, the Group has continued to support renewable energy sources, investing €8.2 billion: 47% in photovoltaic plants, 32% in wind energy and 21% in other renewable energy sources (UniCredit 2018:59).

This is confirmed and stated also in the 2017 IR (UniCredit 2018:59): *in 2017, we served as the joint book runner or joint arranger of 11 issues for a total placement of over €7 billion. Over the year, we also saw growing demand for green loans, and UniCredit served as the lead arranger for 2 deals totalling an issued amount of €104 million.* UniCredit has continued

to support WWF initiatives, “*donating nearly €520,000 to the WWF Italy Oasis System in 2017*” (UniCredit 2018:59).

Therefore, UniCredit has contributed to the achievement of SDGs, in 2018, investing €7.8 billion in renewable energy projects, of which *more than 30 new loans were in impact financing for €32.6 million approved in Italy* (UniCredit 2019b:28) and €18.7 billion in green and sustainable loans, giving UniCredit *a leading role in 7 Sustainability-linked revolving credit facilities* (UniCredit 2019b:71).

In 2018, UniCredit—*the first ever lead manager of green bond issuance* (UniCredit 2019b:71)—has continued to invest in these instruments, for a total placement of nearly €13 billion.

In line with the development of multichannel digital business, in 2018, UniCredit EVO invested €3.1 million in digital banking through a partnership with Meniga, an Icelandic best-in-class fintech. In the same year, the Group established another strategic partnership, investing €800,000, with an Italian start-up called Axyon AI and aim to improve advisory activities through the application of artificial intelligence (UniCredit 2019b).

Box 9.7 focuses on some of the main green products and services that have attracted our interest.

Box 9.7 A Focus on a Selected Number of Green Products and Services

Among the most important deals with reference to the green, it is appropriate to highlight that *UniCredit Corporate & Investment Banking (CIB) supported the ERG Group’s acquisition of E.ON Italia’s hydroelectric business. This increased ERG’s overall installed capacity by approximately 30 percent, making it a significant part of the Italian hydroelectric sector. With 16 power plants, seven dams, three reservoirs and one pumping station located in the Italian regions of Umbria, Marche and Lazio, this portfolio has an overall installed capacity of 527 megawatts, potentially serving more than 500,000 households. The equity value of the transaction was €950 million, which was mostly financed by a €700 million syndicated loan* (UniCredit 2016a:85).

Euro Bond Ethical Corporate Fund: designed to achieve capital appreciation over the medium term. This is accomplished by investing

(continued)

Box 9.7 (continued)

in fixed income instruments issued by companies with business models that meet high standards of social, human and ecological responsibility (UniCredit 2017a:S66).

Genius Card World Wildlife Fund (WWF): the card contributes to the well-being of nature and the cost incurred for the issue is donated entirely to the WWF (see: <https://www.unicredit.it/it/privati/carte/tutte-le-carte/carte-prepagate-iban/genius-card-wwf.html>). It is important to underline that since its inception, the Group has raised more than €2.3 million for WWF (UniCredit 2018:59).

In 2017—for the first time—UniCredit traded over 730 million tons of CO₂ valued at almost €4.5 billion in the EU ETS market (UniCredit 2018:59).

My Business Care: This product is a modular service providing answers to relevant business concerns quickly and efficiently (UniCredit 2019b:41), such as how to continue operations, including in the event of natural disasters. This product is powered by CreditRas, a joint venture with Allianz.

Source: UniCredit (2016a, 2017a, 2018, 2019b) and Official website (see: <https://www.unicredit.it/it/privati/carte/tutte-le-carte/carte-prepagate-iban/genius-card-wwf.html>).

The Group is confirmed in some sustainability indices, with the main ones being Dow Jones Sustainability Index, FTSE4Good Index Series, Standard Ethics Italian Banks Index (see: <https://www.unicreditgroup.eu/it/a-sustainable-bank/sustainability-reporting/rating-and-indexes.html>).

Over recent years, UniCredit has obtained several Awards, as evidenced both on the Official website (see UniCredit website—subsection *Awards and honour* (see: <https://www.unicreditgroup.eu/en/unicredit-at-a-glance/awards-and-honour.html>) and in the several UniCredit-IR, including—among others—the following: (1) *Interactive Key Award; category Finanza, Assicurazioni, Consulenza e Ricerca—Gruppo Editoriale Media Key* (UniCredit 2017a:S8; see: website—subsection “Awards and honour”), (2) *Premio Crescita Digitale; category Making Markets—Accenture and Gruppo 24 Ore* (UniCredit 2017a:S8), (3) *Premio ABI per l’*

Innovazione nei Servizi Bancari 2016; categories “La banca per il futuro -Innovare per crescere” and “La banca che si presenta e ascolta – Innovare per comunicare”—ABI (UniCredit 2017a: S8), (4) One of eight winners of The Innovators in Trade Finance 2017 for the category Process innovation by Global Finance (UniCredit 2018:S8), (5) Cerchio d’Oro dell’Innovazione Finanziaria 2016 Edition (see website—subsection “Awards and honour”, (6) Special mention at the “European CSR Award Scheme” for the Your Choice, Your Project (YCYP) initiative (see: website—subsection “Awards and honour”), (7) Financial Innovation – Italian Award in the category New Services to Enterprises by AIFIn (UniCredit 2019b:S6), (8) Top Employer 2018 by the Top Employers Institute (UniCredit 2019b:S6; see: website—subsection “Awards and honour).

Among the many redevelopment projects, it is important to mention briefly the role of the UniCredit Tower, located in Milan and opened in February 2014 (see: subsection *Milan Headquarters: UniCredit Tower*). Among others, UniCredit financed BARD Offshore 1: *the first and most powerful offshore wind farm in Germany. BARD Offshore 1 has been fully connected to the grid since September 2013. With 80 five-megawatt wind generators, the wind farm has a nominal capacity of 400 megawatts. Under full load its output amounts to more than 1.6 billion kWh of electricity per year, resulting in the avoidance of some 880,000 tons of CO₂ emissions and providing green energy to approximately 400,000 private households* (UniCredit 2017a:84).

According to 2016 IR (UniCredit 2017a:82): *in Milan, the UniCredit Pavilion has achieved a LEED5 Gold Certification, joining the UniCredit Tower (LEED Gold) and the HVBTower (LEED Platinum). This certification is awarded to buildings and spaces that operate in a sustainable manner.*

In 2017, the Group—along with two commercial banks—financed the *Arror Multipurpose Dam* project to build a dam in Kenya. The goals of the project are to (i) *create a large-scale resource for irrigation and drinking water, (ii) increase sustainable energy production and efficiency for local use, and (iii) foster improvement of agricultural activities, fisheries and ecotourism* (UniCredit 2018:S19).

Finally, as stated in the 2018 IR (UniCredit 2019b:69), one of the largest relocation projects in Central Europe is the *Austria Campus*, which brings UniCredit Bank Austria, the UniCredit CEE units established in Vienna and all UniCredit group companies in Vienna together in one

location, in line with the UniCredit Transform 2019 plan. This will lead to a reduction of 332,000 square meters of office space and the closing of 944 retail branches by the end of 2019 (UniCredit 2019b).

9.7 CONCLUDING REMARKS AND FUTURE LINES OF RESEARCH

This chapter investigated the relatively new research field of green banking, which appears extremely promising, given the challenges and the opportunities that the banking industry will have to face, and which we have discussed above. We found it constructive to propose a qualitative analysis of how banks go green that develop theoretical arguments and investigate practical cases, using findings of the literature overview as a basis for mapping empirical evidence on green practices and initiatives. Our exploratory study focuses on only two major Italian banking groups, and therefore, the first results cannot be generalized, but they give primary hints regarding the status quo and trends of Italian banks on this issue and is encouraging for further studies in this field. The case study analysis and the theoretical considerations suggest that the links between sustainability, environmental issues and banks' social responsibility are multiple and far reaching. Our findings add knowledge about green banking practices and confirm studies that suggest that large banks are more likely to engage in environmental actions. The results reveal that the two banking groups are actively involved in environmental issues. In greater detail, it is important to note that they have for a long time been paying attention to the topics of environmental and social responsibilities as well as sustainability. In this vein, they have undertaken a multiplicity of innovative and excellent green banking practices and have promoted innovative green initiatives, with a strategic perspective, in many sound and positive ways for contributing to a green economy. The two Groups use significant resources in favour of the environment and society and play a key role in improving a green culture in the national (and in addition, in the international) context. As has emerged from the first part of the chapter, in recent years, it has been possible to note a proliferation of regulations, guidelines and standards in the European and Italian arena. All this allows us to predict the growing involvement of the Italian banking system in green themes.

Concerning future research, a follow-up to this study could be planned, focusing on a larger number of banks. In addition, following a reform of the Italian mutual banking sector, research should be oriented towards understanding ways in which the cooperative banking groups go green. Finally, in light of the prospects for the European Banking Union, the use of a larger sample (formed by European and Italian banks) could provide a basis for highlighting the differences and similarities between the ways in which banking systems go green, as well as noting best practices in this field.

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NOTES

1. Although the chapter is the result of a collaborative effort between authors, each author takes responsibility for her contribution. In particular, Giuseppina Procopio is responsible for the Sects. 9.3 and 9.6.2; Prof. Dr. Annarita Trotta is responsible for the Sects. 9.1, 9.2, 9.6 and 9.7; Eugenia Strano is responsible for the Sects. 9.4 and 9.6.1. Finally, Dr. Antonia Patrizia Iannuzzi is responsible for the Sect. 9.5.
2. An important contribution is provided by the *Technical expert group on sustainable finance* (TEG) that will operate until June 2019, with a possible extension until year-end 2019. The TEG's role is to assist the European Commission in developing the new regulations that can be grouped in four areas. The first area concerns the development of a taxonomy of the sustainability finance with the aim to determine whether an economic activity is environmentally sustainable. The second area regards the identifications of the European Union (EU) Green Bond Standards. The third area aims to establish the benchmarks for low-carbon investment strategies, while the fourth area aims to enhance and improve the corporate communication of climate change information. The TEG commenced its work in July 2018 and includes 35 members from civil society, academia, business and the finance sector, as well as ten additional members from EU and international public bodies work.
3. In detail, in the text, we will use the following abbreviations: (1) UniCredit 2016a, which refers to the 2015 IR (published in March 2016); (2) UniCredit 2017a, which refers to the 2016 IR (published in April 2017); (3) UniCredit 2018, which refers to the 2017 IR (published in April 2018); (4) and UniCredit 2019b, which refers to the 2018 IR (published in April 2019).

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Opportunities and Challenges of Impact Investing in Climate-Smart Agriculture in Latin America

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10.1 INTRODUCTION

Investing in climate-smart agriculture (CSA) offers a unique first-mover's advantage for frontier market investors. This is particularly the case for those that are aware of the limits of traditional monoculture in adapting to climate change and of a growing consumer consciousness demanding traceable, sustainable food chains; for pension funds recognizing participants' concerns that financial return cannot occur without a habitable environment for the future; and for providers of venture-philanthropic capital from sovereign wealth funds, development finance institutions (DFIs), and privately owned foundations.

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There are, however, four main related challenges to this sort of investing: lack of proven business models and track records, private capital scarcity, questions related to exit strategies, together with long time horizons for return on investment and high perceived risk. In general, investing in such frontier markets tends to require an inherent appetite for an increased amount of risk and, consequently, adequate knowledge and tools to tackle and mitigate the risk exposure.

In 2018, the worldwide Impact Investing Assets Under Management (AUM) summed up to USD 502 billion, mostly being managed by asset managers (64%), foundations (21%), banks (4%), DFIs (2%), family offices (2%), and pension funds and insurance companies (1%) (Global Impact Investing Network 2019b).

If we compare this amount to the sustainable responsible investing (SRI), meaning investments following ESG (environmental, social and governance) compliance factors, the total AUM summed up USD 12 trillion (only US domiciled assets), mostly being managed on behalf of institutional investors (64%), on behalf of individual investors (12%) and others (24%) (US SIF Foundation 2018).

Climate change was the most important specific ESG issue considered by managers in assets-weighted themes. The assets to which this criterion applies more than doubled between 2016 and 2018.

It is valid, therefore, to say that, while sustainable responsible investing looks at climate change as a risk, impact investors could look at it as an opportunity, especially domiciled investors or those interested in countries producing food and soft commodities. From 2014 to 2015, agriculture received the largest amount of capital from impact investors in Brazil, with a total of USD 31.4 million in invested capital (ANDE, LGT Impact Ventures, LAVCA 2016).

In this chapter, we reflect on the constraints of impact investing in climate-smart agriculture in Latin America. In addition, we raise the case of forestry or sustainable forestry investing.

Forestry is a mature sector. Historically, it received interest from institutional investors because of timber's ability to hedge against inflation, its long-term horizons, and the predictability of its cash flow. Recently, forestry's complementary income streams have come to light, including environmental services valuation (such as carbon credits, water stewardship, and biodiversity conservation), different revenue streams from agroforestry (forest, fruits, and nutraceuticals), and, in addition, positive social impact (community development and less conflicts related to land titles).

Nevertheless, forestry is still a relatively small asset class at around USD 9.6 billion (Global Impact Investing Network 2019a).

In this chapter, we address the risks faced when investing in climate-smart agriculture, which involve forests being integrated with crop and livestock production, in order to meet targets regarding forest restoration in Latin America.

Firstly, our findings build on a series of ongoing cases in this field that illustrate investments either via equity, debt or convertible notes; then, secondly, on a *collaboratory*¹ session held in São Paulo in May 2018, in which a group of stakeholders and experts in this field convened to discuss and share risk-mitigation strategies; and, thirdly, on a series of in-depth interviews with investors and investees.

10.2 WHAT IS CLIMATE-SMART AGRICULTURE?

Climate-smart agriculture (CSA) is an approach that helps guide actions needed to transform and reorient agricultural systems to support development effectively and ensure food security in a changing climate. CSA aims to tackle three main objectives: sustainably increasing agricultural productivity and incomes; adapting and building resilience to climate change; and reducing and/or removing greenhouse gas emissions, where possible (FAO 2019). An example of CSA is Amazon-Pec. This is a venture developed and implemented by IDESAM (Institute for the Sustainable Development of the Amazon), which has a revolving fund providing credit in the form of products and technical assistance to cattle ranchers that want to convert to agroforestry. Amazon-Pec fosters CSA because it engages smallholder farmers, it encourages restoration and conservation by making them prerequisites for farmers to access credit, and it is aligned with a growing market demand for ethical and green products. Its business model also introduces value to ecosystem services by accounting for carbon credits (Alimi Impact Ventures 2018). This example shows how financing can support forest restoration or, at least, help in holding back deforestation in the Amazon.

CSA offers a business opportunity in connecting small- and mid-sized farmers to markets, helping them grow food every month of the year as part of, for example, an agroforestry system aligned with climate-smart practices. Compared to conventional agriculture, this approach to farming is less volatile in production output (and, thus, income), as well as less exposed to threats such as diseases. Furthermore, it provides long-term profitability and potential retirement guarantees for the entrepreneur, for example, from high-value wood products. Additionally, the decreased

risks, compared to conventional smallholder agriculture, further extends to a level of protection against future environmental legal requirements and when it comes to localized climate-change risks.

A change in agriculture is needed, not only from an environmental and social perspective but also from an economic one. Traditional systems of large-scale monoculture have stressed the soil and negatively impacted micro-climates, resulting in reduced production levels. The new technology involved in CSA can reduce the use of inputs and restore deforested areas, turning unproductive land into productive farms, and promoting a better integration of crops and people, reducing logistical costs.

Impact investing in CSA requires a first-mover approach mindset and involves pre-seed and seed capital, awareness of the required time for business modeling and testing new technologies, as well as creative investment setups. Tilabras illustrates the challenges and the potential of CSA ventures in Brazil.

Box 10.1 Sustainable Fish Production Aligned with CSA: Scale to Reach Profitability, Social and Environmental Impact—Axial Holding's Tilabras

Tilabras, one of the new ventures of Axial Holding has recently started operations. The aquaculture project encompasses an investment of around USD 200 million in the state of Mato Grosso do Sul (SEMAGRO 2017). In 2023, when the fourth and last phase of the project is implemented, tilapia (a.k.a. Saint Peter) production is set to reach 100,000 tons per year. The project includes aquaculture nets and tanks, refrigeration, processing facilities to produce oil and flour, a maintenance and cage-producing facility, and a water cleaning plant.

Tilabras can be considered a proof of concept for the feasibility of impact investing in CSA: it is both profitable and provides measurable social and environmental impact. The business is scalable, and it also has plans to integrate small fishermen, by allocating 30% of the fish-processing capacity to their association and transferring technology and knowledge to increase productivity. It creates incentives for farmers to recover nearby degraded lands for soybean farms (soybeans are a main input for fish food), as well as vegetable farms integrated with aquaculture (vegetables help in cleaning the water,

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Box 10.1 (continued)

and fish help in fertilizing the soil). Cleaning water is a critical factor for aquaculture. Therefore, Tilabras has incentives to help farmers in the use of precision farming techniques, promoting the wise use of inputs and, consequently, eliminating pesticide and fertilizer waste that may contaminate rivers. Small private solar and biomass power plants and a smaller carbon footprint are other positive impacts. In terms of the socioeconomic impact, the company is working with local NGOs and the government on a program related to the empowerment of women farmers in the region and which involves everything from providing support in the case of domestic violence to offering economic opportunities, such as growing organic cotton.

However, the capital, planning, and execution capacity needed to implement a similar endeavor in Brazil is not negligible, and resilience is required. It took five years for Axial Holding to plan and build facilities in order to become operational (full capacity is planned only for 2023). The Axial-Holding team analyzed 1900 locations before selecting one (SEMAGRO 2017). The environmental licensing process took three years. The knowledge acquired by managing another of its investment ventures in this same field, called Mar & Terra, was also key in executing the Tilabras project successfully.

Mar & Terra was launched in the late 1990s to produce native Brazilian fish species on a large scale and now produces around 700,000 tons per year of different species of fish. As is the case for first movers, Axial Holding faced a challenging learning curve, somewhat alleviated by its association with Mar & Terra.

10.3 THE *COLLABORATORY* SESSION, SHARED RISKS, AND POTENTIAL MITIGATION STRATEGIES

In order to assess the most common perceived and real risks related to investing in climate-smart agriculture as well as identifying mitigation strategies, we organized and hosted a *collaboratory* session with 22 participants. The group included investors, investees, DFIs, insurance companies, and technical centers, with expertise in developing more sustainable agriculture in three different Brazilian biomes: Atlantic Forest, the Amazon, and Cerrado (Brazilian Savanna). The participants shared “best and worst” experiences, discussing risks and mitigation strategies.

The main risks have been clustered into five main groups: environmental and climate change risk; financial risk; infrastructure and supply-chain risk; political, legal, and governance risk; and the “H factor” or human-capital risk.

It is important to note that we have approached the term risk as being “an unwanted event which may or may not occur” (CSLI 2011) with different levels of impact on the investment.

We have *not* looked at issues such as problems that have already arisen or are a given, unfavorable component of the investment. In addition, our focus was on impact investing; therefore, we have not looked at ESG as a risk factor itself for *conventional investments*.

In reality, people involved in investments face not only risk but also uncertainty.

In contrast to risk, uncertainty belongs to the realm of subjectivity (CSLI 2011). Risk and uncertainty, in the context of entrepreneurship and impact investing in CSA, should be considered together.

10.3.1 *Environmental and Climate-Change Risk*

The unpredictability of rainfall patterns and the increased aridity of land, because of higher temperatures and consequently a higher level of evaporation, increase the risk of bad harvests for farmers. Crop insurance can mitigate the farmer’s default risk in credit payments, and hedge instruments such as futures, options, and other derivatives can mitigate the risk that less or no produce might be delivered to trading companies. However, the cost of these financial mitigation strategies will increase with a higher probability of extreme scenarios, and it will be more expensive for farmers to raise capital.

Several technological approaches provide powerful and more long-term oriented ways of mitigating climate-change risk. System redesign/diversification, based on an optimal crop/animal/forest mix, precision farming, and genetic modifications, can create more adaptive and resilient harvests.

Polycultures and integrated crops, livestock, and forest systems are more effective than monoculture in addressing adverse weather conditions, such as delayed rainy seasons and droughts or, on the other hand, heavy rainfall (Altieri et al. 2017). With polyculture, at least one crop will survive generating income and working as a hedge against total harvest loss. Moreover, the biodiversity created through the interaction of plants, animals, and soil promotes nutrient recycling, reduces the exposure to pests and weeds, and increases productivity. As stated in Altieri, Nicholls, and Montalba (2017), studies consistently show that these integrated

systems provide greater yields during water stress situations when compared to monoculture. The Milpa case (Box 10.2) illustrates the benefit of integrating different crops in Latin America.

Another technological approach involves digitalization and the use of drones, satellites, Internet of Things (IoT), big data, and cloud solutions that make it possible to observe, measure, and respond more precisely to inter- and intra-field variability of crops. By using this information, farmers can avoid the excessive use of pesticides and fertilizers, reducing the environmental impact. At the same time, they are better able to irrigate arid terrain and increase productivity.

These technologies have the potential to revolutionize agriculture, and start-ups are increasingly bringing this knowledge to farms, contributing to the technology side of CSA.

Looking at the case of Brazil, the country is on the cutting edge of agribusiness, especially tropical agribusiness. There are reputable research centers, and the number of Brazilian aggrotech start-ups with innovative solutions has been increasing significantly since 2015. This fact is well illustrated by the number of start-ups analyzed by SP Ventures, a venture capital fund focused on aggrotech in Brazil and Latin America: 54 start-ups were evaluated between 2007 and 2014. That number increased to 400 between 2015 and January 2018 (Época Negócios 2018). The portfolio of SP Ventures also highlights the diversity of technology of the Brazilian aggrotech. Among the 21 start-ups financed by the fund, there are entrepreneurs building on biotech, precision farming with the use of drones, satellites, cloud computing and IoT, blockchain technologies, and smart managerial systems.

Box 10.2 The Brazilian Ecosystem for Aggrotech

Some of the world's leading research centers in the field of aggrotech are located in Brazil. Selected examples are ESALQ (Luis de Queiroz College of Agriculture) from the University of São Paulo, which currently ranks among the top five universities for agricultural sciences in the world, and EMBRAPA (Brazilian Agriculture and Livestock Company), a research institution financed with government resources.

Accordingly, the Brazilian aggrotech ecosystem is very promising. The government, multilateral agencies, and not-for-profit organizations are still important providers of capital for the ecosystem, but

(continued)

Box 10.2 (continued)

the share of private capital is increasing. Examples include ESALQTec, which is ESALQ's incubator for start-ups in the field of Agritech, that has established partnerships with many government institutions and private corporations, and Pulse, an accelerator based at the rural technology center of Piracicaba and launched in a partnership between Raizen, SP Ventures, and NXTP Labs.

The Venture Capital (VC) industry in Brazil has recorded various successful exits since 2018, including unicorns such as 99Taxi, NuBank, and PagSeguro. Consequently, VC funds focusing on Brazil and Latin America are currently raising large amounts of capital.

There are still only a few VC funds particularly concentrating on aggrotech with climate-smart agriculture as a central focus, but the forecasts suggest that investors will show an increasing interest in this area. Additionally, private equity funds exclusively focusing on agribusinesses—such as Aqua Capital—are emerging.

Box 10.3 Milpa, a Case for the Benefits of Combining Different Crops

Milpa is an approach still in practice in Mexico and the rest of Mesoamerica (Altieri et al. 2017). In this system, farmers typically combine maize, common beans, and squash with tomatoes, chilies, and semi-domesticated herbs. Beans benefit maize by fixing nitrogen and attracting beneficial insects that reduce the maize's exposure to pests. Squash hinders weeds and covers the soil quickly reducing erosion. Maize provides shade and support for climbing beans, creating an unfavorable environment for insect pests and preserving moisture. It also blocks the dissemination of spores, working as a physical barrier against certain diseases.

10.3.2 Financial Risk Cluster

Financial risks mentioned in the *collaboratory* section are related to unproven models which need high upfront disbursements for implementation to produce results in the long run. The mitigation actions for financial risk start with a market perspective.² There is an increasing demand for organic and more sustainably sourced food, including sustainable cattle

ranching, according to the experiences and expectations of the experts we talked to.

It was stated that—*if the invested business model is promising*—large corporations and more conventional investors are likely to become interested in buying the company at a later stage, as soon as the viability of the business model is proven. However, there is still a lack of successful cases providing data to help in evaluating investments in innovative and CSA businesses.

Angel and venture capital investors are patient investors that deal well with risk by investing in a large portfolio of early-stage companies. As they stage investments, they advance, initially, smaller amounts of capital to start-ups, and provide follow-on investments only to those that meet pre-agreed milestones. These investors participate actively on the boards of their investees, helping the entrepreneurs in pivoting their strategy when needed and in hiring talented management. They also use their network to increase the probability of success for start-ups.

Box 10.4 Assessed Financial Risk

In the *collaboratory* session, the most mentioned financial risks related to CSA impact investing were:

- High upfront disbursements are needed while there is little knowledge that could potentially serve to absorb risk
- Depending on the geographic region, the lack of land ownership titles may have negative impacts due to the bureaucracy and the time required for land registration, or to a potential loss of investment from not being able to legalize the land title, or even associated reputational risk due to corruption
- Business plans not being approved because of the non-fulfillment of requirements for credit approval
- The inherent long-term and illiquid nature of forestry investing
- In the case of agroforestry, although the different sorts of crop arrangements are perceived as a risk-mitigation strategy, including providing intermediary returns along the time horizon of forestry investing, for many credit organizations, including development banks, having a variety of crops may also be perceived as increasing the risk
- The perceived complexity of the integrated production systems for risk assessment by financing organizations and development banks

Source: Alimi Impact Ventures (2018)

Historically, 44% of venture capital investments in Brazil recorded a total loss, another 15% had some loss, but 13% returned more than five times the invested capital (Insper, Spectra and ABVCAP 2018). These successful start-ups compensate for the failures and provide an average gross return of 2–3 times the invested capital for VC investments in Brazil. The more the ecosystem is developed, the higher the number of successful cases with higher returns, and consequently, more private capital will accelerate the growth of Brazilian aggrotech.

A combination of financial resources from governmental and multilateral agency investments, along with the potential involvement of companies with R&D compliance budgets and private foundations, can provide pre-seed and seed capital for scalable opportunities in new CSA ventures, be it in soil management, production conversion, restoration, or aggrotech start-ups.

As these start-ups prove their business model and reach later stages, private equity, corporations, and more conventional capital markets will fund the next growth cycle. The virtuous cycle for scalable opportunities in agribusiness in Brazil has already started.

However, less scalable and less profitable opportunities, and/or those that do not have a clear exit path, are not targeted by angel and venture capital investors. This is the case for many models for integrating agriculture, forests, and livelihoods, especially if they involve small-scale farming.

The financial valuation of environmental services should be accounted for in this sort of investing. The most conventional approach is to make use of carbon credits, for which there is a growing market as companies such as airlines experience a growing pressure to reduce their emissions. Nevertheless, more creative ways are needed to appropriately value environmental services such as water basin conservation, the survival of bees and pollination, and biodiversity conservation, just to mention a few. Ejido Verde, in Michoacán, Mexico, is an example of a creative financial approach to restore degraded land.

As for the illiquidity and long investment horizons of the investments, risk could be decreased by combining the forestry business with a shorter-term business, such as the production of grains, vegetables or fruits, or the keeping of livestock. Additionally, at an exit point, investors can integrate the discounted value of—for instance—the timber that is still to be harvested in the sale price of the company shares. Thus, investors do not necessarily have to remain invested (Table 10.1).

A frequently discussed topic in this context is blended finance, which could provide seed money for not-yet-proven business models and work as a collateral fund, while being a first-loss cushion.

Box 10.5 Managing Long Investment Horizons—Ejido Verde’s Regenerative Investing in Michoacán, Mexico

Ejido Verde is a Mexican regenerative pine-resin supply company. It aims to restore 12,000 hectares of degraded lands with resin-producing commercial agroforestry plantations using native pine trees. It builds on a partnership between indigenous communities that have been tapping pine resin for centuries and Mexican pine chemical companies that transform the resin into derivatives for global markets in 12 different industries. The business model includes 0% interest community loans to plant new forests. Loans range up to USD 3.5 million depending on the area planted. Family farms repay their portion of the community loan with 10–15% of the resin production to repay a fixed amount of resin agrees in advance which is anticipated between years 11 and 20 of the plantation. With an exclusive purchasing agreement, Ejido Verde buys the remaining resin production at a fair market price with cash on delivery. The first resin will be harvested after ten years with the initial plantation resin beginning to flow in 2021.

Ejido Verde is raising USD 25–30 million with USD 12 million deployed and USD 8 million pledged. It has developed four different investment vehicles that allow clear exits (Table 10.1).

Table 10.1 The different investment options developed by Ejido Verde

<i>Investment options</i>	<i>Investor profile</i>	<i>Target return^a</i>	<i>Investment term (years)</i>	<i>Additional information</i>
Equity	Strategic long-term partner/family offices	7–10×	25 +	Minority interest, return targets from the dividends only ^b Preferred return on principal
Mezzanine	Family offices/mezzanine funds	5.0×	20	Performance based, tied to top-line revenue
		1.75×	7	Option for early exit in year 7 ^c
Debt with/without guarantees	Commercial institutions	9% per year	20	Unsecured, balance sheet
	Development banks	7% per year	10	
		6% per year	20	Asset backed, partial guarantees
		4% per year	10	

^aTarget return is expressed in investment multiple for equity and mezzanine options. And in interest rate for straight debt

^bGrowth strategy could lead to a higher return through increased dividends and/or selling back of equity stake

^cSubject to minimal productive targets being achieved

Source: Adapted by the authors from Ejido Verde Executive Summary for Investors

Box 10.6 Blended Finance for Subordinated Credit Quotas

Blended finance is the strategic use of development finance for the mobilization of additional finance toward sustainable development in developing countries (OECD 2019).

Blended finance is a combining of different sources of financial and intellectual capital involving “funding by development finance institutions (DFIs), multilateral development banks (MDBs), bilateral governments, and foundations in de-risking instruments (e.g. guarantees, first loss or risk sharing capital, technical assistance and capacity building) to crowd-in private capital in frontier and emerging markets in order to accelerate the achievement of the SDGs by scaling-up activities” (Blue Orchard 2018).

Currently, discussions are taking place on Blended Finance 2.0. The key add-ons relate to scale, effectiveness, and new actors collaborating on blended finance components. In terms of new actors, efforts have been focusing on how to engage institutional investors, especially pension funds, which have more patient capital and less liquidity needs. The second new group of key actors constitutes privately owned companies: the resulting discussion revolves around the question of how they could engage as part of their R&D, socio-environmental compliance, or innovation needs.

In the specific case of climate-smart agriculture, the costs associated with establishing the ecological infrastructure of integrated farms (labor, resources, and capital) tend to be high in the first three to five years. Once the cultivation of the integrated system starts to render ecological benefits, controlling pests and weeds, and recycling nutrients in healthy soil, the costs of extra inputs and maintenance drop because farmers need less fertilizers, pesticides, and irrigation. After years of conversion, the biodiverse farms will finance their own operations. However, patient investors are needed to bear the risk of financing the conversion until the symbioses brought by the biodiversity prove viable.

A design involving different credit quotas, with different levels of seniority and terms could be a solution. The receivables from the proceeds of the farm would pay for the interest and amortization of debt, where quotas with lower seniority would only be paid after high seniority debt is guaranteed. Foundations, governments, and multilateral funds could buy junior quotas, and pension funds and other profit-seeking investors would be typical investors to buy senior quotas.

The desire of international institutional investors, such as European and Canadian pension funds, and multilateral and development agencies, to engage in impact investing will probably bring more capital to blended finance vehicles. Pension funds and other institutional investors that value impact investments may invest in unproven technologies, if foundations and governmental multilateral agencies decrease the investors' risk of loss in blended finance designs. However, venture philanthropy is not yet well established in Brazil and is, thus, unknown to many domestic investors.

10.3.3 *Political, Legal, and Governance Risk Cluster*

Corruption and reputational risk associated with doing business with an unethical partner or government were mentioned in the *collaboratory* session. In order to attract investment that is aligned with a more sustainable approach to agriculture, several of Brazil's state development secretaries have offered incentives for investors to start businesses in their regions. On the one hand, this creates an *El Dorado* set of opportunities composed of co-funding, bringing land titles into compliance, and tax incentives. On the other hand, a more stringent investment assessment is required, including preventive measures against reputational risks that may arise.

Box 10.7 Main Risks Assigned to Political, Legal, and Governance Cluster

- Failed relationships and a lack of cooperation with the government and public bureaucracy
- Reputational risk associated with doing business or working with the government or with former governmental representatives
- Becoming involved in corrupt schemes
- The legal risk of not complying with the forest code and facing associated compliance costs and fines; the legal risk of failing to comply with other legislation, owing to the high complexity of the Brazilian legal system
- The lack of credibility of public institutions and the reputational risk associated with corrupt schemes that may emerge with public partners, and current or former government representatives

Source: Alimi Impact Ventures (2018).

Investors, especially international ones and those with some larger portfolios, do not have the capacity to manage each project themselves and often do not intend to do so, leaving the entrepreneur in charge. However, this situation can potentially lead to agency problems where the agents' goals are not perfectly aligned with the investors' goals.

Misaligned and badly structured cooperation, and misunderstandings with local managers or the entrepreneurs, could even lead to fraud and embezzlement. Therefore, it is crucial to design appropriate incentive schemes, contracts with fair terms and understandable conditions and requirements, and to establish active communication that works well. Reporting should include *appropriate* (long- as well as short-term) metrics that are understandable to all parties and should not be allowed to be delayed or incomplete.

The risk of investing in an unethical farmer or entrepreneur can be reduced with a thorough due diligence process. During the due diligence process, the reputational history of the partner can be assessed, and if there is any doubt about the ethics, investors should not pursue the investment any further. Furthermore, both positive and negative financial or non-financial covenants ("carrots and sticks") may also mitigate some risks, limiting the actions of the farmer or entrepreneur that may lead to compliance issues.

Equity investors usually require a seat on the board, and they may hire and fire executives. Moreover, investors can include an option covenant, and in case there is a breach of the agreement, they can force entrepreneurs or farmers to buy back their equity stake at a determined amount.

10.3.4 *Human Capital Risk (or the "H Factor" Risk)*

During the *collaboratory* session, the most frequently mentioned and extensively discussed risk was the "H factor" (the human capital risk). The related risks are very broad and include challenges associated with family succession; issues related to a lack of understanding of CSA financing, by managers operating financing and investment funds; a lack of financial and business education by smallholder farmers; and the low availability of qualified people to lead the investment's implementation.

Mitigation strategies for human capital risk begin with a reflection on the use of philanthropic and DFI capital for technical assistance.

Box 10.8 Main Risks Associated with the “H Factor”

- Family succession in both larger farmers and smallholders because of the low interest of younger family members toward agriculture, leading to the discontinuation of the investment and failure of the business
- The management risk caused by the lack of professionals with an educational background, which combines running a business, a deep understanding of environmental services valuation, and a creative mindset to search for new business models, including new sorts of collaterals and guarantees
- Making changes to the business model without the appropriate expertise
- Costs associated with non-compliance of the labor law
- The lack of knowledge/information exchange between different organizations. The experts in the *collaboratory* session referred to several ongoing CSA incubation initiatives involving more-sustainable food production start-ups led by different organizations but similar in its essence and shallow in business related content.

Source: Alimi Impact Ventures (2018).

In blended finance, instead of allocating philanthropic and DFI capital as first loss, part of it should and could be directed to the development of educational centers to prepare smallholder farmers to access credit and manage a business professionally. Rabobank Foundation credit lines to smallholder farmers in the Brazilian Cerrado is one example of such a design.

10.3.5 Infrastructure and Supply Chain Risk

Infrastructure is needed to guarantee the producers' market access and to decrease transportation costs significantly. Infrastructure is, therefore, an important determinant of a project's success. For this reason, the chosen investment location should be a place that already has a well-developed infrastructure, or where an adequate infrastructure could be built.

Box 10.9 Credit Lines Linked to a Training Center for Family Farming in the Brazilian Savanna

One example of using not-for-profit financing for training purposes is the Rabobank Foundation's investment in the Brazilian Cerrado. The investment is composed of a debt instrument for smallholder farmers (who would not, otherwise, be able to access easy and low-cost governmental credit due to a lack of collateral) and a grant for the further development of a technical center for training in farm management, organic planting systems, and in financial literacy. In order to take out credit, the smallholders must attend the training. This is, in essence, a mitigation strategy against default risk.

However, this would require additional investments that have to be accounted for. Depending on the biome, there are slightly different risk levels regarding the availability of the needed infrastructure. Some areas in Brazil are more exposed to the risk of flooded roads; others have unstable connections to the Internet or to the electric grid.

In order to decrease costs and mitigate risk, businesses in Brazil are already successfully making use of the economies of scale and complementary transportation systems via cooperatives and other types of associations.

Lastly, in order to avoid reputational and financial risk in the context of corruption along the supply chain, partners should be selected carefully, and long-term cooperation should be established. In this way, entrepreneurs and investors can create and maintain a transparent and efficient transportation system.

10.4 NEW PLAYERS IN CLIMATE-SMART BUSINESSES

Last but not least, it is essential to consider how companies in large commodity chains and with ESG compliance needs could engage in blended finance structures by providing venture philanthropic capital or by offering the currently scarce seed and start-up capital to scale up impact.

Companies committing part of their revenues to R&D and/or environmental compensation fees could play a role in blended finance structures in providing capital—which is already budgeted and must be disbursed—either to reduce impact investing risks related to human capital by supporting technical assistance or to provide seed and start-up capital to companies with not-yet-proven business models.

The key challenges to incorporate these companies involve regulation and an awareness of the catalytic effect this sort of capital would have when invested together with other partners in blended finance vehicles.

Currently, in Brazil, there are two types of compliance needs regarding committed fees and budgets based on annual revenues—one for R&D investing and one for environmental impact compensation.

Companies, such as infrastructure concessionaire operators, including airport or hydropower plant operators, or businesses receiving tax benefits from free trade zones, for example, technology companies based in the Manaus Free Trade Zone, are required to make compulsory annual R&D investments.

In addition, companies with core businesses that have clear direct environmental impact, for example, mining companies, must comply with compensation fees to be allocated to development activities in the communities they operate in.

An emblematic case is one of the regulation change in the use of the compulsory R&D fees paid by technology companies in the Manaus Free Trade Zone. Since 2018, besides having to be allocated in the investing in R&D research or technology centers, these fees can also be used to capitalize start-up companies, as long as they are based in the Amazonian states.

The new regulation specifies that the fees can be used as investment capital, in the form of equity, convertible notes, or as Limited Partners (LPs) in funds registered at the CVM (Brazilian Securities and Exchange Commission). It is estimated that the new regulation will release approximately USD 130 million³ per year in the Amazonian states.

In this way, a financial resource that was originally used as one-way payment for R&D is now expended into seed and start-up capital that will support the development of the technological and socio-environmental innovation ecosystem in the Amazon.

The second example relates to R&D compliance governed by the National Electricity Agency and how companies are applying it to support start-ups, which require research funding to further develop new technologies in renewable energy, which then connects to the next players in the investing chain.

Box 10.10 Three Gorges in Brazil

China Three Gorges Corporation (CTG) has operated in Brazil since 2013 and has investments in 17 hydropower plants and 11 wind farms. In 2017, they committed USD 1.9 million in R&D projects, mostly in the areas of applied research and experimental development in renewable energy. CTG Brazil is currently exploring models to collaborate with start-ups and partners to support the next steps of the businesses they support with technical assistance. As part of this process, the company has developed a participatory process to define the key investing areas as part of their road map, and this will guide the development of their theory of change (ToC) aligned with the sustainable development goals (SDGs).

10.5 LESSONS LEARNED ON POTENTIAL RISK MITIGATION STRATEGIES

Based on the discussions held during the *collaboratory* session and on a series of complementary interviews, we can point to the following lessons learned for risk mitigation while investing in climate-smart agriculture.

- Communication is key. There is a rich pool of knowledge that investors, entrepreneurs, and other experts can benefit from, as long as experiences are shared. If there is a successful mitigation strategy in place somewhere, protecting from or avoiding a risk that is relevant for others, sharing this and exchanging approaches can take the whole sector forward. A *collaboratory* session, such as the one we organized, might be a good setting.
- Some risks are interlinked and simple measures, or even the business model in itself, can work as an effective mitigation strategy.
- The perceived risk might be higher than the real risk faced. It is important to analyze the situation thoroughly and realistically. The breakdown of risks into the five clusters we identified can help to identify characteristics of the risk at hand and to find appropriate countermeasures.
- Some risks concern large areas of land. For small-scale farming, in particular, it can be useful to build *alliances* with neighboring entrepreneurs in order to implement the same or a complementary risk mitigation strategy.

- Innovation and digitalization open up new opportunities that might just revolutionize agriculture, especially in the context of value chains, and social and environmental impact. It might also build resilience to risk.

10.6 CONCLUSIONS

Climate change mitigation requires new business models aligned with climate-smart agriculture practices, especially in the case of countries which are (and will be) the cellars for food production for the estimated world population of 9.7 billion by 2050.

Nevertheless, looking at CSA or at more sustainable value chains beyond ESG or Forestry Code compliance, there is a real opportunity in impact investing in this field, as the cases of Axial Holding and SP Ventures, both from Brazil, and Ejido Verde from Mexico have shown.

In order to scale-up impact investing in CSA, the required seed and start-up capital could be provided by new actors in the field, such as companies with R&D compliance capital, and by well-structured blended finance models, along with funds with a diversified portfolio. Innovative and promising investment opportunities are diverse, ranging from sustainable cattle-ranching initiatives and iCLF (integrated Crops, Livestock, and Forestry) to high-end technology and digitalized farming, providing a balance between impact and return.

Currently, there is also a movement of *new rural entrepreneurs*, formed by the next generation of the large family-owned agribusinesses in Brazil. These are young people who are taking over their family business with a fresh approach and the clear intentionality to lead their business successfully, from both a business and a social and environmental impact perspective.

These developments, changes in mindsets, and new market characteristics show that, although there are risks in frontier markets, the mitigation strategies resemble business opportunities that could revolutionize the market, while helping to solve imminent social and environmental issues.

Thus, with the right toolset and a diverse group of people with a clear business view, it is possible to overcome both real and perceived risks and to successfully enter an innovative CSA investment market that can provide financial, social, and environmental return, especially in countries that have traditionally focused on extensive monoculture.

NOTES

1. The *collaboratory* methodology was developed during the 50+20 Initiative by a working group led by Prof. Katrin Muff from the Business School Lausanne. It fuses *collaboration* and *laboratory*, aiming to be a building space where collaborative innovations are explored.
2. Based on the *collaboratory* session about risk in CSA impact investing in Brazil held in May 2018 in São Paulo.
3. This amount was estimated, based on interviews with the ICT companies based in the Manaus Free Trade Zone in April 2018.

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Sustainable Finance: Trends, Opportunities and Risks

Mario La Torre and Helen Chiappini

11.1 INTRODUCTION

Interest in sustainable finance—and any other investment supporting the creation of positive social and environmental effects—has grown over the last ten years. Following the global financial crisis, investors and policy makers reconsidered common financial schemes, business models and products through the lens of sustainability issues. Policy makers intercepted the growing trend and moved on with a set of new regulatory proposals. This was particularly true in the European Union where several regulations were proposed by the European Commission. Many of these issues are still open on both the theoretical and practical side.

This chapter aims to summarize some of the main trends, opportunities and risks linked with sustainability and, in turn, with sustainable finance.

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The chapter is structured as follows. Section 11.2 outlines recent trends in sustainable finance. Section 11.3 discusses some of the main opportunities and risks linked with sustainable finance.

11.2 RECENT TRENDS

Of the different trends characterizing sustainable finance, here, we consider the following three: a growing investors' preference toward sustainable finance, the spread of sustainable business models and, finally, the emerging policies and regulations targeting the industry.

11.2.1 *Investors' Preferences Toward Sustainable Finance*

Investors are orienting their preference toward sustainable investments (Credit Suisse 2019; Global Sustainable Investment Alliance—GSIA 2019). GSIA (2019) estimated that sustainable investments in Europe, the USA, Japan, Canada, Australia and New Zealand have grown by 34% since 2016, accounting for USD 30.7 trillion in 2018. The GSIA Report also estimated an investor's preference toward negative screening (USD 17.5 trillion), although different investment strategies spread across the geographical areas. In Europe, negative screening is the most common investment strategy, while in Japan corporate engagement and shareholders' action are the preferred strategies. In the other areas—the USA, Canada, Australia and New Zealand—the environmental, social and governance (ESG) integration strategy prevailed.

Several surveys highlighted that young generations pay great attention to how their savings are invested and, in general, appear sensible to the theme of sustainable investments (Credit Suisse 2019; Schrodors 2018). Specifically, Schrodors (2018) pointed out that 52% of younger people invest in sustainability compared to 28% of oldest generations. Although this is encouraging data, such reports often omit to note that most of the wealth is currently in the hands of the oldest generations, so the amount of wealth that could be invested in sustainable finance is only a small proportion. The moral pressure that younger generations have on asset managers, however, appears relevant and able to generate a progressive shift in the asset managers' investment strategies.

11.2.2 *Sustainable Business Models*

Sustainability issues have positively contaminated traditional business models and a new concept of business models for sustainability has emerged over the last years (Stubbs and Cocklin 2008; Schaltegger et al. 2016). Traditional financial business models have been also (positively) influenced by sustainability challenges (La Torre et al. 2019) and innovative business models looking toward sustainability have been developed by the banking industry (Yip and Bocken 2018). The banking industry's commitment to sustainability was recently confirmed in the signing of the "Principles for Responsible Banking" (UNEP 2019a). In September 2019, 130 banks—managing one-third of the assets in the worldwide banking industry—signed an agreement toward climate change and inclusive growth. Such Principles include the sustainability alignment of banking activities "to be consistent with and contribute to individuals' needs and society's goals, as expressed in the Sustainable Development Goals, the Paris Climate Agreement and relevant national and regional frameworks" (principle 1, UNEP 2019a p. 3). To do so, banks should incorporate the impact and risk assessment of sustainability in their day-to-day activities, in addition to defining proper sustainability targets (principle 2, UNEP 2019a). Similarly, the insurance industry has launched public consultation on the first guide for the inclusion of environmental, social and governance factors in the business strategy of non-life insurance companies (UNEP 2019b).

When traditional business models for sustainability are not able to meet the growing sustainability issues, collaboration between public-private actors may help in the achievement of social and/or environmental goal. This is, for instance, the case with collaborative business models (Austin and Seitanidi 2012). Significant support in contrasting emerging social and environmental needs may come from social impact bonds (La Torre et al. 2019) and other financial architectures, based on the pay-by-result scheme.

11.2.3 *New Policies and Regulations*

Sustainable finance currently works outside a specific regulatory framework. However, several actions have recently emerged aimed at regulating some specific aspects of sustainability and financial products labeled as "sustainable." The European Commission represents one of the most

dynamic actors within the sustainable finance panorama (Birindelli et al. 2020; Quirici 2020). However, other countries have also set some policies and regulations on sustainable finance. For instance, Russia is attempting to legally define what green banking is (UN 2019), while Italy has already included a formal definition of ethical and sustainable banking in its Banking Law (Bittucci 2020).

Other policies on green bonds spread around the world. For instance, green bond guidelines were released by the Santiago Stock Exchange and by the China Securities Regulatory Commission and People's Bank of China (UN 2019).

All regulations and policies related to sustainable finance bring the great advantage of shedding light on when a sustainable finance institution (i.e., green bank) or product (i.e., green bond) may be properly considered sustainable. By contrast, such policies and regulations often do not appear harmonized and coordinated in different markets. The Global Financial Markets Association (2019 p. 13) properly noted that *A better-aligned set of regulatory requirements would help institutions to focus their business models to support the scale and pace of change required to meet sustainability goals. While each jurisdiction has its own policy issues and priorities, individual jurisdictional policies could impact how firms operate globally, so flexibility should be ensured. Dialogue between authorities across borders is critically important to avoid market fragmentation.*

11.3 OPPORTUNITIES AND RISKS OF SUSTAINABLE FINANCE

The rise of sustainable finance, and more in general, the worldwide spread of awareness for sustainability issues, drives several considerations.

The reorientation of investment strategies is part of a more global sustainability movement aimed at fostering sustainable consumer attitudes and, through this, aimed at reorienting firm production. This worldwide movement is obtaining good results: a recent study from New York University (2019) highlighted that products labeled as “sustainable products” are bought 5.6 times more than “not sustainable” products. Similarly, Accenture (2015) estimated that the transition toward a sustainable economy may generate profit opportunities for around USD 4500 billion per year. At least two main issues seem to emerge from such data:

first, the so-called risk of greenwashing and, second, the risk connected to the transition toward a low-carbon economy. Consumers (and investors) are exposed to the risk that both consumer products and financial products labeled as “sustainable” are not materially sustainable. The awareness of this potential issue seems higher than in the recent past, when little research (e.g., La Torre and Chiappini 2016; Chiappini 2017) considered this aspect. Several policy makers are currently working on how to protect consumers against the risk of greenwashing. An example can be found in the Technical Expert Group’s (2019) taxonomy on green activities. The taxonomy, however, poses new and relevant issues in term of transitional risk. The GSIA (2019), for instance, observed that *Overly-restrictive taxonomies that are too limiting in what is considered “green” or too aggressive in labeling assets or activities as “brown” may exclude scalable dimensions of sustainable finance that could aid companies’ transition efforts*. Thus, policy makers working on the prevention of greenwashing must pay attention to balancing market protection and market incentives with the purpose of not compromising the investors’ green push.

On the other hand, a fast transition toward a green economy may negatively impact the financial industry. Several Central Banks and policy makers are currently working on stress tests and guidelines (Bank of England 2018; European Banking Authority 2019; UNEP 2019a, b).

Finally, the Paris Agreement and the urgent need of a “green new deal” seem to have tarnished the other side of the coin: the social issues and the sustainability of public expenditure.

This pathway is defined by the need to seek private capital and reconvent production process, on the one hand, and, on the other, by the risks of greenwashing, so that a 4.0 sustainable finance must be found.

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