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# Impact investing,

# exploratory analysis of the link between funds and funded companies



Relatore Prof. Giuseppe Scellato

Candidata Dott.ssa Eleonora Marino

Firma del relatore

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Firma del candidato

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### Abstract

This research investigates investigates, through an exploratory analysis, the relations between investments funds and funded companies in the impact investing sector. The aim is to offer a first sight of the bond between funds and funded companies, to capture the characteristics that lead more capital and the correspondence between funds and companies characteristics.

The research is firstly based on a conspicuous literature review that explores several perspectives on the impact investing phenomenon and gave us guidelines to analyse social enterprises and funds.

We conduct quantitative analysis for both, using a unique dataset made by matching by fund name ImpactBase database and Thomson One Banker database; The first database houses the profiles of over 425 investment funds and products and reflects activities, returns and metrics of the impact investing funds currently on ImpactBase. The second, instead, contains financial data on public companies, as well as mergers and acquisition information and market data.

Stratifying with subsequent steps the dataset, we obtained a cluster of funds diversified by the number of investments, target return, target geography and headquarter location, that granted us to offer a global landscape. The cluster includes 10 funds that invested in 127 companies. We conducted a quantitative analysis of both funds and funded companies.

Then, for the latter, we conducted also a qualitative analysis using public information. We classify each of the 127 companies basing on their characteristics: mission and vision, target population, level of integration between social and economic returns and the technology used are the features that helped us to capture all the nuances in the spectrum of the social enterprises.

### Introduction

The objective of this research is to bring out the characteristics of social enterprises that attract more funding from investment funds. From the literature review emerges that the world of impact investing is extremely varied, social enterprises have different legal forms, different business models, different operational models and different ownership structure.

We did the literature review on 47 papers that analyze the phenomenon of impact investing under different perspectives. We collected, read and summarized the papers according to the procedure described in chapter 1.1 and subsequently, we stored information in the table in Appendix I. We organized the literature review in three macro-areas: definition, market and portfolio management. After a brief overview of the origins of this phenomenon we did in Chapter 1.2, Chapter 1.3 reviews the various definitions of the impact investing (II) and the

boundaries within it, in fact, there are numerous definitional and terminological issues that slow down the market growth.

Chapter 1.4 analyzes the impact market investing, actors of which are investors, social enterprises and the policymakers.

Finally, in chapter 1.5 we observed these investments from a portfolio management perspective.

Starting from the information gathered, we hunted, within this vast panorama, which characteristics could attract more the social investments funds, we wondered if there was a correspondence between the investment funds and the funded companies characteristics and we sized the magnitude of equity social companies received by these funds.

We approached these questions in the most comprehensive way. In chapter 2.1 we illustrate the creation of the analysis's sample. As described in Chapter 2.2, chosen funds differ for headquarter and target regions, size, impact and target populations. They also have different types of expected return. Consequently, funded companies are diverse and we highlight differences and similarities making a quantitative and qualitative analysis in Chapter 2.2 and 2.3. In the latter, we generate a model that could collect and synthesize social enterprises characteristics with the aim of unifying them under the broader categories described in chapter 1.3.1. Appendix III to XII contains tables of the features of each company.

### 1 Literature review

### 1.1 Method and source classification

The following literature review was conducted between September and December 2018 in order to build a detailed picture of the current Impact Investing (II) research landscape. Our research was conducted analyzing the academic works on Social Impact Investing (SII) listed in "Business and Management" and "Finance and Economics" by Daggers and Nicholls (2016), and enlarging their list to recent years, as you can see in Table 1.

We used Google Scholar, Scopus and Web of Science by entering "impact investment", "impact investing", "social impact investing", "social impact investment" and "impact measurement" keywords.

We concentrated our efforts on 47 published works. Selected articles widely differ from each other in several ways, in Appendix I, you can see differentiation criteria in the header line, they are:

- Publication year,
- State,
- Publisher,
- Name of journal,
- Type of paper,

- Level of analysis,
- Concept and theories used,
- Topic.

From the first to the fourth, criteria are immediately comprehensible. The fifth criterium is about how authors worked on their researches.

Some authors build their research following an inductive process, i.e. starting from a set of particular cases, they have drawn the consequences/theories of wider validity and we call these "Empirical" works.

Other authors didn't use empirical data to generate new theories expanding in sub-fields the field of impact investing and we call these "Conceptual" works.

Finally, some build literature reviews proposing to summarize the knowledge reached up to a certain moment and we labelled them "Literature review".

The validity of researches may concern a country, a region of the world, e.g. the UK, or the entire globe, this information is contained in the sixth criterium, "Level of analysis".

The fields investigated are numerous and spread from conceptual frameworks to practical issues as portfolio management, we summarized them in the seventh criterium "Concepts and theory used". Heterogeneity allowed us to draw a broad and detailed scenario of II within two main fields "Finance and economics" and "Business and management", the same criteria used by Daggers and Nicholls (2016) that in our research is the last criterium of classification.

We start from researches focused on Social Enterprises<sup>1</sup>, (M. T. Dacin, Peter A. D., P. Tracey, 2011; Shaker A. Zahra, Lance R. Newey, Yong Li, 2014; Sara Rago, Paolo Venturi, 2015), how they get financing (Wolfgang Spiess-Knafl, Ann-Kristin Achleitner, 2011; W. Grassl, 2012; Wolfgang Spiess-Knafl & Jessica Aschari-Lincoln, 2015; Francesco Rizzi, Chiara Pellegrini, Massimo Battaglia, 2017), which metrics and indicators they use (Michael Moody, Laura Littlepage, Naveed Paydar, 2015; Khrista Johnson, 2015; Donald F. Kuratko, Jeffery S. McMullen, Jeffrey S. Hornsby, Chad Jackson, 2016; Bengo Irene, Arena Marika, Azzone Giovanni & Calderini Mario, 2017) and which reporting (Morley, 2016) and accounting techniques (Alex Nicholls, 2018) they use/should use.

Then, we deepen in impact investing themes, literature reviews gave us a clear and extensive framework about born, evolution and challenge (J. Freireich, K. Fulton 2009; J. E. Clarkin and C. L. Cangion,2015; Nicholls and Daggers, 2016). Someone analyzed the process of creation and institutionalization of II (J.P Morgan 2010; Suzette Viviers, Tamzin Ractliffe, Dean Hand, 2011; B. Bell, H. Haugh, 2015; World Economic Forum and OECD 2015; Marika Arena, Irene Bengo, Mario Calderini, Veronica Chiodo, 2017). Others largely studied the terminological and definitional issue and boundaries with others fields, e.g. social entrepreneurship, social innovation, corporate social responsibility etc., (A. K. Höchstädter, B.Scheck, 2014; B. Bell, H. Haugh, 2015; Jason Lortie & Kevin C. Cox, 2018). Some focused on impact investing

<sup>&</sup>lt;sup>1</sup> For the benefit of the reader, it seems appropriate to immediately clarify an important difference that could help the comprehension of the research's structure described above: for the purpose of this research, the term impact investing means the investment activities carried out in favour of social enterprises, which are enterprises that perform at best both in terms of social/environmental and economic results.

characteristics, e.g. blended value, due diligence process, infrastructures, istitutionalization etc. (J. Emerson, 2000; Jarrod Ormiston, Kylie Charlton, M. Scott Donald & Richard G. Seymour, 2015; Mario Calderini, Veronica Chiodo and Fania Valeria Michelucci 2017). Impact investing involves a plurality of stakeholders (Sharam Alijani, Catherine Karyotis, 2018) that can be advantageous but hide conflicts between investors and their purpose, this interesting problem had been analyzed by many authors under multiple points of view (Sergio G. Lazzarini, S. Cabral, L. C. de M. Ferreira, L.S.Pongeluppe, A. Rotondaro, 2014; Othmar M. Lehner & Alex Nicholls, 2014; Chowdhry, B., Davies, S. W., & Waters, B., 2016; Philip Roundy, Hunter Holzhauer, Ye Dai, 2017). Attention is also focused on hybrid funds and on the role of the government (Mikko Jääskeläinen, Markku Maula, Gordon Murray, Markku Maula, Gordon Murray, 2007; Luigi Buzzacchi, Giuseppe Scellato, Elisa Ughetto, 2012; Elisa Ughetto, UK) Important contributions for II derive from portfolio management researches (Geobey, Sean & Callahan, Jennifer, 2018), and as well as challenges, like performance measurement tools or agency problems like mission drift issue<sup>2</sup>(Brandstetter, L., & Lehner, O. M., 2011; George Apostolakis, Gert van Dijk, Frido Kraanen, Robert J. Blomme, 2018; Jean-Laurent Viviani, Carole Maurel, 2018; Uli Grabenwarter, Heinrich Liechtenstein, 2011; Jacob Gray, Nick Ashburn, Harry Douglas, Jessica Jeffers, 2015; Dilek Cetindamar, Banu Ozkazanc-Pan, 2017, Bryan Dufour, 2018). (Marguerite Mendell & Erica Barbosa, 2013) examine exchange platforms.

### 1.2 Rising

The Annual Impact investor survey, 2018 shows that II's market is composed of more than USD 228 billion assets, managed by diverse organizations.

Impact investing has its roots in the history of the West, in fact, as you can see in *IMAGE 1* all research analyzed, except one, have been written in the West. We can say II is the economic manifestation of the ideological and moral changes occurred in the collective thinking of its inhabitant, to mention some the the most recent events that have shocked the common morality: anti-Vietnam sentiments, the civil rights fights, Chernobyl nuclear reactor explosion and in general the vast amounts of information about global warming, 2007-2009 global financial crisis, austerity policies (Suzette Viviers, Tamzin Ractliffe, Dean Hand, 2011). Considering additionally "ineffectiveness of charitable models and the inefficiency of public spending" (Mario Calderini, Veronica Chiodo and Fania Valeria Michelucci, 2018) together with these factors, they gave birth to impact investing, under the trust of the investment community itself, as a "response to market failures in traditional investing" (2017, Geobey, Sean & Callahan, Jennifer) becoming part of "a broader movement gaining momentum in contemporary market economies, one demanding a more ethical and socially inclusive

<sup>&</sup>lt;sup>2</sup> The term mission drift has been studied by many authors, as the consequence of the dualistic logic in hybrid organization; (2017, Dilek Cetindamar, Banu Ozkazanc-Pan) intended it as a decoupling of action/ends rather than the emergent dominance of one institutional logic over another.

capitalism" (M. Tina Dacin, Peter A. Dacin, Paul Tracey, 2011, p.1024). Il is a way to satisfy investors who evaluate social and environmental values.



Image 1 Geographical distribution of analized papers

### 1.3 Definition

Il is part of the broad sector of Social Finance (SF), some authors aggregate different method and tools under this term, e.g. alternative currencies, community investment, crowdfunding, ethical banking, microfinance, social impact bonds, social impact investing, social responsible investment, venture philanthropy (Perilleux, 2015, Allison et al., 2015, Howard, 2012 in Francesco Rizzi, Chiara Pellegrini, Massimo Battaglia, 2017). Il and ethical banking represent the dominant forms in SF (Francesco Rizzi, Chiara Pellegrini, Massimo Battaglia, 2017). Others mean SF as a synonymous of II (J. E. Clarkin and C. L. Cangioni, 2015). In the World Economic Forum and the OECD report, 2015, authors call II "blended finance".

From a theory-building perspective, it was recognized to II the potential to become a new paradigm(Nicholls, 2010) even if, nowadays, it is still in a pre-paradigmatic stage (Francesco Rizzi, Chiara Pellegrini, Massimo Battaglia, 2017), but it lacks a clear taxonomy and the limits of this practice are still blurred (Nichols and Daggers, 2016). Lack of definitional, conceptual and terminological clarity is problematic because may slow down the market growth (Clark et al. 2012b; Conway et al. 2012 in A. K. Höchstädter, B.Scheck, 2014).

In financial terms, J.P.Morgan,2010, assesses II as "an emergent asset class" and some authors consider it is still today (J. E. Clarkin and C. L. Cangioni,2015), others consider impact investing span across asset classes (A. K. Höchstädter, B.Scheck, 2014, pg. 12).

In this research, we classify as impact investment, the one that has the return of the invested principal and a sort of non-financial impact that has been described as "social", "social and/or

environmental", "non-financial" impact; This kind of impact for most of the authors must be measurable and intentional (A. K. Höchstädter, B.Scheck, 2014, Appendix 1). The expected level of financial return is undefined for the most of authors and below market rate for some. According to Annual Impact Investors survey 2018, the most of investors target risk-adjusted market-rate returns. Others seek below-market-rate returns closer to market-rate returns or closer to capital preservation. Since impact investing can be considered a distinct asset class, it should be compared and rated on the basis of financial performance, return on investment and social impact factor (2018, Sharam Alijani, Catherine Karyotis) and, for this reason, many authors focused on the need for market expertise, metrics and benchmarks, we will provide a more detailed description in "Metrics and indicators" chapter.

#### 1.3.1 Boundaries

Boundaries in relation to commercial investment, charity and the public sector are quite strong (B. Bell, H. Haugh, 2015), but impact investments can be directed towards various "nuance" of social enterprise. Nuances derive from the degree of economic and social returns.

We can consider II, corporate social responsibility (CSR), base of pyramid (BoP), nonprofit management and social innovation (SI) sub-fields of the larger domain of the social entrepreneurship (SE), at the same time, social entrepreneurship is a sub-field of entrepreneurship. In the intersection between international entrepreneurship and social entrepreneurship stand international social ventures (ISV). They pursue blended value on a global scale and they generate indivisible financial and social/environmental value, prioritizing the social one (2014, Shaker A. Zahra, Lance R. Newey, Yong Li). Risk-taking, proactiveness and innovativeness are in common between social entrepreneurship and general entrepreneurship, but the first offer differentiating product compared to the second. Social purpose makes the difference. Social entrepreneurship can be for-profit or non-for-profit depending on the priority given to the social goal. Boundaries between CSR, BoP, non-profit, SI, II have been well defined by (Jason Lortie & Kevin C. Cox, 2018), differences between II, responsible investment (RI), and philanthropy were looked at in-depth by (2011, Suzette Viviers, Tamzin Ractliffe, Dean Hand).

Here we recall the hallmarks of II compared to SI and to SRI. We talk about social investment when the topic is to provide capital to social organizations, instead, we talk about impact investing when the mission is social and financial ROI, it deals with investments selection and returns. The social responsible investment aims to minimize the negative effects, instead, II is characterized by a greater proactiveness to solve social/environmental challenges. SRI and II are differentiated by the size and nature of investment and risk-return profiles, too (A. K. Höchstädter, B.Scheck, 2014, pg. 8).

Starting from the aforementioned cases, we can describe a "spectrum" of intent for SE that goes from the pure social intent to the purely financial. II cross the same spectrum, where even if there can't be only financial or only social return, every investor or entrepreneur can hang more on one side or the other (J. Freireich, K. Fulton, 2009; K.Alter, 2009; Nicholls, 2010). Someone differentiate impact and financial aims, these can be considered substitute, and it is recognized the difference between "market-based" and "mission-based" investing; someone

else considers them complements (2011, Uli Grabenwarter, Heinrich Liechtenstein) and deny the existence of a tradeoff between the goals in the case of impact investing.

In the first case tradeoff can exist but only for choice of investors (Jacob Gray, Nick Ashburn, Harry Douglas, Jessica Jeffers, 2015; Sergio G. Lazzarini, S. Cabral, L. C. de M. Ferreira, L.S.Pongeluppe, A. Rotondaro, 2014), and it is not intrinsic in the definition. It seems that individual and combined impacts of these efforts are not yet fully understood (2014, Othmar M. Lehner & Alex Nicholls).

### 2.1 Social capital market

II market functioning is determined by three infrastructure: governmental infrastructure, facilitative infrastructure, transactional infrastructure (Schwartz et al. 2015); Private capitals, financial instruments, private intermediation are all part of the translational infrastructure in the success of which resides the possibility of having lower transaction costs (Mario Calderini, Veronica Chiodo and Fania Valeria Michelucci,2017). Policy makers are part of the governmental infrastructure needed for the institutionalization (Mario Calderini, Veronica Chiodo and Fania Valeria Michelucci, 2017). Facilitative infrastructure comprehends counselling and incubators and all the services needed to ensure investors (Mario Calderini, Veronica Chiodo and Fania Valeria Michelucci, 2017).

Information asymmetry, financial instruments, the source of capital and market intermediation segment the market. (Mario Calderini, Veronica Chiodo and Fania Valeria Michelucci,2017). From a stage of 'uncoordinated innovation' market has gone to 'market building' stage (Jarrod Ormiston, Kylie Charlton, M. Scott Donald & Richard G. Seymour, 2015), but it has not reached an efficient global functioning yet (2014, Othmar M. Lehner and Alex Nicholls). According to data collected from Annual Impact investor survey 2018, the majority of headquarters are located in developed markets, and they invest both in emerging markets and in developed markets. It didn't evolve in unison in all parts of the world and today there is a dualistic situation, between countries in which II is institutionalized and governmental and where facilitative and transactional infrastructure are established and that countries in which it is not (Mario Calderini, Veronica Chiodo and Fania Valeria Michelucci, 2017). Nevertheless, global networks emerged, the Global Impact Investing Network (GIIN), the Impact Investing Policy Collaborative (IIPC), Impact Reporting and Investment Standards (IRIS) and the Global Impact Investing Rating System (GIIRS) are a clear manifestation. (Jarrod Ormiston, Kylie Charlton, M. Scott Donald & Richard G. Seymour, 2015).

The ecosystem is a complex of different actors that cooperate in several and new forms for which it is necessary to adopt a multistakeholder approach (Sharam Alijani, Catherine Karyotis, 2018) to evaluate generated synergies. The cost of capital can be lower than in traditional companies because the synergies, in fact, you can involve different investors proposing a different risk-return profile to each type (Jean-Laurent Viviani, Carole Maurel, 2018). The field of II advantages from appropriating actors from mainstream finance and also from public and charitable organization. II also benefits of innovation that invents new actors

and new practices (B. Bell, H. Haugh,2015; Marika Arena, Irene Bengo, Mario Calderini, Veronica Chiodo, 2018). Financing comes from private sources, public sources, or some combination thereof. The size and the mission differentiate investors, they can be :

- Asset and Portfolio managers,
- Banks and financial operators,
- Foundations,
- International organizations,
- Investment funds,
- Social enterprises.

The market can become efficient by combining the strengths and motivations of the individual players leveraging additional funding sources (Othmar M. Lehner & Alex Nicholls, 2014). Furthermore, investors, entrepreneurs and intermediaries allowed "professionalization", for example shifting from a limited and qualitative reporting to a more quantitative and investment-like one, in fact, many senior managers of social investment organizations worked in high-profit firms in finance and studied in elite university. They use the "economic style social impact reporting" because of their preceding professional and educational experience. (Moley, 2016). Impact investors operate within different social fields and industries, top sectors of investments are financial services, energy, microfinance and housing (Annual impact investment survey, 2018). Capital is allocated the most in mature private companies and growth-stage companies, and few are allocated in seed or venture stage companies, in fact as underlined by (Mendell and Barbosa 2013) smaller enterprises remain undercapitalized despite the emergence of exchange platforms.

Social impact exchange platforms provide a marketplace both for primary and/or secondary transactions and information on potential investment opportunities are numerous and all of them have their own listing requirements. There is not a standardized and universal measure of social impact and it is evaluated through screening or reliance on the third part rating. Main barriers to channelling capital are :

- the secondary market,
- new financial products that provide exit strategies for investors,
- the legal form of social enterprises. (Mendell and Barbosa, 2013).

#### 2.1.1 Investors



Image 2 The Institutionalization of Social Investment: the interplay of investments logics and investor rationalities, Alex Nicholls, 2010

Any investment can be in a certain grade of a spectrum that goes from financial first and social first intent (J. Freireich, K. Fulton, 2009; Nicholls, 2010), it has been clearly represented by Nicholls, 2010, of whom we reported the illustration in *IMAGE 2*.

Financial first investor is the venture capitalist, he risks to lose his job if he doesn't reach enough financial return for his clients (i.e. investors), they invoke "fiduciary responsibility", and aim to maximize the ROIs in their funds; on the opposite side, there is the philanthropist. He doesn't seek financial returns but only social impact. In the middle ground, there are angels investors and impact investors that are similar because angels investors fund start-up, looking for a financial return and also to support the growth of new entrepreneurs, they participate to the creation of social value but they don't evaluate SROI. Impact investors evaluate SROI and ROI and tend to do investment aligned with their values (Philip Roundy, Hunter Holzhauer, Ye Dai, 2016), we talk about "blended value creation" (J. Emerson, 2000), or, as it is often referred to, "double bottom line investors" (Wolfgang Spiess-Knafl, Ann-Kristin Achleitner, 2011).

Social returns must be a priori defined and ex-post evaluated (Mario Calderini, Veronica Chiodo and Fania Valeria Michelucci, 2017). Therefore impact investments have a double rationale, the financial one because of its contribution to portfolio diversification and the social one that results from its alignment with values of organizations and/or clients. By interviews with impact investors it results that maximizing financial returns is essential to meet fiduciary obligations (2015, Jarrod Ormiston, Kylie Charlton, M. Scott Donald & Richard G. Seymour). The social rationale implies impact investors should be less inclined to mission drift, but there are several components to avoid mission sacrifice: legal permission to pursue impact, the funds managers degree of control to influence exit, motivation to pursue exits, and overall financial performance as explained by (J. Gray, N.Ashburn, H.Douglas, J. Jeffers, 2015). Reporting on social impact is also required on a frequent basis to prevent mission drift (Mendell and Barbosa 2013)

The pressure to find liquidity may be pronounced (J. Gray, N.Ashburn, H.Douglas, J. Jeffers, 2015) and because of the insufficient amount of capital available at all levels of venture need, impact investors need to increase the pool of money available as impact investments and to be strategic about the creation of funds that can support ventures at all stages of the entrepreneurial life cycle. (Philip Roundy, Hunter Holzhauer, Ye Dai, 2016). Jarrod Ormiston

et al., 2016 underlined the need to employ due diligence practices with consideration of social impact and the value of networks and collaboration for learning, fostering investment opportunities, optimizing capital flows and developing the market.

Impact investors are for the most fund managers, lower percentages are foundations and others categories are banks, family offices and pension funds or insurance companies (Annual impact investments survey, 2018). Other organizational forms that invest for impact are social VC, venture philanthropy (Wolfgang Spiess-Knafl & Jessica Aschari-Lincoln, 2015), crowdfunding (2014, Othmar M. Lehner & Alex Nicholls) and so on (2017, Dilek Cetindamar, Banu Ozkazanc-Pan).

Crowdfunding in a social entrepreneurship being supported by the crowd that selects the social needs provides a strong signal to other players in the field. (Othmar M. Lehner & Alex Nicholls, 2014).

Wolfgang Spiess-Knafl et all., 2010 explains that, in the social capital market, venture

## Institutions in the traditional capital market

# Institutions in the social capital market



Image 3 Financing of Social Entrepreneurship, Wolfgang Spiess-Knafl, Ann-Kristin Achleitner, 2011

philanthropy funds are the same of venture capital funds. Specifically, they support the social enterprise with multi-year financial and non-financial support offering an high engagement and the performance measurement. The role of investment funds in the traditional capital markets Is performed by social investment funds. They consider social and financial return requirements and they can maximize the financial return with social constraint (they are known as "Financial First") or thay can maximize the social return with financial constraint (they are known as "Impact first"). The parallelism between the traditional capital market and the social capital market institutions is shown in *IMAGE 3.* 

Specific impact tools have been developed, e.g. Social impact bonds (SIB) and social impact guarantees (SIG), they can be properly considered "financial engineering triumph" (2015, Chowdhry, B., Davies, S. W., & Waters, B.).

The optimal security exhibits the pay-for-success feature in public work projects, conversely contract must contain a pay-for-failure feature if the impact investment is in the private sector. The latter point occurs in the Social Impact Guarantee (SIG) case, it promises investors a greater financial return when their desired social goals are not attained; The first point is the hallmark of SIBs. We also show that the sale of equity provides an efficient contract when social output is non-contractible.

Impact investment can take the form of debt, equity or hybrid finance. In private capital markets, investors allocate capital through debt instruments, followed by private equity and public equity (Annual impact investments survey, 2018). The main risks for impact investors depend on:

- the market (early stage of the market, ecosystem),
- funds managers (moral hazard, mission drift, the combination of investment capital, reputational) and
- legal issues (Table 1, Brandstetter, L., & Lehner, O. M., 2015).

Furthermore, Chowdhry et al. (2015) and J.L. Viviani et al. (2018) consider agency conflicts that may occur between managers and investors, and among different categories of investors (between who is more financial-first and who is more social-first). Moral hazard and opportunistic behaviours are affected by confidence and shared common values principal-agents model in which principals and agents may share common preferences for social output. The greater productivity is achieved via selection (matching principals to agents with similar "missions") rather than providing explicit incentives.

Free-riding potentially impedes individual investors from participating in impact investments because they produce public social value. Despite this problem in Chowdhry et al. (2015) free riding does not occur because undertaking the project critically relies on both investors' participation, and it resulted transparency and responsibility are fundamentals principles to solve agency conflicts in intermediaries managements.

#### 2.1.2 Social enterprise

Social enterprises combine aspects of multiple organizational forms whose boundaries are ambiguous, in fact, they are not characterized by a unique legal form because financial and social/environmental mission can be present in different percentage (G. Smith and S. Teasdale, 2012).

Nine different type of business have been identified and they depend on mission orientation level, type of integration and target or customers (S.K. Alter, 2006; W. Grassl, 2012). Multi-stakeholder governance may lead to challenges in order to satisfy every stakeholder (Sara Rago, Paolo Venturi, 2015).

As said before, capital can be generated internally (providing services or products), obtained by public funds or provided externally; it's important to maintain diversified sources of funds because, even if synergies with governments are key agents for structuring social enterprise (Francesco Rizzi, Chiara Pellegrini, Massimo Battaglia, 2017), there is a risk for the sustainability due, for example, to public administration spending capacity (Marika Arena, Irene Bengo, Mario Calderini, Veronica Chiodo, 2017). Social enterprises face difficulties in financing, e.g. social tech start-up can be considered riskier than the traditional, in fact, a seed stage company is often supported by grants, donations or crowdfunding and it is supported by incubators. In the early phase the main barriers are information asymmetry, moral hazard problem and the absence of collateral. Venture capitals, venture philanthropist, "hybrid capital" (e.g. recoverable grants, convertible grants, forgivable loans, etc.) "patient capital" (long-term grants with no exit strategies and low interest) are the most used financing methods. In the growth phase, STSU can access large corporate partners or banks and other financial institutions on the debt side, alternatives are Community Development Financial Institutions (CDFIs), national and local public authorities, instruments like SIG and SIB. In the growth phase, social impact funds are willing to invest (Marika Arena, Irene Bengo, Mario Calderini, Veronica Chiodo,2017).

Chowdhry et al. (2015) show that a hybrid structure is optimal when the manager's incentives are naturally aligned with the founder's.

Social entrepreneurs require strong support in the non-impact-related dimensions of their business, but, due to the specific nature of their business, they are often much harder to replace. Often support came from the VC who funds them to make the business a success. A recurrent topos in the literature is the hybrid spectrum (J. Freireich, K. Fulton, 2009; K.Alter, 2009; Nicholls, 2010) representing all the possible social enterprise, Appendix II represent it.

#### 2.1.3 Policymakers

Policymakers in addition to providing capital can direct the simultaneous performance of several players and their cooperative and competitive behaviours. Designing incentive schemes of participation and setting working rules to protect interests of the investors; they develop the legislative structure of the social impact market (Othmar M. Lehner & Alex Nicholls, 2014; Francesco Rizzi, Chiara Pellegrini, Massimo Battaglia, 2017). We can say that the structuralization of social finance as a new paradigm depends from the government because of the legitimation and consequently structuration in SF and also from the entrepreneurs and investors because of the "exchange of new instruments, languages" (Francesco Rizzi, Chiara Pellegrini, Massimo Battaglia, 2017).

#### 2.1.4 Hybrid funds

Hybrid funds generate when governments finance private funds to channelling and allocate public resources in market failures areas generating funds with a public and private component. M. Jääskeläinen et al. (2007) studied the structures used to profit distribution and compensation and how these alter the expected returns ( for limited partner, LP) and the net compensation ( for general partner, GP) and which benefits can occur with a better-designed scheme of incentives to attract private funds. Governments considering models of public support should consider the opportunity cost of LP and GP that generate the largest discrepancy in performance.

Generalizing what was reported L. Buzzacchi et al. (2012) relatively to public ownership in VC funds we can say that the "public ownership on the investments effects manifests both in the ex-ante selection process for the target companies and in their post-acquisition management".

In Europe the instruments of public support for risk capital for innovation are mainly attributable to the following five types :

- investments funds
- financial tools
- subsidies
- guarantees
- tax incentives

state priority intervention must be done to promote the contextual conditions that positively influence the demand and supply of capital. The schemes of profit distribution and incentives for the most used participation are pari passu, downside protection, upside leverage. (Elisa Ughetto)

Hybridity can be a source of confusion, and the time horizon for social return tend to be higher than the financial one, and social tech startup facing these barriers can suffer from a not easy getting financial resources(2018, Marika Arena, Irene Bengo, Mario Calderini, Veronica Chiodo).

Mission drift and mission lock-in are the main risks in hybridity<sup>3</sup>, social value creation should be measured according to three dimensions: financial return, social impact and risk. (2018, Jean-Laurent Viviani, Carole Maurel).

### 2.2 Metrics

Any provider of capital would fund a company not purely for financial return considerations: business model, risk affinity, the skill set of the entrepreneur and business factors are all factors that influence the choice (2011, Uli Grabenwarter, Heinrich Liechtenstein), so, facilitative infrastructure results of fundamental importance (Schwartz et al. 2015). Excepted business angels that don't require sophisticated reporting tools because their close interaction with the social entrepreneur, impact investors operate with delegated/discretionary asset management services. It is necessary to ensure investors and to decrease asymmetric information, moreover, only by this way it is possible to do a comparison between investments that can be aggregated at the portfolio level. Consequently, authors from different countries are developing impact measurement systems and metrics (Mario Calderini, Veronica Chiodo and Fania Valeria Michelucci,2017), impact reporting (Morley, 2016) and accounting systems (Nicholls, 2016), it emerges that "valid social impact accounting processes are as empowering as the data reporting that they facilitate".(2018, Alex Nicholls).

Bengo I. et al. (2016) return an up-to-date and detailed image of the main financial instruments that can be used to choose which projects to finance as part of the impact investment. In many countries it attended the rise of new financial supply chains after that it emerges the need for a new way of think business and new theoretical and practical tools to funds social business.

<sup>&</sup>lt;sup>3</sup>Dilek Cetindamar, Banu Ozkazanc-Pana,2017 offer a preliminary metric that allows us to assessing hybridization at the organizational level.

Social organizations performances can be measured with:

- Synthetic measures: provide a measure of the global performance of a social organization, e.g. SROI<sup>4</sup>, LM3.
- Process-Based measures: like Models, MIAA, SIA, PMS, scorecards and dashboards.
- Performance dimensions: Fit for Purpose model, SIMPLE, Performance Assessment. (2018, Bengo Irene, Arena Marika, Azzone Giovanni & Calderini Mario).
  Capital allocation in a portfolio creation can use:
- Gamma model and Black Litterman (Brandstetter, L., & Lehner, O. M., 2015). In the literature, SROI is the most discussed indicator; for an entrepreneurship, it's expensive to evaluate it but empirical studies demonstrate that there are in its applications some learning benefits because it is a feedback on the production process itself (2015, Michael Moody, Laura Littlepage, Naveed Paydar).

Many of these, in particular, SROI, IRIS, GIIRS are ex-post point of view, thus are only "helpful if the ventures are already well established in the markets and do little in the judgment of potential investments from an ex-ante point of view" (2015, Brandstetter, L., & Lehner, O. M.). B. Dufour (2018) evaluate differences and commonalities between SIM and program evaluation in France which lies in resource availability, the scope, the evaluating entity, the proximity of this to stakeholders and the motivation.

The charitable market has been embraced in this kind of studies, too (Wolfgang Spiess-Knafl & Jessica Aschari-Lincoln, 2015). Venture philanthropy has an approach similar to venture capitalists and uses significant effort in the stage of selection process, (2015, Khrista Johnson) suggests the use of measures and tools proper of II to let the charitable market become efficient. She has underlined how IRIS and GPS are a useful tool to improve the efficiency and also that market and GIIRS make possible compare different charity organization and allow a better capital allocation.

### 2.3 Portfolio management

"Should I invest in a multidimensional company or in an equivalent portfolio of for-profit and not-for-profit organizations?" (2018, Jean-Laurent Viviani, Carole Maurel)

Once impact measures are established and effective others several issues emerge, analysis of measurements is one of these. The analysis must be performed in order to achieve the desired risk/return profile in a portfolio, (Geobey, Sean & Callahan, Jennifer, 2018).

J.L. Viviani et al. (2018) suggested a method to evaluate impact investing performance unifying social and financial returns.

Others metrics to face this topic are the Black-Litterman model (Brandstetter and Lehner, 2015) and Gamma model (Uli Grabenwarter, Heinrich Liechtenstein, 2011). The first combines social and financial value into tools suitable for traditional portfolio optimization, the latter is an

<sup>&</sup>lt;sup>4</sup> ex-post point of view, thus are only helpful if the ventures are already well established in the markets and do little in the judgment of potential investments from an ex-ante point of view.

extension to the capital asset pricing model. Geobey et al. (2017) evidence that BL model can't be applied in pooled impact investing portfolios that enclose a large amount of capital from a mix of larger and smaller investors that differs for their value preferences. They identify some of the problems to II to scale and for which transparency, dialogic accounting and democratic values can be useful tools for managers to execute portfolio adjustments that bring qualitatively satisfactory to all investors, reducing barriers to scale. Nicholls (2016), too, emphasises that accountability for results is necessary to establish performance parameters for the team in order to create incentives and motivate them and to achieve a sustainable investment activity.

G. Apostolakis et al. (2017) studied how to get more people involved in II or SRI and give an outline to design pension investments policy.

All of these studies indicate the importance of disclosing individual investment preferences in order to formulate a response aligned with the interest of investors.

### 3 Study cases

From the overview outlined above, it definitely emerges that the field of impact investing is broad and multifaceted, now we develop our research by focusing on a sample of analisys made of ten funds and on the social enterprises that they funded. Referring to Chapter 2.1.1, chosen funds are social investments funds and social philanthropy funds. As mentioned above, in the Annual Impact investor survey, 2018 we have noticed some impressive data: USD 228.1 billion are invested in impact asset managed by 226 companies and, moreover, it results that the number of organization making impact investments shows an increasing trend. This data intrigue us, so we decide to go deep in the exploration. The aim is evaluating which types of companies are financed the most and identify, in this way, the characteristics most appreciated by investment funds. Moreover, the meticulous analysis that we conducted on the "social" financed companies has allowed us to size the "business washing" phenomenon described by the aforementioned J. Morley (Draft b,2016).

To advance understanding of the direction of impact investments, quantitative analysis was conducted on impact funds and one more in-depth investigation of funded enterprises was made. A case study approach was considered appropriate because, by combining the theoretical knowledge with the empirical insights obtained by the using of inductive approach, we were able to identified investments motivations and logics.

Quantitative analyzes derive from the synthesis of a unique database. It was born from the matching, by name of the funds, of the impactBase databases and the Tomson One Banker databases. The first database houses the profiles of over 425 investment funds and products, representing different strategies, geographies and impact targets. It reflects activities, returns and metrics of the impact investing funds currently on ImpactBase. The second, instead, contains financial data on public companies, as well as mergers and acquisition information and market data.



Image 4 Database's class diagram

In this way we obtained a database containing the information about funds, investments, firms and investments shown in *IMAGE* 4. The ten chosen funds are the result of successive stratifications, the aim of which was to get the most of heterogeneity to allow central themes to emerge. At first, we ordered the funds by the number of investments and, then, we eliminated all the funds that made less than 5 investments; In this way, the sample has been restricted to 38 funds. Subsequently, we filtered the funds by type of expected return and it came out that only a fund aims a below market rate return, the fund was thus included in the final sample. To get the other 9 funds, we filtered by the geographic target.

Analyzing the complete database, we noticed that 60% of investments pointed at US companies, 20% at European companies, 10% at Indian companies and 5% investments were directed to African companies. For this reason, we chose a single fund that financed African companies, two that financed Indian companies, keeping one that works in India and the other

from Mauritius to assess any differences, three that financed European and five United States's companies.

Starting from the sample, we carried out quantitative analyzes to adequately read these funds below three viewpoints: generic traits, financial variables and impact variables.

After having presented the characteristics of the chosen funds, we qualitatively and quantitatively analyzed the financed social enterprises. The quantitative analysis was carried out using the same database described above, while the qualitative analysis was carried out by examining public information.

At the end of the analysis emerged interesting results about which kind of social enterprises are funded the most, the relation between impact performance and profit distribution and the amount that came from social investments funds and social philanthropy funds despite traditional funds.

### 3.1 Funds overview

After the selection process, our cluster is composed of the following funds: Aavishkaar India Micro Venture Capital Fund, Aspada Advisors, Climate Change Capital Private Equity Fund, Coastal Ventures LP, Core Innovation Capital I LP, Environmental Technologies Fund, LeapFrog Investments Fund II, Physic Ventures LP, Reach LP, SJF Ventures.

The general features we focused on are:

• vintage year, i.e. the year in which the first investment has been delivered towards a company or a project,

- current status, in order to assess the current situation of the fund.
- · Committed capital, used to size the fund itself and its potential investments and
- Limited partners who have subscribed to the capital.

The financial variable we focused on are:

- The number of companies financed,
- the number of investment rounds e
- the style stage.
- The occurrence or not of
- management fee,
- hurdle rate and
- carried interest.

Finally, the impact variables we will focus are:

- The type of social impact sought and
- the metrics used to evaluate it.

#### 3.1.1 Selected funds overview

Fund	Headquarter	Target geography	Number investments	Target return
Aavishkaar India Micro Venture Capital Fund	India	Asia, Southern Asia , India	9	RAMRR⁵
Aspada Advisors - Unspecified Fund	Mauritius	Asia , Southern Asia , India	14	RAMRR
Climate Change Capital Private Equity Fund	United Kingdom	Europe	17	RAMRR
Coastal Ventures, L.P.	United States	North America	13	BMRR <sup>6</sup>
Core Innovation Capital I, L.P.	United States	North America , United States of America	20	RAMRR
Environmental Technologies Fund	United Kingdom	Europe	19	RAMRR
LeapFrog Investments Fund II	Mauritius	Africa , Eastern Africa , Kenya , South Africa, Western Africa , Ghana, Nigeria, South-Eastern Asia , Indonesia, Philippines, India, Southern Asia , Sri Lanka	13	RAMRR
Physic Ventures, L.P.	United States	North America	41	RAMRR
Reach, L.P.	United States	North America , United States of America	21	RAMRR
SJF VENTURES I, L.P.	United States	North America , United States of America	38	RAMRR

Table 1 Sample's funds features

50% of the selected funds headquarters are located in the US, 20% in England, 20% in Mauritius and 10% in India. We selected funds that made 35.5% of investments in U.S.A., 21.4% in North America, 21.4% in South-East Asia, 14.3 in Europe and 7.1% in Africa.



Image 5 Fund's vintage year

<sup>5</sup> Risk adjusted market-rate of return

<sup>6</sup> Below market-rate of return

The inception year of the funds goes from 1995 to 2016.

In 50% of the funds, the vintage year coincides with the inception year. In 20% of the cases the vintage year was the year immediately after the inception year and in one case it was six years later. 2007 was a strong vintage year: 40% of the funds did their first investment.

Fund	Status
SJF VENTURES I, L.P.	Closed - no longer investing
Environmental Technologies Fund	Closed - no longer investing
Coastal Ventures, L.P.	Closed - no longer investing
Physic Ventures, L.P.	Closed - still investing
Reach, L.P.	Closed - still investing
Core Innovation Capital I, L.P.	Closed - still investing
Climate Change Capital Private Equity Fund	Closed - still investing
LeapFrog Investments Fund II	Closed - still investing
Aavishkaar India Micro Venture Capital Fund	Closed - still investing
Aspada Advisors - Unspecified Fund	Open - committed capital

Table 2 Funds's current status



Today 90% of funds are closed, more precisely, 60% are closed and are still investing, while

Image 6 Funds's committed capital

In six funds, the committed capital is less than 50 millions of dollars, in particular, Coastal Ventures has received 5.5 Millions of dollars, Aspada advisor 10 Millions of dollars, SJF Ventures 17 Millions of dollars, Core innovation capital 45 Millions of dollars and Aavishkaar India micro venture capital 50 Millions of dollars. Four funds received more than \$ 50 million: Reach L.P. 52 Millions of dollars, Environmental Technologies Funds 142 Millions of dollars, Climate Change Capital 174 Millions of dollars and LeapfrogInvestments Funds, which is the fund received 400 Millions that received the largest sum, of dollars. The capital was underwritten by several types of limited partners: Leapfrog Investments fund, is the fund that received the highest committed capital received them from financial development institutions, family offices, pension funds and other institutional investors. Climate Change, the second for amount of committed capital, from pension funds and other institutional investors. Describing in descendant order of committed capital, Environmental technologies fund received capital from financial development institutions, foundations, family offices, pension funds and other institutional investors. Reach L.P. from foundations, family offices, other institutional investors and retail investors. Aavishkar India Micro Venture Capital from institution of financial development, financial funds and retail investors. Core innovation capital L.P. from foundations, family offices, pension funds and other institutional investors. SJF ventures from institution of financial development. Aspada advisor from family offices and other institutional investors. Coastal ventures from family offices, other institutional investors and retail investors.

Fund	Limited Partner
Coastal Ventures, L.P.	Family Office, Other Institutional Investors, Retail Investors
Aspada Advisors - Unspecified Fund	Family Office, Other Institutional Investors
SJF VENTURES I, L.P.	Development Finance Institution (DFI)
Core Innovation Capital I, L.P.	Endowments/Foundations, Family Office, Pension Funds, Other Institutional Investors
Aavishkaar India Micro Venture Capital Fund	Development Finance Institution (DFI)Pension Funds, Retail Investors
Reach, L.P.	Endowments/Foundations, Family Office, Other Institutional Investors, Retail Investors
Environmental Technologies Fund	Development Finance Institution (DFI)Endowments/Foundations, Family Office, Pension Funds, Other Institutional Investors
Climate Change Capital Private Equity Fund	Pension Funds, Other Institutional Investors
LeapFrog Investments Fund II	Development Finance Institution (DFI)Family Office, Pension Funds, Other Institutional Investors

Image 7 Funds's limited partners

The funds have funded 127 companies in total, Physic Ventures has financed 18 companies with 41 rounds, for a total capital of 347 Millions of dollars, Reach ventures financed 17 companies with 21 rounds, for a total capital equal to 102.75 Millions of dollars. , Environmental Technologies Fund financed 15 companies with 19 rounds, for a total capital of 181.69 Millions of dollars. , Core innovation capital has financed 13 companies with 20 rounds, for a total capital of 138.55 Millions of dollars. Aspada advisor has financed 13 companies with 14 rounds, for a total capital of 60.74 Millions of dollars. SJF VENTUREs financed 13 companies with 38 rounds, for a total capital of 22.37 Millions of dollars. Leapfrog investments financed 10 companies with 13 rounds, for a total capital of 242.48 Millions of dollars. Climate change capital private equity financed 9 companies with 17 rounds, for a total capital of 420.72 millions of dollars. Aavishkaar India Micro Venture Capital fund has financed 9 companies with 9 rounds, for a total capital of \$ 2.52 Millions of dollars.

Fund	N. companies	N. round	Total equity (Millions of dollars)
Climate Change Capital Private Equity Fund	9	17	420,72
Physic Ventures, L.P.	18	41	347,06
LeapFrog Investments Fund II	10	13	242,48
Environmental Technologies Fund	15	19	181,69

Core Innovation Capital I, L.P.	13	20	138,55
Reach, L.P.	17	21	102,75
Aspada Advisors - Unspecified Fund	13	14	60,74
SJF VENTURES I, L.P.	13	38	22,37
Coastal Ventures, L.P.	10	13	15,05
Aavishkaar India Micro Venture Capital Fund	9	9	2,52
Total	127	205	1533,9

Image 8 Funds's rounds

Coastal Ventures L.P. and Environmental Technologies Fund tend to fund all phases: early stage, growth stage, late stage and buyout. Core Innovation Capital I, L.P. and Physic Ventures, L.P. finance early stage and growth internships. SJF VENTURES I, L.P. finance secondary internships and growth stages. Aavishkaar India Micro venture capital L.P. finances Seed stage and Early stage, Reach L.P. Early stage funding. Leapfrog finances growth stage.

Fund	Asset class	Stage
Reach, L.P.	Private Equity/Venture Capital, Venture	Early Stage
Coastal Ventures, L.P.	Venture, Private Equity/Venture Capital	Late Stage, Growth Stage, Early Stage, Buy Out
Aavishkaar India Micro Venture Capital Fund	Venture, Private Equity/Venture Capital	Seed Stage, Early Stage
SJF VENTURES I, L.P.	Venture, Private Equity/Venture Capital	Secondary, Growth Stage
Environmental Technologies Fund	Private Equity/Venture Capital	Late Stage, Growth Stage, Early Stage, Buy Out
Physic Ventures, L.P.	Venture, Private Equity/Venture Capital	Early Stage, Growth Stage
Core Innovation Capital I, L.P.	Private Equity/Venture Capital, Venture	Early Stage, Growth Stage
Climate Change Capital Private Equity Fund	Other Private Equity, Private Equity/Venture Capital	Late Stage, Growth Stage
LeapFrog Investments Fund II	Other Private Equity, Private Equity/Venture Capital	Growth Stage
Aspada Advisors - Unspecified Fund	Private Equity/Venture Capital	

Image 9 Funded stage

It emerges that the investments made by these funds have a range of 26 Millions of dollars, which is very vast. The average investment made by the funds is of 3 millions of dollars, but considering the standard deviation of 3 millions of dollars, this average does not seem to be significant. The median is 700000. Core Innovation Capital and Aavisjkar India Micro Venture Capital funds require a 6% hurdle rate to their investments.

Some funds include management fees, i.e. the compensation LPs pay to GP for managing capital. in particular Coastal venture L..P. ask a 3% management fee, as SJF venture I, L.P. .

Core innovation capital I, L.P. require 2.5% and Aavishkaar India Micro Venture Capital Fund 3.5% management fee.

We notice that, the carried interest, i.e. the compensation for private equity and hedge fund managers for their well management, is a method to face the moral hazard issue grant to managers in 50% of funds: 20% for Coastal Ventures and 10%, as for SJF venture I, L.P. . Core innovation capital I, L.P. give 20% and Aavishkaar India Micro Venture Capital Fund of 15% and Reach L.P. 20%.

Fund	Management fee	Carried interest	Hurdle rate
Coastal Ventures, L.P.	3%	20%	0
SJF VENTURES I, L.P.	3%	10%	100% of invested capital returned
Core Innovation Capital I, L.P.	2,5%	20%	6%
Aavishkaar India Micro Venture Capital Fund	3,5%	15%	6%
Reach, L.P.		20%	

Table 3 Funds's management fee, carried interest and hurdle rate

100% of the funds declare to use a social and environmental metric system. In 10% of cases this system is compatible with IRIS. 20% declare a metric system compatible with IRIS and another metric system (in one case the FIIRM, in the second case a system owned by the fund itself). In 70% a metric system is used which is not compatible with IRIS. Each fund evaluates the impact based on its social mission (s), as you can see. Moreover, it appears that even in these social funds **profit sharing is not related to social performance** while we expected to find a relationship between the impact measurement system (used in 100% of our analysis sample) and the investors profit

Fund	Social and environmental metrics	Other social and environmental metrics system	Core impact metrics tracked	Social and environmental rating
Reach, L.P.	Yes	FRL% of portfolio companies' user base, and demographics reached.	% of low-income students our portfolio companies reach. Retention, Net Promoter Score, monthly active users, user growth and revenue.	
Coastal Ventures, L.P.	Yes	CVI Metrics	# of jobs created for low- income employees. Benefits provided for employees. Supplies sourced locally.	Fund is rated by other social & environmental rating system
Aavishkaar India Micro Venture Capital Fund	Yes			
SJF VENTURES I, L.P.	Yes, IRIS compatible metrics	SJF proprietary impact reporting system	Carbon displaced, renewable energy generated, tons recycled, energy saved, job retention, job creation, employee benefits provided, employee training and development	

Environmental Technologies Fund	Yes, IRIS compatible metrics		Greenhouse Gas Offset/Mitigated (IRIS ID: PI5376) Hazardous Waste Avoided (ID:PI2073) Non-hazardous Waste Avoided (ID:PI8177)	
Physic Ventures, L.P.	Yes			No social or environmental rating system used
Core Innovation Capital I, L.P.	Yes	Savings and/or incremental income generated.	Savings generated.	Fund is GIIRS rated
Climate Change Capital Private Equity Fund	Yes	-		
LeapFrog Investments Fund II	Yes, IRIS compatible	Financial, Impact, Innovation and Risk Management (FIIRM)	Traditional social and environmental metrics Micro-insurance-related metrics: Incurred Claims Ratios, Claims Rejection Ratios, Policy Renewals, Policy Holder Complaints, etc.	

Table 4 Funds performance measurement





sustainable food and consumer products, 23% in essential services and education, 22% in water and/or technologies to purify/reuse it, 11% in clean-tech, 10% in microfinance and the 1% in small businesses.

#### Image 10 Impact theme

According to the description of the impact of the funds, 40% of them target the BOP, 20% the environment and another 20% innovation in the medical sector.

Area	Fund	Impact description		
served	Number			
		BoP	4	
India	Aavishkaar	Entrepreneurial	1	
	India Micro	support		

	Venture		
	Capital Fund		
India	Aspada	Essential	1
	Advisors -	serivces	
	Unspecified		
	Fund		
U.S.A	Coastal	Employment	1
	Ventures, L.P.		
Asia,	LeapFrog	Financial	1
Africa	Investments	services	
	Fund II		
		Environment	2
Worldwide	Climate	Lower carbon,	1
	Change	cleantech	
	Capital Private		
	Equity Fund		
Worldwide	Environmental	Energy	1
	Technologies	efficiency	
	Fund		
		Innovation	2
U.S.A.	Reach, L.P.	Health	1
Worldwide	Physic	Health	1
	Ventures, L.P.		
		Others	2
Worldwide	SJF	Environment,	1
	VENTURES I,	employment	
	L.P.		
U.S.A.	Core	Financial	1
	Innovation	services	
	Capital I, L.P.		

Table 5 Funds's impact description

### 3.2 Companies

The analysis of companies is more in-depth than that of the funds. In fact, we used our database to get some general information and then we went deep trying to capture all the nuances social entrepreneurship 'spectrum' effectively funded. The image of the spectrum is a recurrent topos in the literature and all the papers describe a similar one, that we will generalize with that of Kim Alter, 2009 in Appendix II. For our purpose, we used the available public information, in particular, the website and companies' descriptions on Bloomberg. At first, we did the quantitative analysis because we wanted to know:

- financed phases,
- sector of belonging,
- · collected capital,

• funds' equity percentage,

• current status.

To classify the impact level of the enterprises we have extracted the following information:

- mission/vision,
- field,
- product/service,
- impact,
- target population,
- level of integration between social and economic strategy,
- technology required.

Mission and vision, field of action, product/service, social impact and target population results directly from the websites. The social mission is most clearly defined in two ways: the operational context of the venture and its outcomes and impact. A third, operational processes, can also be significant in defining both the social and entrepreneurial (Nicholls, 2010) During data collection, we decided to label as non-social the companies that did not express an intentional social mission in their mission or vision statement or in any other intentions' declaration in their website (A. K. Höchstädter, B.Scheck, 2014), intentionality is our first "binding feature".



Image 11 Intentionality is a binding features

The hybrid spectrum usually considers all the nuances from philanthropy to the traditional enterprise, where the blurred boundaries are determined by the generating economic income and its redistribution scheme but because we are evaluating businesses funded by VC funds, we didn't consider the existence in the cluster of the non-profit aims. It would miss the financial return necessary for the double-bottom line investors.

After discharging those companies without a intentional social/environmental mission, we needed to evaluate additional aspects, in fact, an impact statement does not necessarily produce a social enterprise.

We evaluated the product/service and the field to which it belongs, as reported in the table (Nicholls, 2014).

Advocacy and campaigning
Community regeneration
Education
Environmental preservation and sustainable development
Healthcare
Poverty alleviation/financial services

Welfare projects

Table 6 The Institutionalization of Social Investment: The Interplay of Investment Logics and Investor Rationalities

The extent of the impact depends on the population to which it is directed, too. We generalized target into general population, target population, B2B:

	General population, when the assets of the activity are directed to the whole population (for example the environmental benefits.		
Target population	Target population, when the benefits of the activity are directed to a specific target (children, elderly, poor, etc).		
	B2B, when the benefits of the activity are directed to companies (eg Microcredit, etc.).		

Table 7 Target population

To this regards, we remember the lector that "[...] impact investing does not assume that any investment in a business selling products to poor people inherently creates social impact. [...] The fact that an investment is made in a poor country is not sufficient to qualify it as an impact investment." (Freireich, J., & Fulton, K., 2009). The second binding feature is the effectiveness of the social environmental impact.

We evaluated generated impact value and economic value and the level of integration of the strategies used to reach them. We describe impact values In terms of benefit, while we assume the profit aims for the economic value. The level of integration has been described in qualitative terms:

	High, if the economic and social results derive from the same activity.		
Level of integration	Medium, if the economic and social results derive from different but closely related activities.		
	Low, if economic and social results do not derive from the same activity.		
	ITOITI THE SAME ACTIVITY.		

Table 8 Level of integration

In the end, we evaluated the type of technology necessary for the complete development of the business:

	High, if the product/service is innovative with respect	
	to the environment in which it is developed.	
Technology	Medium, if the product is technological but does not	
	introduce innovation.	
	Low if the product is not technological.	

Table 9 Technology

Based on this information we have labeled the different companies in:

Social nuance	Target population	Level of integration	Technology	
CSR	Target population	Low	Low	
SRI	General population/targe population	t Low	Low	
BOP	Target population	High	Low	
SF	General population/targe population	t Medium	Medium	

SI	General	population/target	Medium	High
	population			

Table 10 Social nuance's definition

Since we are based on the analyzed literature, these are the boundaries currently described and which we have reconstructed on the basis of the reached information. We design the image below that represents the nuance we consider in Table10. Appendix III to Appendix XIII shows the qualitative analysis conducted on each enterprise. In our analysis we focused on venture philanthropy funds and social investment funds and it emerges the **distribution of the equity among the social nuances**: 54% of the equity of the analysis sample was directed



Image 12 Social enterprise nuances

towards social companies working for the BoP, followed by the cleantech companies that got 21%, social innovation companies received 7% and the ones focused on the CSR took 0,3%. 8,5% of equity was directed towards traditional companies.



### 3.3 Companies overview

Starting from the data at our disposal, 42% of the companies received 75% to 100% of their capital. 56% of them received between 50% and 75% and only 1.7% less than 50%.

Percentage of capital from social funds	Percentage of companies	
75%-100%	42,02%	
50-75%	56,30%	
25%-50%	1,68%	

The companies in the database enjoy wide participation by social funds.



Image 13 Social funds partecipation

Altogether these funds invested about 11688 million dollars. Most of the capital was invested in expansion and later stage companies, which, as pointed out in chapter 2.1.1, are the phases for which funds tend to invest more (M. Arena et al. 2017). Companies in later stage obtained 4198 millions of dollars, those in expansion stage 4048 million of dollars, those in the early stage 3138 and in the seed stage 302.



Image 14 Equity/stage

The companies that received the most capital belong to the energy and internet industry sector, which received respectively more than 6000 million dollars and more than 2000. The sector of biotechnology with around 1000 million follows, and then, in decreasing order, the medical sector, with few less than 1000 million, the sector of consumer goods, software, communications and semiconductors.



Image 15 Equity distribution in industry



#### 3.3.1 Companies funded by Aavishkaar India Micro Venture Capital Fund



Image 16 Companies' geography

Our database contains nine investments made by Aavishkaar India Micro Venture Capital Fund, towards nine companies, data are coherent with the purpose we reported in *TABLE 6:* fund's investments are focused on supporting activities at the bottom of the pyramid in India.


Image 17 Companies current status

The inquired companies are located in West and South India and assist some of the poorest areas of the country, among others, the "BIMARU states"<sup>7</sup>. The companies, currently all active, belong to different sectors: Healthcare, Agriculture, Energy, Education, Water, Sanitation and Technology, *IMAGE 19* shows the number of investments related to the companies sector, it stands out the high heterogeneity of companies.



Image 18 Business sectors

78% of companies are focused on BoP. Precisely, three of them works in healthcare, two in hygiene and sanitization, one in education, one in agriculture, one in sustainable energy and the last in business support.

Image 19 Business sectors

<sup>7</sup> THE FOUR SICK: BIHAR, MADHYA PRADESH, RAJASTHAN E UTTAR PRADESH



The companies received investments over the period from 2001 to 2011. They were moreover in the expansion stage (55%) and the later stage (20%). Nowadays companies are all active.

Image 20 Companies' stage and year

Details of the qualitative analysis are in Appendix III, it emerges that 89% of companies work for BOP, 11% are attentive to CSR.

Each company has received only one round of investment from the fund, each round amounts, on average, to 0.8 Millions of dollars dollars but investments have a range of 1.45Mn and a maximum investment of 1.5 Millions of dollars. The greatest investment was attributed to the medical sector, followed by the Internet sector.



Image 21 Impact orientation of the comanies

3.3.2 Companies funded by Aspada Advisors

Our database contains fourteen investments made by Aspada Advisors, towards thirteen companies.



Funded firms are located in Western, Southern and Northern State of India and assist some



Firms, nowadays, are all active. They belong to different sectors: 50% is in "other sectors" category, 22% is consumer-related, 14% is related to computer software, and 7% is biotechnology and 7% internet specific industry. The "others sectors" comprehend agriculture-related, transportation, non-bank services and consultancy services. *IMAGE 23* shows the number of investments related to the sectors, highlighting the high heterogeneity of the companies.



Image 23 Companies' business sectors

The companies received investments over the period from 2014 to 2018. They were moreover in the expansion stage (55%) and the later stage (20%), as showed in *IMAGE 24*.



Image 24 Companies' stage

Data are conflicting with the purpose we reported in *TABLE 6*, in fact, the aim of the fund was to provide essential services to the Indian population but we didn't notice any sort of social mission in 6/13 of the financed companies; only one company has been rewarded for its social results.

Details of the qualitative analysis are in Appendix IV.



Image 25 Impact orientation

31% of companies is not a social enterprise, 38% work for BoP and / or CSR, 15% deal with Social innovation. A company has been rewarded for its social result. The most of them allow innovation through digitalization and engineering of industrial processes, the most, 3/7, address their efforts on CSR, 2/7 have innovative aims, 1/7 on BoP and the last on employment.

Each company received only one round of investment from the Aspada fund, except EM3 AgriServices Pvt Ltd, which received both the first and second. On average each company received 4.67 Millions of dollarr, the dispersion of the amount of each investment, however, is high, for this reason, we have examined more closely companies that received more funds.





Image 26 Rewarded enterprise and received equity

*IMAGE 26* shows that two of the most funded companies, Dunzo Digital and Imax projects, are traditional companies, EM3 Agriservices is the only, between most funded, to be a social enterprise. It is also the only one to have an agreement with the Government.

On the base of our data, the total Equity was generated by the single Aspada round, for almost all the companies considered. Only two companies have in fact equity greater than the sum of total investments received from the fund.

You can appreciate single company's details in Appendix V.

### 3.3.3 Companies funded by Climate Change Capital Ltd

Climate Change Capital was private asset management and advisory group. Founded in 2013, it was acquired in 2012 by Bunge Ltd. CCC's investments held in companies, projects and technologies that provided products or services that facilitated climate change mitigation or adaptation in Europe. Funded companies are located in Central-North Europe.



Image 28 Companies geography

Our database contains seventeen investments made by Climate towards nine companies. The fund was specialized in companies that worked for the environment: sustainable energy production and supply, recycling of waste and water purification are the pursuits of these companies. Details of the qualitative analysis are in Appendix VI.

1/9 can't be considered an SE. One is out of business; the impact of others manifests itself in the use of technology to generate clean energy or recycle efficiently.



Image 29 Impact orientation

Currently, the companies are all active except for one that went public and another that was acquired, it was impossible to find data on the latter.

They belong to different sectors: 47% industrial energy, specifically, wind, water and solar energy; 29% semiconductors, 12% internet specific, 12% other industries. "Others" includes consulting services.



Image 30 Companies's business sectors

*IMAGE 30* shows the number of investments related to the sectors. It may seem that the companies are very heterogeneous, but going in detail, as we did in Appendix VII, it turns out that all companies, except one, are voted to obtain environmental benefits, as well as economic. The only company that we have shown as non-social is the company that produces LEDs.



Image 31 Companies stage

The companies received the investments from 2008 to 2014, 10/17 of the investments have been made towards companies in the expansion stage and in the later stage, as you can see in *IMAGE 31*.

Companies received funds in several rounds of investment. In average, every round amounts to 28 Millions of dollars, but the dispersal is wide, *IMAGE 32*. Deutsch companies received the most of capital, followed by English, French and Norwegian firms.

The company that received the most funds is the German Soltecture, in the energy industry, it and Resitec are the only companies for which the total received from the fund is not equivalent to the equity (blue line in table AA).



Image 33 Total equity/total amount investments from fund

Data are consistent with the purpose we reported in *TABLE 6*. You can appreciate the details of each company in the Appendix V.



#### 3.3.4 Companies funded by Coastal Ventures, L.P.

Coastal fund is dedicated to the conservation of coastal environment, in fact, funded companies are located the most in the coastal area of North Est and North West of U.S.A., one is located in India. Coastal fund is the only fund that finance social enterprise that target below market rate return.

Our database contains thirteen investments made by Coastal towards ten companies.

Among the companies, one is out of business and another has been acquired, recent data for these two are therefore not available, the others are all active.

The companies operate in different sectors: the most of investments, 38%, have been made in consumer-related industry, 31% in the internet industry, 15% in "other", 8% in communication, and 8% biotechnology. The "others" field comprehends real estate, motor



Image 34Companies geography



Image 35 Business sectors

*IMAGE 35* shows the number of investments related to the sectors, highlighting the high heterogeneity of the companies.

The companies received investments between 1996 and 2004. Funds were distributed in a balanced way in the early stage and expansion stage. Seed companies had been financed too, as you can see in *IMAGE 36*.



Image 36 Companies' stage



Image 37 Total equity/ total amount of investments received

Companies received several rounds of investment, in particular, the Coast of Maine company received funds in three rounds. The percentage of funding for each round on total equity is low. On average each round amounts to 1.15 Millions of dollars, the dispersion between the rounds is large but lower than that of the funds examined up to now, . The company that received the most funds is Envisionet of the specific internet sector, followed the same sector company BroadcastAmerica.



Image 38 Impact orientation

Details of the qualitative analysis are in Appendix VI.

Looking closely at the sample of companies we noticed that 40% have no social impact, 20% are innovative companies in the field of health, 10% work for the environment and 10% for health. Considering that the fund drives all the companies funded to underwrite a "Social Agreement" targeting jobs for people with low incomes, it is possible that the data collected are incorrect due to our lack of information. In this case, the business model attributable to all companies would be the employment model.





We couldn't hypothesize the type of social business of the company Chemogen because of the scarcity of information available. It deals with the diagnosis of diseases for immunocompressed people, they are definitely a social enterprise, but it is not clear in what relationship it is with the market. Overall six of the nine financed companies are traditional companies.

### 3.3.5 Companies funded by Core Innovation Capital I, L.P.

Our database contains twenty investments towards fourteen companies . Funded companies are located in Western and Eastern region of U.S.A. and in Canada.



Image 40 Companies' geography

Companies are currently active, one went public and another has been acquired, recent data are not available for these. They belong to different sectors: most of the investments, 75%, have been made in the internet specific industry, 20% were in computer software, 5% in medical health. *IMAGE 41* shows the number of investments related to the industries, companies are quite homogeneous.



Image 41 Comapnies' business sectors

The companies received investments between 2010 and 2018, most of the companies that received funds were in the early stage and in the expansion stage, as you can see in *IMAGE* 43.



Image 43 Companies' stage



Image 42 Companies' total equity/ total amount of received equity

The companies received several rounds of investment from Core Innovation Capital LP. On average each round amounts to 8,15 Millions of dollars, but the dispersion between the rounds is high,

in fact, the maximum investment round received by the companies is 33.3 Millions of dollars and the investment range is 33.05 Millions of dollars. CoverHound, in the energy industry, received the most of funds, followed by Ripple Labs, these are the only companies for which the sum of rounds received from the fund is not equivalent to the equity (blue line in *IMAGE 42*). Companies that received the most funds are US companies, in particular, Vouch financial and Ripple Labs Inc.



Image 44 Investments rounds distribution

Details of the qualitative analysis are in Appendix VII. It shows that ten companies are traditional companies in fact 43% of companies have no social impact, 28% have a social impact tending towards innovation. They work primarily in the health and non-health insurance sector and financial services, making access to these services easier.



Image 45 Impact orientation

3.3.6 Companies funded by Environmental Technologies Fund

Our database contains nineteen investments made by Environmental Technologies Fund towards fourteen companies. Funded companies are located in North of Europe and in the U.S.A. .



Image 46 Companies' geography

The companies are currently all active, except three that have been acquired. In addition to these, we did not find recent data (website, social activities) relating to two other companies. The companies belong to different sectors: the most of investments, 53%, have been made in industrial energy industry, 11% were consumer related, 11% for communications, 10% related semiconductor, and 10% were for other, and 5% computer software. The "others" fields comprehends Construction and aircraft. the *IMAGE 47* shows the number of investments related to the sectors, highlighting the high heterogeneity of the companies.



Image 47 Companies' sectors

Although it may seem that the companies are very heterogeneous, they are united by a single common denominator: 54% of them works in cleantech; Companies exploit the skills of their dependents to improve the efficiency of industrial processes, to improve the efficiency and functioning of cities and railways, to purify water and to be able to reuse it both in an industrial context and in a private context, creating drones to create better working conditions. 7% works for environmental benefit.

The environmental mission is common to almost all companies, thanks to the new technologies they develop it is possible to obtain existing products by wasting less, reusing more and polluting less. In this context, the social mission is considered embedded because the companies have differentiated their product based on the level of waste/pollution. Two



Image 48 Companies stage

The companies have received investments over a period of time from 207 to 2016, the funds received in later stage and in the expansion stage, as you can see in *IMAGE 48*.



Image 49 Total equity/ total investments receivd

Companies received funds in several rounds of investment. In average, every round amounts to 11 Millions of dollars, but the dispersal is wide, in fact, The maximum investment amounts to 26.46 Millions of dollars and the range is 25.84 Millions of dollars.

On the basis of our data it is also shown that the total equity of almost 50% of all the companies was generated by rounds paid by the Environment technologies fund, the rest have an equity greater than the amount of the investment.

The companies received several rounds of investment from the Environmental fund. The companies that received the most money are the U.K. companies, followed by the English, French and Norwegian companies.



Image 50 Investment rounds distribution

### Details of the qualitative analysis are in Appendix VIII.



Image 51 Impact orientation

3.3.7 Companies funded by LeapFrog Investments Fund II

Our database contains thirteen investments made by Leapfrog towards eleven companies. Funded companies are located in Noth of Europe, Central Africa, Mauritius, South and Central India and Philippines.



Image 52 Companies' geography

Four companies were acquired, 2 went public and seven are active. We did not find recent data (website, social activities) relating to one of the companies.



Image 53 Companies' business sectors

They belong to different sectors: the most of investments, 77%, have been made in other sectors, which comprehend financial and insurance services. 15% were in computer software, 8% were In medical health. The *IMAGE 53* shows the number of investments related to the sectors, highlighting the heterogeneity of the companies.

The companies have received investments between 2013 and 2017, the funds invests more in the expansion stage, as you can see in Image 54.



Image 54 Companies' stage

Some of the companies received several rounds of investment from the Leapfrog fund. On average each round amounts to 30,31 Millions of dollars, but the dispersion is high, in fact, the maximum investment is 75.06 Millions of dollars, the range of 73.3 Millions of dollars. The total equity of 9/11 of companies is generated by the Leapfrog investments.





Image 55 Companies' total equity/ Total amount of investment rounds



Image 56 Impact orientation

Data are not completely coherent with the purpose we reported in *IMAGE 55*, in fact, 37% of companies have no social impact, social enterprises channel their efforts towards the inclusion of the mass or the BoP in financial / insurance products 35% also through innovative means 9%. Others are more geared towards CRS 9%.



Image 57 Investment rounds distribution

Details of the qualitative analysis are in Appendix IX.



Image 58 Impact orientation

3.3.8 Companies funded by Physic Ventures, L.P.

Our database contains forty-one investments made by Physic, towards eighteen companies.



Image 59 Companies' geography

Currently, two companies went public and thirteen were acquired, the others companies are all active.

They operate in different sectors: 29% in internet specific, 25% industrial energy, 12% biotechnology, 12% computer software, 12% consumer related, 5% medical health and 5%



others. The "others" industry comprehend advertising and public relations.

IMAGE 60 shows the number of investments related to the sectors. Companies are very Image 60 Companies business sectors

#### heterogeneous.

balanced way in the early stage and expansion stage. Later stage companies had been financed too, as you can see in IMAGE 61. **COMPANIES' STAGE** N. COMPANIES Seed Early Stage Later Stage Expansion 2007 2008 2009 2010 2013 2014 2015 2011 2012 YEAR

The companies received investments between 2007 and 2015. Funds were distributed in a

Image 61 Companies' stage

Companies received funds in several rounds of investment. In average, every round amounts to 9,9 Millions of dollars, but the dispersal is wide, the range of investments is 39.91 Millions of dollars. The maximum investment received was 40 Millions of dollars. (IMAGE 62) .



Image 62 Investment rounds distribution

The company that received the most funds is TS biosystem of biotechnology industry, GSRD operation of the internet specific industry and Elixir farmaceutical of the medical health industry.

Details of the qualitative analysis are in Appendix X.

17% of companies are attentive to CSR and through responsible / ecological production



Image 63 Impact orientation

provide customers with technological tools that improve consumption efficiency and home / industrial energy management. 11% work in the health sector. 5% has no social effects. 17% of companies are attentive to CSR and through responsible / ecological production choices obtain environmental benefits. Another 17% provide customers with technological tools that improve consumption efficiency and home / industrial energy management. 11% work in the health sector. 5% has no social effects.

#### 3.3.9 Companies funded by Reach, L.P.

Our database contains twentyone investments made by Reach, towards seventeen companies. Funded firms are located in U.S.A and U.K.



Image 64 Companies' geography

Currently, the companies are all active. One was acquired, it was impossible to find data on this.

They belong to different sectors: 57% internet specific, 33% computer, 12% internet specific, 12% other industries. "Others" includes consulting services. *IMAGE 65* shows the number of investments related to the sectors. Companies appear very heterogeneous.



Image 65 Companies' business sectors

The companies received investments between 2015 and 2018. Funds were distributed predominantly in the early stage. Later and expansion stage companies had been financed too, as you can see in *IMAGE* 66.



Image 66 Companies' stage

Companies received funds in several rounds of investment. In average, every round amounts to 4 Millions of dollars, but the dispersal is wide, in fact, he investment range is 20.11 Millions of dollars, the maximum investment was 21 Millions of dollars. *IMAGE* 66.

The company that received the most funds is the indian Nearpod of computer software industry, in the energy industry.

The fund invests mostly in "Edtech", which we labeled as social innovation in the education sector (71%), most of the companies financed are apps that support, monitor and manage learning, with particular regard to the poorest sections of society and / or marginalized. Companies labeled as non-social work in the same sector and in similar ways but often having very high costs, the social result is an increasingly classy society. Appendix XII



Image 67 Impact orientation

Data are coherent with the purpose we reported TABLE 6.



### 3.3.10 Companies funded by SJF Ventures

Our database contains thirty-eight investments, towards thirteen companies.



Image 68 Companies' geography

Funded firms are located in East State of U.S.A..

Currently, the companies are all active. Four companies were acquired, it was impossible to find data on these.

They belong to different sectors: 31% internet specific; 24% industrial energy, 12% consumer related, 13% medical health,8% computer software and 3% semiconductor. *IMAGE* 70 shows



the number of investments related to the sectors. Companies are very heterogeneous.

Image 69 Companies' business sectors

The companies received investments between 1999 and 2008. Funds were expansion stage predominantly. Early and later stage companies had been financed too, as you can see in *IMAGE* 70.



Image 70 Companies' stage

Companies received funds in several rounds of investment. In average, every round amounts to 0,7 Millions of dollars, but the dispersal is wide, in fact the investment range is 6.9 Millions of dollars and the maximum investment is 7 Millions of dollars.

The company that received the most funds is the Allegheny child care, in the medical health industry, this and Ryla teleservices are the only companies for which the total received from the fund is not equivalent to the equity (blue line in *IMAGE 72*).

Details of the qualitative analysis are in Appendix XI.



Image 71 Impact orientation

Data are conflicting with the purpose we reported in Table X, 23% of the companies of the fund have social impact by innovating the education sectors and the social sector, obtaining an environmental impact through their services (16%). 23% of companies don't have any social impact.



Image 72 Companies total equity/ total amount of investment rounds



Image 73 Investments round distribution

## 4 Conclusion

Entrepreneurs founding social ventures can access a wide range of funding sources: family and friends, angels and venture capitalists, sources of debt and impact investors. Impact investors represent the source of capital more closely aligned with the dualistic mission of their social organizations and the most unlikely to encounter the "mission drift". In our analysis we focused on venture philanthropy funds and social investment funds and it emerges that generally more than 50% of social enterprises' equity come from these social funds, the remaining part comes from others traditional funds.

Moreover, it appears that even in these social funds **profit sharing is not related to social performance** while we expected to find a relationship between the impact measurement system (used in 100% of our analysis sample) and the investors profit.

Finally, our analysis made appear **the distribution of the equity among the social nuances** we highlight: 54% of the equity of the analysis sample was directed towards social companies working for the BoP, followed by the cleantech companies that got 21%, social innovation companies received 7% and the ones focused on the CSR took 0,3%. 8,5% of equity was directed towards traditional companies.

## Appendix I

Publication Yr.	State	Authors	Title	Publisher	Name of Journal	Type of paper	Level of Analysis	Concept and Theories used	Summary T	opic related
2000	USA	Jed Emerson	The Nature of Returns: A Social Capital Markets Inquiry into Elements of Investment and The Blended Value Proposition	Harvard Business School	Social Enterprise Series n. 17	Conceptual	Global	Blended value	Definition of value as a whole that integrates financial, social and environmental value, he evaluates the blended ROI.	Finance and economics
2007	Finland	Mikko Jääskelä inen, Markku Maula, Gordon Murray, Maula, Gordon Murray	Profit distribution and compensatio n structures in publicly and privately funded hybrid venture capital funds	Elsevier	Research policy	Empirical	Global	Hybrid funds, profit distribution, compensatio n scheme	On a sample of 250 funds characterized by different compensation structures, the authors compare the profit distribution to understand which structure let investors earn the most and overcome the opportunity cost. They find out that the distribution structure with asymmetric timing of government and private investments is the most effective and the same results when government loans the funds and that that the most effective way to increase the compensation of the GP is to alter the carry ratio.	Finance and economics
2009	USA	Jessica Freireich , Katherin e Fulton	Investing for social and environmenta l impact	Monitor Institute	Report	Conceptual	Global	Impact investing	Authors assess II, they draw future perspective in both optimistic and pessimistic cases and they underline which process can accelerate progress.	Finance and economics
2010	USA	J.P. Morgan: Nick O'Donoh oe, Christina Leijonhu fvud, Yasemin Saltuk	Impact Investments: An emerging asset class	J.P. Morgan	Report	Empirical	Global	Landscape	Authors evaluate II as a new asset class and assess its market: the dimension, investments, investors expecting returns, opportunity.	Finance and economics
2011	South Africa	Suzette Viviers, Tamzin Ractliffe, Dean Hand	From philanthropy to impact investing: shifting mindsets in South Africa	Virtus inter press	Journal Corporate Ownership & Control	Empirical	Country	Landscaping/ scoping II in South Africa	Authors analyze investments of 53 South African local funds of responsible investment, delineating impact investing profile (numerosity, purpose, etc.). Address to II and RI the way to face the South African development challenges, instead of philanthropy. Underline the challenge to stimulate II growth (e.g lacks a common language, definitions, measures, specialized intermediaries, ad hoc legislation, infrastructures)	Business and Manageme nt
2011	Spain	Uli Graben warter, Heinrich Liechten stein	In search of gamma an unconvention al perspective on Impact Investing	IESE	IESE Business School Working Paper	Empirical/ Conceptual	Global	Metrics and measuremen t	Interviews with more than 60 dedicated impact investors. They propose an adaptive quantitative model, gamma factor.	Finance and economics
2011	German y	Wolfgan g Spiess- Knafl, Ann-	Financing of Social Entrepreneur ship	Technisch e Universität München	-	Conceptual	Global	SE Financing	Explanation on how can social enterprises get financing: equity, debt, mezzanine capital, donations, hybrid capital	Finance and economics

		Kristin Achleitn er							(recoverable grants, convertible grants, forgivable loans, revenue share agreements).	
2011	Canada/ UK	M. Tina Dacin, Peter A. Dacin, Paul Tracey	Social entrepreneur ship: A critique and future directions.	Organizati onScience	INFORM	Conceptual	Global	Social entrepreneur ship	Authors consider promises of SE as a domain of inquiry and underline the potential, for SE, to extend the organization theory. They think over the definitional debate focusing on outcomes and context.	Business and Manageme nt
2012	Italy	Luigi Buzzacc hi, Giusepp e Scellato, Elisa Ughetto	The investment strategies of publicly sponsored venture capital funds	Elsevier	Journal of Banking & Finance	Empirical	Region	Public ownership in hybrid VC funds	Investigate the impact of public ownership levels on the investment strategies of hybrid VC funds. Focused on observing the likelihood of write-offs and the timing of exit	Finance and economics
2012	USA	Wolfgan g Grassl	Business Models of Social Enterprise: A Design Approach to Hybridity.	ACRN Oxford Journals	ACRN Journal of Entreprene urship Perspectiv es	Conceptual	Global	Social entrepreneur ship	The author describes the functional model of SEs. Illustrates terminological issues, business models, "ontology" and "phenomenology" culmination.	Business and Manageme nt
2012	England	Graham Smith, Simon Teasdal e	Associative democracy and the social economy: exploring the regulatory challenge	Routledge	Economy and Society Volume 41 Number 2	Conceptual	Regional	Social economy and associative democracy	Authors explore challenging questions for how to regulate legal and regulatory forms associate with social economy in UK.	Legal
2013	Canada	Margueri te Mendell & Erica Barbosa	Impact investing: a preliminary analysis of emergent primary and secondary exchange platforms	Routledge	Journal of Sustainabl e Finance & Investment	Empirical	Global	Exchange platforms	Individual semi-structured interviews with founders or executives of exchange platform.	Finance and economics
2014	German y	A. K. Höchstä dter, B.Schec k, 2014	What's in a Name: An Analysis of Impact Investing Understandin gs by Academics and Practitioners	Springer	J Bus Ethics	Literature review	Global	II definitions and terminology	Literature review focused on definitional, terminological and strategical issues of impact investing, looking for convergence and divergence between authors to enable a common comprehension of the field.	Business and Manageme nt
2014	USA	Shaker A. Zahra, Lance R. Newey,Y ong Li	On the Frontiers: The Implications of Social Entrepreneur ship for International Entrepreneur ship	ET&P	Entreprene urship theory and practice	Conceptual	Global	Social international ventures	Exploration of the intersection between social entrepreneurship and international entrepreneurship, where social international ventures lie.	Business and Manageme nt
2014	Switzerla nd	Sergio G. Lazzarini ,S. Cabral, L. C. de M. Ferreira, L.S.Pon geluppe, A. Rotonda ro	The best of both worlds? Impact investors and their role in		U. of St. Gallen Law & Economics Working Paper No. 2015-06	Empirical	Global	Impact investors	Qualitative interviews to impact investors to understand their approach and mechanism to conciliate both their purposes in the case social and financial return are complements or substitute.	Finance and economics
2014	England	Othmar M. Lehner & Alex Nicholls	Social finance and crowdfunding for social enterprises: a public– private case study providing legitimacy and leverage	Routledge	Venture Capital An Internation al Journal of Entreprene urial Finance	Conceptual	Global	Policy makers, crowfunding	Examine the interaction between policymakers and crowdfunding and how to combine their strengths and weaknesses.	Finance and economics

2015	England	B. Bell, H. Haugh	Exploring institutional field emergence : Insights from social investment	SSFII Conferenc e	-	Empirical	Region	Social investment field emergence in the UK	Analyzes the process involved in creating the new field of activity of impact investment (here called social investment), by one in-depth single case study. Differentiation (differences from social and commercial investments, public and charity finance), integration, mimesis and innovation demarcate boundaries of the field.	Business and manageme nt
2015	England	J. E. Clarkin and C. L. Cangion	Impact Investing: A Primer and Review of the Literature	DE GRUYTER	Entrep. Res. J.	Literature review	Global	Landscaping/ scoping	Il literature review, authors point out contributions from the legal, financial, social entrepreneurship and project management literature.	Business and Manageme nt
2015	USA	Michael Moody, Laura Littlepag e, Naveed Paydar	Measuring Social Return on Investment: lessons from organizationa I implementati on of SROI in the Netherlands and the United States	Wiley	Nonprofit manageme nt & Leadership	Empirical	Country	SROI application	In depth analisys of 4 organizations that apply SROI, pro and contro.	Business and manageme nt
2015	The Netherla nds	Jarrod Ormiston , Kylie Charlton , M. Scott Donald & Richard G. Seymour	Overcoming the Challenges of Impact	Routledge	Journal of Social Entreprene urship	Empirical	Global	Features useful	Conversations with practitioners in and around II led to four main themes: financial first focus, due diligence process, mission and values alignment, networking and collaboration importance.	Business and manageme nt
2015	USA	Khrista Johnson	The Charitable Deduction Games: Mimicking Impact Investing	U. of Pennsylva nia	U. of Pennsylva nia journal of business law	Conceptual	Global	Metrics and measuremen t	Discussion on how can the charitable market become efficient by adopting measures and tools that come from impact investment field ( IRIS, GPS, GIIRS)	Business and Manageme nt
2015	Italy	Sara Rago, Paolo Venturi	Hybridization as Systemic Innovation: Italian Social Enterprise on the Move	5th EMES Internation al Conferenc e on Social Enterprise		Empirical	Country	Second generation hybrid	Second generation hybrid organizations characteristics and analysis of 2 Italian case studies: "Panecotto" and "La città essenziale"	Business and Manageme nt
2015	England	Brandste tter, L., & Lehner, O. M.	Opening the Market for Impact Investments: The Need for Adapted Portfolio Tools	DE GRUYTER	Entrep. Res. J.	Conceptual	Global	Portfolio optimization	A description on how to adapt BL to II.	Finance and economics
2015	Switzerla nd	Wolfgan g Spiess- Knafl & Jessica Aschari- Lincoln	Understandin g mechanisms in the social investment market: what are venture philanthropy funds financing and how?	Routledge, Taylor & Francis	Venture Capital An Internation al Journal of Entreprene urial Finance	Empirical	Global	Venture philantropy funds	A description of how to predict model of the venture philanthropy instrument for their investees (grant vs commercial financing): the model contains investees' organizational and beneficiary characteristics and has a strong predictive characteristic adapt BL to II.	Finance and economics
2015	Italy	Luigi Buzzacc hi, Giusepp e Scellato, Elisa Ughetto	Investment stage drifts and venture capital managerial incentives	Elsevier	Journal of Corporate Finance	Empirical	Region	Investment style drift, managerial incentives, VC funds	,	Finance and economics
2015	USA	Jacob Gray, Nick Ashburn, Harry	Great expectations Mission Preservation and Financial	Wharton Social Impact Initiative		Empirical	Global	Mission drift	Analyzes a sample of 53 funds to understand if the mission can be sacrificed to financial returns.	Finance and economics

		Douglas, Jessica Jeffers	Performance in Impact Investing							
2015	Internati onal	World Economi c Forum and OECD: Richard Samans, Erik Solheim	Blended Finance Vol. 1:A Primer for Development Finance and Philanthropic Funders. An overview of the strategic use of development finance and philanthropic funds to mobilize private capital for development	OECD	Report	Conceptual	Global	Blended finance	Authors explore the role of blended finance, investor barriers, tools, risks and scaling.	Finance and economics
2016	England	Morley	Social impact reporting as reputation management : Effective practice, symbolic adoption or business- washing?	London School of Economics	-	Empirical	Region	Reporting	Analysis of the websites of 128 social purpose organisations and interviews with 24 individuals at 22 social purpose organisations.	Business and manageme nt
2016	England	Morley	Elite networks and the rise of social impact reporting in the UK social sector	London School of Economics	-	Empirical	Region	Reporting and professionali sm	Analysis of network structures of social investors by interviews and publicly available information.	Business and manageme nt
2016	USA	Donald F. Kuratko, Jeffery S. McMulle n, Jeffrey S. Hornsby, Chad Jackson	Is your organization conducive to the continuous creation of social value? Toward a social corporate entrepreneur ship scale	Elsevier	Business Horizons	Conceptual	Global	Social entrepreneur ship strategy	Test a model in the field of social corporate entrepreneurship strategy. In the model, entitled the social corporate entrepreneurship scale (SCES), four of the five factors weren't significant.	Business and Manageme nt
2016	USA	Nicholss and Daggers	The Landscape of Social Impact Investment Research: Trends and Opportunities	Said business school		Literature review	Global	Landscape	A literature review of the knowledge of impact investing, authors add to the previous literature reviews the distinction between academic and non-academic research.	Manageme
2016	USA	Chowdhr y, B., Davies, S. W., & Waters, B.	Incentivizing Impact Investing.	-	-	Conceptual	Global	Social investors vs commercial investors	Generate a model to understand the optimal contract model in a public project, SIB and SIG, and private project. Investigation about free riding and principal-agent problem.	Finance and economics
2017	Italy	Frances co Rizzi, Chiara Pellegrin i, Massimo Battaglia	The structuring of social finance: Emerging approaches for supporting environmenta Ily and socially impactful projects	Elsevier	Journal of Cleaner Production	Émpirical	Region	Social finance features	Analyze the structuration process of social finance, exploring diversity among different European (sample was made up of institutions from UK, Ireland and Italy ) SF institutions. It results that between all the models/tools of SF, II and ethical banking are the dominant forms and can pass from a pre- paradigmatic stage to a paradigmatic stage to a paradigmatic stage to a paradigmatic stage to a povernments, entrepreneurship and investor.	Business and manageme nt

2017	Italy	Mario Calderini , Veronica Chiodo and Fania Valeria Micheluc ci	The social impact investment race: toward an interpretative framework	Emerald	European Business Review	Empirical	Global	SII in different countries	G8 International report's analysis and interpretation using Shwats et al. theoretical framework, i.e. focusing on government infrastructure, facilitative infrastructure and transactional. Evidence shows dualistic situation, between countries in which SII is institutionalized and that in which it is not.	Business and manageme nt
2017	USA	Philip Roundy, Hunter Holzhau er, Ye Dai	Finance or philanthropy? Exploring the motivations and criteria of impact investors	Emerald	Social Responsibi lity Journal	Empirical	Global	Investment choice	Interviews with 31 investors and ethnographic observation to understand the differences among impact investors, social responsible investors, for- profit investors, and philanthropists because of motivations and criteria used to chose an investment	Finance and economics
2017	USA	Dilek Cetinda mar, Banu Ozkazan c-Pan	Assessing mission drift at venture capital impact investors	Wiley	Business Ethics: A Eur Rev.	Empirical	Region	Mission drift in hybrid VC funds	Case study approach on VC firms that identify themselves as impact investors. Assess of mission drift by examining mission statement and their investments: it results in 50% of VC impact investors.	Finance and economics
2017	Italy	Bengo Irene, Arena Marika, Azzone Giovanni & Calderini Mario	Indicators and metrics for social business: a review of current approaches	Elsevier	Journal of Social Entreprene urship	Literature review	Global	Metrics and measuremen t	Review of indicators and metrics and accounting technics for social business organized by stakeholders interests.	Finance and economics
2017	Italy	Marika Arena, Irene Bengo, Mario Calderini , Veronica Chiodo	Unlocking finance for social tech start-ups: Is there a new opportunity space?	Elsevier	Technologi cal Forecastin g & Social Change	Conceptual	Global	Financing mechanism for social innovation enterprices	Investigate social tech start-up model of entrepreneurship and which barriers and privileges they may face in financing in the different phase of life(seed, startups, early growth, and growth).	Finance and economics
2018	USA	Jason Lortie & Kevin C. Cox	On the boundaries of social entrepreneur ship: a review of relationships with related research domains	Springer	Int Entrep Manag J	Conceptual	Global	Boundaries of social entrepreneur ship	Trace the social entrepreneurship profile marking boundaries between with corporate social responsibility, base of pyramid, non-profit management, social innovation, and impact investing.	Business and manageme nt
2018	England	Alex Nicholls	A General Theory of Social Impact Accounting: Materiality, Uncertainty and Empowerme nt,	Routledge	Journal of Social Entreprene urship	Conceptual	Global	Social impact accounting	Examine 92 reports, a general theory of social impact accounting results must own truth, rightness, sincerity.	Business and manageme nt
2018	France	Sharam Alijani, Catherin e Karyotis	Coping with impact investing antagonistic objectives: A multistakehol der approach	Elsevier	Research in Internation al Business and Finance	Conceptual	Global	Multistakehol der approch in II	Description of the complex impact investing landscape with a multistakeholder approach.	Business and manageme nt
2018	France	Bryan Dufour	Social impact measuremen t: What can impact investment practices and the policy evaluation paradigm learn from each other?	Elsevier	Research in Internation al Business and Finance	Conceptual	Country	PE vs SIM	France case study of the difference between program evaluation and social impact measurement.	Business and Manageme nt

2018	France	Jean- Laurent Viviani, Carole Maurel	Performance of impact investing: A value creation approach	Elsevier	Research in Internation al Business and Finance	Conceptual	Global	Measure of value creation in II	Investigation on the choice to include in a portfolio a social enterprise instead of inserting a traditional and a not-for-profit enterprise also proposes a synthetic method that consists in the projection of the value created on the social (or financial) dimension from which an indicator appears unique and easy to use.	Finance and economics
2018	England	Geobey, Sean & Callahan , Jennifer	Managing Impact Portfolios: A Conceptual View of Scale	Oxford Journal of Finance and Risk Perspectiv es	ACRN Oxford Journal of Finance and Risk Perspectiv es	Conceptual	Global	Impact portfolio	Impact portfolio difficulties to scale, use of transparency, dialogic accounting, and democratic values in portfolio management.	Finance and economics
2018	The Netherla nds	George Apostola kis, Gert van Dijk, Frido Kraanen c, Robert J. Blomme	Examining socially responsible investment preferences: A discrete choice conjoint experiment	Elsevier	Journal of Behavioral and Experiment al Finance	Empirical	Country	Investment portfolio choice combining SI, II and traditional options	Choice-based conjoint experiment in which participants were invited to select a preferred investment portfolio, it results that Netherlands pension funds can better align their investments to their clients characteristic and interests, improving for each segment a strategy to meet them ( communication, certain risk/return profiles, a behavioural architecture of choice).	Finance and economics
2018	England	GIIN	Annual Impact investment survevy			Empirical	Global	II market	Report on 229 impact investments organizations.	Business and Manageme nt
	Italy	, Elisa Ughetto	L'intervento pubblico a favore del capitale di rischio			Empirical	Global	Public ownership, incentives, profit distribution	Discussion about the schemes of profit distribution and incentives.	Finance and economics

## Appendix II

Kim Alter, 2009

Hybrid spectrum

Traditional Nonprofit	Nonprofit with income generating activities	Social enterprise	Socially responsible business	Corporation practing social responsability	Traditional for profit
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# Appendix III

Qualitative analysis of the companies funded by Aavishkaar India Micro Venture Capital Fund.


B2r Technologies Pvt Ltd	Butterfly EdufieldsGV Meditech Ltd Pvt Ltd	GV Meditech Ltd	INI Farms Pvt Ltd	Sara Plast Pvt Ltd
http://b2r.in/index.html	https://www.butter flyfields.com/abou t-us/	https://www.butter https://healthmarketinnovatio http://www.inifarm http://www.3sindia.com/ flyfields.com/abou ns.org/program/gv-meditech- s.com/index.html t-us/ ltd	http://www.inifarm s.com/index.html	http://www.3sindia.com/
Yes	Yes	Yes	No	Yes
BOP	BOP, CSR	ВОР	CSR	ВОР
Medium	Medium	Low	Medium	Low
B2B	B2B	Target population, general population	general Target population	Target population
High	Medium	High	Medium	Medium
Poverty alleviation/financial services.	Education	Healthcare	Poverty alleviation/financia I services	Poverty alleviation/financiaPoverty alleviation/financial services I services
Direct impact to household family incomes.Offering Employability & urban migration.meaning Indirect impact to the economic ecosystem.learning Increase in confidence of the youth andexperier perception of the community.	ful nces for	Provide medical, diagnostidSocial res and pharmaceutical services. managing agricoltura chain	ponsi al sup	ble ofSupplies customized sanitation solutions at BoP ply
Publishing, legal, financial services,webEducational research, data mining, data scrubbing, datamaterial/ s management project	nal science	nal Free consultation, medicines, Horticulture sciencediagnostics, health camps products		Sanitation solutions
"Rural Ethos Business Ethic: B2R wants to Bridging the redefine the relationship between urban andlearning divide" rural India by attempting to break these structures and prejudices. Our business aims to leverage the notential of rural society in a	"Bridging the learning divide…"	the"Surya Super Speciality"Kimaye" " Hospital is aims at providing world class facilities not only to the people of Varanasi but also to the adioining		"A world where the basic human right to health and sanitation becomes reality for all."
manner that creates sustainable, professional and commercial capacity - in a way that does not destroy the rural social fabric."		/semi-ur		"To supply and service portable restrooms from the most visited to the remotest areas of the globe. And to constantly improve on it."

Servals Automation Pvt Ltd	Swas Healthcare Pvt Ltd	HealthcareVaatsalya Healthcare Solutions Pvt Ltd	Waterlife India Pvt Ltd
http://servalsgroup.blogspot.co m/	https://www.swas healthcare.com/	www.vaatsalya.com	https://www.waterlifeindia.co m/index.html
Yes	No	Yes	No
ВОР	ВОР	BOP	ВОР
Medium	Low	Low	Medium
Target population	General population	Target population	Target population, B2B
High	Medium	High	High
Environmental preservation and Healthcare sustainable development		Healthcare	Poverty alleviation/financial services
Pursuit of sustainable rura energy products	safe and e based	Provide medical, diagnostic and pharmaceutical services.	Provide high quality safe water to underserved and challenging areas at an economical cost.
Sustainable energy employment	,Natural healthcare	energy, Natural healthcare Free consultation, medicines, diagnostics	Safe water
"To bring appropriate technology to the BoP to enhance quality of their life"	"Health naturally"	"to be the most_Customer friendly and Respected Hospital Group in the country with PAN India presence"	Ţ
		"Affordable, Accessible and Appropriate Healthcare services to under-served areas"	

#### Appendix IV

Qualitative analysis of the companies funded by Aspada Advisors.

Vision	Mission	Product/ service	Social impact	Field(s)	Level of integration	Target population	Technology	Impact	Award(s)	Website	Company
"Our target is to cross over 1 million- joinings annually."	"We're here to solve the hiring woes- once and for all, across all job hierarchies, industries, cities and for all parties concerned - employers, recruitment consultants and job seekers."	Make hiring quick, easy and convenient	Make hiring quick, easy and convenient for everyone	Welfare projects	High	Targegt population	Medium	<u></u>	No	https://www.aasaanjobs.com/about/	Aasaanjobs Pvt Ltd
	·	andAgricultural products	andFruit supply chainAny solutions aim	Efficient farmerAny products supply chain aim	Medium	Target population	Medium	ВоР	No	Ţ	Allfresh Supply Management Pvt Ltd
	"You now have the power to move things"	Any social/environmental aim	nAny social/environmental aim	rAny social/environmental aim	Any social/environmental aim	Any social/environmenta aim	Any social/environmental aim	Any social/environmental	Any social/environmental aim	https://www.dunzo.in/about .html	SupplyDunzo Digital Pvt Ltd vt Ltd
	·	Technology network farmers a enlarge th production	Innovation agricolture, efficient managing of farms	Tech agriculture	High	alGovernment Contract, Any information B2B commerce	High	SI	No	http://www.em3agri.c om/	EM3 AgriServices PvtImax Ltd Ltd
Any information	Any information	toAny information nd eir	inAny information ty	Any information	Any information	Any information	Any information	Any information	Any information	Any information	max Projects India ₋td

INI Farms Pvt Ltd	Lawrencedale Agro Processing (India) Pvt Ltd	AgroReverie Language Technologies Pvt Ltd	LanguageSchedulers Logistics India Pvt Ltd s Pvt Ltd	Shiksha Financial Services India Pvt Ltd
http://www.inifarms.com/ind ex.html	http://www.inifarms.com/ind http://www.lawrencedale.com/https://reverieinc.com/Any social/environmental aim ex.html	https://reverieinc.com	Any social/environmental aim	http://shikshafinance.com/home/
No	No	No	Any social/environmental aim	Yes
CSR	CSR	Social innovation	Any social/environmental aim	ВоР
Low	Low	Medium	Any social/environmental aim	Medium
Target population	Target population	Target population	Any social/environmental aim	Target population
Medium	Low	Medium	Any social/environmental aim	High
Agriculture	Agriculture	Language software	Any social/environmental aim	provides loans and finances education
Social responsible managing of agricoltural supply chain	responsibleSocial responsible managingInternet easy fruition agricolturalof agricoltural supply chain	Internet easy fruition	Any social/environmental aim	Higher level of attendance at school
Horticulture products	Agricultural products	Translation	Any social/environmental aim	Access to education
	"To be the most respectedDemocratizing organisation in the Agri ValueIndian Internet Chain"		the"We Schedule, You rule"	"To enhance access to education finance, by: funding schools for asset creation, thereby establishing good quality education infrastructure and funding parents for school fees, thereby reducing school drop-out rates"
"Kimaye"	"Deliver farm fresh fruits & vegetables hygienically by harnessing the collective wisdom of our farming community and advances in technology"		"Schedulers aspires to be the best- in-class global service provider of temperature controlled food and Pharma logistics services, specializing in optimization of supply chain for its valued customers"	Schedulers aspires to be the best- <sup>"</sup> To enrich India's human skill, focusing on n-class global service provider ofthe bottom of the pyramid, by creating emperature controlled food andaccess to relevant products and services." Pharma logistics services, specializing in optimization of supply chain for its valued customers"

Any "Deliver social/environmental advantage from within warehouse" Any social/environmental aim	Any social/environmental aim	Any social/environmental aim	Any Supply social/environmental solutions.	Any social/environmental aim	Any Any soc social/environmental aim		Any Any soc	Any Any soc social/environmental aim	Any www.th social/environmental	Siddhi Vinayak AgriThinklink Processing Pvt Ltd Services
to our the 4			chain s/	Any social/environmental aim Low	Any social/environmental aim	Any social/environmental aim	Any social/environmental aim	Any social/environmental aim	www.thinklink-scs.com	Supply Pvt Ltd
competitive"Organise India's farm to fork supply chain to deliver: customers1) Cleaner, Fresher, Better produce to customers. walls of a2) Improved returns to farmers. 3) Lower wastage and inefficiencies. We contributing to the overall reduction of food inflation and scarcity."	Agricultural products	Lower wastage and inefficiencies in agricultural supply chain	optimization Efficient farmer products supply chain warehouse	Low	Target population	Low	CSR	No	www.waycool.in	ChainWaycool Foods and Products Pvt Ltd

# Appendix V

Qualitative analysis of the companies funded by Climate change capital Ltd.

	Vision	Mission	Product/ service	Social impact	of integration Field(s)	Target population	Technology	Impact	Award(s)	Website	Company
--	--------	---------	------------------	---------------	-------------------------------	-------------------	------------	--------	----------	---------	---------

	Consultancy, projectOOB management, delivery, and housing stock retrofitting services	Environmental benefits get byl recycling, renewable energyl and insulation of homes	Environmental preservation and Environmental sustainable development sustainable sustainable development	High	General population	Medium	CLEAN-TECH	0	www.climateenergy.org.uk	Climate Energy Ltd
OOB	ООВ	get byEnvironmental energybenefits		ООВ	ООВ	ООВ	ООВ	ООВ	OOB	Enecsys Ltd
1	Heat pump	Environmental benefits	Environmental andpreservation and sustainable development	High	General population	Medium	CLEAN-TECH	0	www.neura.at orAny https://www.linkedsocial/ in.com/combanv/ntal.aim	NEURA GmbH
1	Refrigeration led lights	Any social/environmen tal aim	Any Env and social/environmen and tal aim dev	Any social/environmen	Any General social/environmen Government	Any social/environmen	Any social/environmen	Any social/environmen	www.neura.at orAny https://www.linked social/environmen in.com/companv/ntal aim	Nualight Ltd
"Turn your constraints into advantages: High performance and innovative solutions for the conditioning of sludge and the treatment of complex effluents."	led Conditioning of sludge andInnovation of cities treatment of effluents	the treatment of municipalCommunications and industrial sludge and ofSmart Metering <i>a</i> complex effluents.	ironmental elopment	High		High	CLEAN-TECH	0	www.orege.com	Orege SA
"Turn your constraints into"Communications for smart grids: advantages: Highhow close is the energy internet performance and innovativeplatform for smart grids, smart solutions metering and smart home?" for the conditioning of sludge and the treatment of complex effluents."	Innovation of cities	Any the treatment of municipalCommunications Systems for social/environmen and industrial sludge and ofSmart Metering and Smart Grids tal aim complex effluents.	preservationEnvironmental preservation and sustainablesustainable development	High	population,General population, Government	High	CLEAN-TECH	0	www.ppc-ag.de	Power PLUS Communications AG

	) - -	) ) ] )
Resitec AS	Soltecture GmbH	SSE PLC
https://www.resitec.no/	www.soltecture.com	http://sse.com/aboutus/
0	0	
CLEAN-TECH	CLEAN-TECH	CSR
High	Medium	Low
General population	General population	General population
High	High	High
Environmental preservation and Environmental sustainable development and sustainab	Environmental preservation and sustainable development	Environmental preservationEnvironmental preservation and sustainable development and sustainable development
engineering services withins powder and slurry technology, recycling of photovoltaic industry	withinSolar energy. iology, voltaic	Providing energy in a sustainable way
handling, recovery, andSolar modules treatment of powders, liquids,semiconductor and suspensions	andSolar modules based on CISGeneration, iids,semiconductor distribution electricity, storage, supply of	Generation, transmission, distribution and supply of electricity, in the production, storage, distribution and supply of gas and in other
"ReSiTec offers development,SOLAR CONS pilot and engineering servicesSUSTAINIBILITY, within powder and slurryTECHNOLOGY. technology."	iment,SOLAR CONSTRUCTION.SSE's rvicesSUSTAINIBILITY. respor slurryTECHNOLOGY. now a to be energy a low-	SSE's purpose is to responsibly provide the energy and related services needed now and in the future. It aims to be a leading provider of energy and related services in a low-carbon world.

# Appendix VI

Qualitative analysis of the companies funded by Coastal ventures Ltd.

Vision	Mission .	Product/ service	Social impact	Level of integration Field(s)	Target population	Technology	Impact	Award(s)	Website	Company
	I	acccess to live games on any computer or mobile device	Any social/environmental aim	Any social/environmental Any social/environmental aim	Any social/environmental aim	Any social/environmental aim	Any social/environmental	Any social/environmental aim	http://broadcastamerica .com/	BroadcastAmerica.co m

	ООВ	OOB	OOB	OOB	OOB	OOB	OOB	OOB	OOB	OOB	OOB	EnvisioNet
		Reimagining modern health	Hospitals, clinics	Healthcare in Philippines	Healthcare	High	General population	High	<u>0</u>	Yes	https://www.int ellicare.net.ph/	IntelliCare, Inc.
			Trailers leasing and sales	ıAny social/environment al aim	Any social/environment al aim	Any social/environment	Any social/environment al aim	Any social/environment al aim	Any social/environment	Any social/environment al aim	https://mainetrailer .com/	Maine Trailer Inc

# Appendix VII

Qualitative analysis of the companies funded by Core innovation capital I.

Any Any information social/enviro Any Global information payments - One frictionless experience to send	credit access access to finance and le technology in emerging orldwide.	Financial s Credit access business lendingApp to get that "Engineering thedelivering lending revolution,consumer decision loans withinsmartphon 24 hours or less" to people markets w	Any social/environmental aim Hair e-commerce -	Any information	Health insurance
Any information Any information	High Poverty alleviation/financial services	High Welfare projects	Any social/environmental High aim Any social/environmental aim	Any information Any information	High Healthcare
Any information Any information	High Any info General population,Any terget population info	High B2B	Any social/environmentalHigh aim Any social/environmentalB2B aim	Any information Any information	High General population
Any information Any information	BOP, SI	<u>o</u> ,	Any social/environmental- aim Any social/environmentalSI aim	Any information Any information	Ω,
Plastyc Inc http://www.p lastyc.com/	FinancialPayJoy Inc https://www.payjoy.com .miradort/	Mirador Financia Inc https://www.mirador ech.com/	L2c Inc Mayvenn Inc https://www.transhttps://shop.mayvenn.co union.com/L2C m/	L2c Inc https://www.trans union.com/L2C	Decent Inc https://medium.com/decent

Savvymoney Inc	Say	TIO Networks Corp	Urban FT Inc	Vouch
https://www.savvymoney.com/	https://say.com/		https://urbanft.com/	
	Any social/environmentali aim	Any social/environmentalAny social/environmentalAny aim aim	al/environmental	Any information
ß	Any social/environmentalAny aim	Any social/environmentalAny aim	al/environmental	Any information
High	Any social/environmentalAny aim	social/environmental	al/environmental	Any information
B2B	Any social/environmentalAny aim aim	social/environmental	al/environmental	Any information
Integrated	Any social/environmentalAny aim aim	social/environmental	al/environmental	Any information
Welfare projects	Any social/environmentalAny aim	social/environmental	al/environmental	Any information
Saving money thanks to efficient financial Transforms investors	the role	ofAny social/environmentalAny aim soci aim	al/environmental	Any information
Credit score solutions	Technology platform forbill pay open communicationthrough	ment trans an	sactionsdigital payments andAny Internetbanking platform info	Any information
SavvyMoney's objective is helping you, ourSay partners, succeed. Through our partners, weshareholders are blending extensive industry andtheir full owne technology expertise with our commitment to promoting credit and financial wellness.	elping you, ourSay empowers- our partners, weshareholders to access industry andtheir full ownership rights. commitment to wellness.	I	Money Is Power but itAny doesn't need to defineinformation your digital banking strategy	Any information
"A smarter crdit score solution, Credit Score <sup>"</sup> If you own a stock, then- solution for every online and mobile bankinglyou have a vote" platform. Increase engagement. Build deeper relationships."	"If you own a stock, then you have a vote"	1		Any information

# Appendix VIII

Qualitative analysis of the companies funded by Environmental technologies fund.

Vision	Mission	Product/ service	Social impact	Field(s)	Level c integration	Target population	Technology	Impact	Award(s)	Website	Company
Any Information	Any Information	Any Information	Any Information	Any Information	ofAny Information	Any Information	Any Information	Any Information	Any Information		4energy Ltd
	Energy to succeed	Biofuel production from liquor	Black liquor gasification for the recovery of Any Any energy and chemicals in the pulp and social/environme information paper industry ntal aim	Environmental preservation an sustainable development	High	General population	High	CLEAN TECH		https://www.chemrec.se/	4energy Ltd Chemrec AB
Any social/environme information ntal aim	Any Any social/environme information ntal aim	Any Any social/environme information	nfAny dsocial/environme ntal aim	andAny Any social/environme information ntal aim	Any Any social/environme information	http://cpmotion.c om/	СРМ Compact Power Motors Стры				
Any information	Any information	Any information	Any information	Any information	Any information	Any information	Any information	Any information	Any information	Any information	CompactElstat Ltd Motors
Enabling the Sustainable Company		Software to manage social and environmental performance	Allows social companies to manage their environmental and social performance	Welfare projects	High	B2B	High	<u></u>	<u> </u>	https://enablon.com/company	Enablon SA

	Metalysis is a growing U.K. headquartered company with- a solid-state alloy powder technology which is lower-cost and more environmentally friendly than traditional production methods.	Metalysis is a growing U.K. a solid-state alloy powder t and more environmenta production methods.		Any information	
Any information			Through active innovation, quality- thinking and understanding of commercial possibilities; give the world beautiful, long lasting and environmentally friendly wood	AIMS ATIAny LEADER INInformation OF FLYING BE AT THE OF	FLYABILITY AIMS AT BECOMING THE LEADER IN THIS SEGMENT OF FLYING ROBOTICS, AND BE AT THE FOREFRONT OF
Any information		Powder technology	Kebony products	Any information	Drones
Any Information	is lower-cost and more	d of apowder technology which bothenvironmentally friendly cost-	produces an enhanced wood of apowder technology superior quality that is bothenvironmentally frier environmentally friendly and cost-	sAny information	drones for inaccessible placesAny info
Any information	and sustainable	and Environmental preservation development	Environmental preservation and sustainable development	Any information	Welfare projects
Any information		Medium	Medium	Any information	Medium
Any information		General population	General population	Any information	B2B
Any information		High	High	Any information	High
Any information		<u>v</u>	<u>o</u>	Any information	Ω
Any information			<u> </u>	Any information	
Any information		http://www.metalysis.com/	https://kebony.com/en/content/ab http://www.metalysis.com/ out-us/	Any information	https://www.flyability.com/
Novel Polymer Solutions		Metalysis Ltd	Kebony ASA	Industrial Origami Inc	Flyability SA

			Dissolved		•
		making brighter city	fleetAny incy,information vices your	energy advance railway and fleet and 4Gmanagement, improving the efficiency, ount ofsafety and quality of rail services t in thehelping to transform the future of your railway and how it is operated.	dramatically improve the energy advance railway and fleetAny efficiency of transmitters for 3G and 4Gmanagement, improving the efficiency, information handsets by reducing the amount of safety and quality of rail services waste energy dissipated as heat in the helping to transform the future of your RF Power Amplifier circuit railway and how it is operated.
er purification-	Water	smart city applications	Any information		Semiconductor
er purificatio meration	applications,water purification al authoritiesregeneration e world save	Wireless smart city applications, water purific helping cities, regional authorities regeneration and utilities around the world save	information	maximise the safety and reliability o the railway and reduce costs	ET saves energy and improves wireless maximise the safety and reliability of Any coverage in high data rate wireless the railway and reduce costs infor transmitters
andEnvironmental preservation sustainable development	ation	Environmental preservation sustainable development	and Any information	andEnvironmental preservation and sustainable development	Environmental preservation and sustainable development
ſ	High	Medium	Any information	Medium	Medium
	B2B	General populatin	Any information	General population	General population
ſ	High	High	Any information	High	High
	<u>\</u>	<u></u>	Any information	<u>s</u>	Ω
			Any information		·
www.voltea.com	WW	www.telensa.com	Any information	https://perpetuum.com/technology/	http://www.nujira.com/about-nujira
Voltea BV	Volt	Telensa	TAG EnergyTelensa Solutions I tri	Perpetuum Ltd	Nujira Ltd

# Appendix IX

Qualitative analysis of the companies funded by Leapfrog Investments fund II.

Company	AFB Mauritius Ltd	Cignifi Inc	Fincare Business Services Ltd
Award(s)	0		T
Website	https://afb.com.gh/about/	https://cignifi.com/	http://www.fincare.com/
Impact	SF, CSI	SF	SF
Technology	Medium	Medium	Medium
Target population	Target population	Target population	Target population
Level of	ofMedium	High	Medium
Field(s)	Poverty alleviation/financial services	Poverty alleviation/financialPoverty services	Poverty alleviation/financial services
Social impact	reach the underserved and unbanked population insub-saharan Africa	and unbankedhelp credit bureaus and financial Financia Africa institutions reach the underserved and unbanked population in developing countries that have no credit	Financial services
Product/ service Credit products		Credit products	Credit products
Mission	a financial serv provides innova t products. We oonsible lending and Payroll Loans, afb D Cash loans to infol	Cignifi transforms behavior into fi opportunity	mobileFincare Business Services Ltd is a nancialholding company for a clutch of businesses operating in the banking & financial services sector in India. The Fincare platform currently comprises of Fincare Small Finance Bank and Lok
Vision	or market traders.		- -

Any social/environment al aim	Any social/environment al aim	Any social/environment al aim	Any social/environment al aim	social/environment Any social/environment al aim	Any social/environment Anv	Any social/environment	Any social/environment	http://goodlife.co.k e/		Goodlife Pharmacy Ltd
Any Our vision is to become- social/environmentIndia's largest retail asset al aim finance company	·	Credit products	I	social/environment Any Poverty social/environmentalleviation/financial al aim services	General population Medium	Low	CRS	http://www.magma.co.in/	I	Magma Fincorp Ltd
	BIMA is the leading emergingPartnering people market insurance player, usingachieve their dreams innovative mobile technology to bring insurance to people who have never had it before	Credit products	using innovative mobileAny technology to bring insurance toaim people who have never had it before	Welfare projects	Target population High	Medium	SF	http://goodlife.co.k http://www.magma.co.in/ http://www.bimamobile.com/ e/	yes	Milvik AB
We leverage deep insightAny information To to create solutions that em make us the preferred and partner for people across cor Africa. solution	people eir dreams.	manage pension schemes and provide support services to individuals and organizations	eAny social/environmentalAny informationAny paim it	aim Any social/environmentalAny informationAny aim	Any social/environmentalAny informationAny aim Any social/environmentalAny informationAny		Any social/environmentalAny informationAny aim	https://www.petratrust.com	1	Petra Trust Company Ltd
tAny information	Any information	Any information	IAny information	Any information	IAny information	Any information	Any information	Any information	Any information	Resolution Health East
To serve our clients, employees, stakeholders and society by providing responsive and comprehensive Insurance <u>solutions.</u>	to Any information To be the recognized leader and preferred provider of insurance services in Kenya.	manage pension schemesAny information innovative insurance covers and provide support services to individuals and organizations	ıAny social/environmental aim		nAny social/environmental aim Anv social/environmental	Any social/environmental	Any social/environmental	https://www.petratrust.com Any information https://www.resolution.co.ke		Resolution Insurance EastCompany Ltd

	Change the wayMake you feel aboutafford insurance famili famili	Any In social/environment al aim	Any life social/environment pro al aim	Any M social/environment Any W social/environment al aim			n m/ Any social/environment	s://www.smk.c	Syn Mun KongU Insurance PCL
Our vision is to be the leader in helping Ghanaians build their dre ams, one customer at a time.	wayMake insurance simple, aboutaffordable and more accessible, providing our customers and their families with a smoother path to their dreams.	Insurance products	life and savings insurance products to the mass market	Medium Welfare projects	General population	Medium	Social finance	- www.utlifeghana.com	KongUT Life Insurance Ltd

# Appendix X

Qualitative analysis of the companies funded by Physic Ventures, L.P.

Any Any information Any information Any information Any information Any information Any information Any information Any information Any Any information	Vision Any information	Mission Any information	Product/ service Any information	Social impact Any information	Field(s) Any information	Level ofAny integration information	Target population Any information	Technology Any information	Impact Any information	Website Any information	Award(s) Any information	Netwo
	ion Any information	Any information	Any information	Any information	ion Any information	Any information	Any information	Any information	ion Any information	ion Any information	ion Any information	

		Any information	Any information		Any information	
are the sraged the better	We believe patients are the most underleveraged resource in the achievement of better outcomes	Any information	rmation	Let us guide you to what'sAny good. info	Any information	EnergyHub's Mercury DERMS provides utilities with Any information innovative grid-edge DER solutions. From commercial and industrial demand response, to Bring Your Own Thermostat® (BYOT) residential demand response, to delivering advanced grid services using DERs, utilities rely on Mercury to manage the complete lifecycle of any DER program.
	Application	Any information	Any information	Website/guide	Any information	grid-edge DER solutions
their	connect patients with their care team	Any information	IAny information	health, environmental, and Any social impacts of productsinformation and companies	Any information	distributed energy resources managing
	Healthcare	Any information	Any information	Welfare projects	sustainableAny information	Environmental preservation and sustainable development
90 -	High	Any information	Any information	High	Any information	High
	General population	Any information	Any information	General population, B2B	Any information	General population, B2B
	High	Any information	Any information		Any information	High
	S	Any information	Any information	S	Any information	S
).CO	https://www.healthloop.co m/	Any information	Any information	https://www.goodguide.com/ Any #/	Any information	https://www.energyhub.com/solutions
with	joined forces GetWellNetwork	Any information	Any information		Any information	
	HealthLoop Inc	Halosource Inc	GSRD Operations Inc	FitnessGoodGuide, Inc.	Expresso Fitness Corporation	Energyhub Inc

		Any information			Any information	
ſ	Our mission is to save lives and- improve healthcare by empowering clinicians to effectively treat patients faster than ever before		Beauty becomesPharmaca is the trusted sourceAny information for integrative wellness solutions. We offer an open-minded approach to medicine and inspire health in the lives of our customers, ourselves and the world.	Beauty becomes you.	Any information	We develop and produceAny cost competitive,information sustainable chemicals and polymers from plant- based and renewable feedstocks
	diagnostic tools	Any information diagnostic tools		Beauty products Beauty products	Any information	Chemicals
	diagnostic tools	Any information diagnostic tools	beauty products	beauty products	Any information	Sustainable ChemicalAny Products
·	Healthcare		Environmental Environmental preservation and Any information preservation and sustainable development sustainable	Environmental preservation and sustainable	Any and information ent	Environmental preservation anc sustainable development
	High	Any information High	Medium	Medium	Any information	Medium
	General population	Any information	General population	General population	Any information	Genereal population, B2BAny
	High	Any information	Medium	Medium	Any information	High
Any information	<u> </u>	Any information	CSR	CSR	Any information	CLEAN TECH
	https://www.t2biosystems.com/	Any information	http://www.ownprhttps://www.pharmaca.com/ oducts.com/	http://www.ownpi oducts.com/	Any information	https://www.novomer.co m/
	•	Any information			Any information	
Tugboat Inc	T2 Biosystems Inc	Recyclebank	Own Products IncPharmaca Integrative PharmacyRecyclebank	Own Products Inc	On Q Ity Inc	Novomer Inc

Watersmart Software Inc	Yummly Inc
Yes	Any social/environmental aim
https://www.watersmart.com/	Any social/environmental aim
S	Any social/environmental aim
High	Any social/environmental aim
General population	Any social/environmental aim
High	Any social/environmental aim
Welfare projects	Any social/environmental aim
water management	Any social/environmental aim
Water software	Any social/environmental aim
To change the way the world usesWe're water by delivering a world-classmissio software-as-a-service customerin the engagement and analytics platformmillion and providing superior customeraround service to water utilities	world usesWe're fulfilling this world-classmission by improving life customerin the kitchen for over 25 cs platformmillion home cooks customeraround the world.

#### Appendix XI

Qualitative analysis of the companies funded by Reach, L.P.

SCHOOL
the between and
Target population
www.admithub.com

BookNook Inc	FreshGrade Education Inc	Gradescope Inc	Holberton, Inc.
https://www.booknooklearni ng.com/	https://www.freshgrade.com/	gradescope.com	www.holbertonschool.com
ı	Yes	I	I
<u>N</u>	Ω	<u>ν</u>	Ω
High	High	High	High
Target population	Target population	Target population	Target population
High	High	High	High
Education	Education	Education	Education
student success in reading	student success	student success	student success in software engeneering
Application	Application	Application	Application
Help your students achieve reading goals With technology anyone can use -	The Portfolio & Assessment Platform that Makes Learning Visible -	Grade All Coursework in Half the Time -	Become a Full-Stack Software Engineer. Holberton School is a campus-based program that preps you to launch your career through collaborative, project-based -

KickUp Inc https://kickup.co/ - SI SI	Lightneer Oy www.lightneer.com - SI SI	Mrs Wordsmith www.mrswordsmith.com Any social/environmental aim Any social/environmental aim Any social/environmental aim	
ligh	High	Any social/environment	al aim
Target population High	Target population High	Any social/environmental aim Any social/environmental aim	tal ai aim m
Education	Education	Any social/environmental aim	tal aim
assess, manage, and communicate about learning's	people learning	Any social/environmental aim	ntal aim
ation	Mobile learning game	Any social/environmental aim	ntal aim
Understand the link between professional	GAME SCIENTISTS CREATING FUN GAMES FOR EVERYONE -	Mind-blowing gifts Hollywood-illustrated for kids of all ages. -	Mind-blowing gifts for young storytellers Hollywood-illustrated vocabulary products for kids of all ages. -

			c
https://www.peoplegrove.com/	www.buildpiper.com	www.schoolmint.com	tinkergarten.com
	Any social/environmental aim	I	Any social/environmental aim
Ñ	Any social/environmental aim	Ñ	Any social/environmental aim
High	Any social/environmental aim	High	Any social/environmental aim
	•		
High	Any social/environmental aim	High	Any social/environmental aim
Education	Any social/environmental aim	Education	Any social/environmental aim
student success	Any contal/any ironmental aim	student success	Any cocial/any ironmental aim
Application	Any social/environmental aim	Application	Any social/environmental aim
Where doors are opened PeopleGrove helps students and alumni succeed before, during, and	PIPER COMPUTER KIT Everything your kids need to	We help school systems streamline and transform their entire student	PLAY IS LEARNING
-	- Dulia their own computer	-	1

•		.
WriteLab & Chegg: Improve Your Writing in Less Time	Inspiration & insight for modern parents	Knowledge, faster.
Application	Any social/environmental aim	Any social/environmental aim
student success in writing	Any social/environmental aim	Any social/environmental aim
Education	Any social/environmental aim	Any social/environmental aim
High	Any social/environmental aim	Any social/environmental aim
Target population	Any social/environmental aim	Any social/environmental aim
High	Any social/environmental aim	Any social/environmental aim
Ω	Any social/environmental aim	Any social/environmental aim
I	Any social/environmental aim	Any social/environmental aim
www.writelab.com	winnie.com	volley.com
WriteLab Inc	Winnie, Inc.	Volley Labs Inc

#### Appendix XII

Qualitative analysis of the companies funded by SJF Ventures.



To provide all families access to- an excellent early educational experience that prepares their children to be life-long learners in an ever changing world.	Brightside Academy provides We will help child care and early educationyou manage that prepares children to be life- long learners.	Any social/environmental aim Mar soft	Any social/environmental aim efficent	Any social/environmental aim We	Any social/environmental aim High	Any social/environmental aim B2B	Any social/environmental aim High	Any social/environmental aim	Any social/environmental aim	www.brightsideacademy.com www	Allegheny Child Care AcademyCitysoft Inc Inc
	0	Managing software	improve efficiency	Welfare projects						w.citysoft. n	
	providesWe will helpOur mission is to satisfy theHelping ducationyou manage needs of (EM) environmentalthe management, D&D, DOE,Landsca DOD, commercial, andMaterial nuclear build plant construction.	Any social/environmental aim Application	Any social/environmental aim affordable engaging materials students.	Any social/environmental aim Education	Any social/environmental aim High	Any social/environmental aim	Any social/environmental aim High	Any social/environmental aim	Any social/environmental aim -	www.citysoft.www.containertechnologies.c edmap.com com om	Container TechnologiesEd Map Inc Industries LLC
	fy the Helping YouNavigate. nentalthe Changing DOE,Landscape of Course andMaterials plant	Application	to your	Education	High	B2B		<u></u>	1	edmap.com	
Any information	Any information	Any information	Any information	Any information	Any information	Any information	Any information	Any information	Any information	Any information	EvCo Research LLC
Any information	Any information	Any information	Any information	Any information	Any information	Any information	Any information	Any information	Any information	Any information	ResearchR24 Lumber Co
	To make energy efficiency economically viable by capturing incentives and rebates for our partners.	Costumer support	Incentives and rebates to install more efficiency option	Environmental and preservation and sustainable development 7	High	B2B	High	CLEAN TECH	1	http://www.realwinwin.com /	RealWinWin Inc

Any information Any info	Any information Any info	Any information Any info	Any information Any info	Any information Any info	Any information Any information Infor	Any information Any info Any information Any	Any information Any	Any information Any info	Any information Any	Ryla Teleservices,
Any information	Any information	Any information	Any information	Any information	information Any information	Any information Anv	Any information	Any information	Any information	Salvage Direct Inc
Any information-	Any information-	Any information	Any information/valuable from scra	Any information Environmental preservation sustainable	Any information High	Any information Hiigh	Any information CLEAN TECH	Any information-	Any information	Sealtech Co LLC
	I	Any information Plastic products	valuable productshelping from scrap platics compai substar telecon			Any information Hiigh Any aim	CLEAN TECH	1	Any information http://www.selecte ch.com/	CoSelectech Inc
	1		mic nies ntial cost sav	Any social/environmentalAny andaim info		Any social/environmentalAny aim info Anv social/environmentalAnv	Any social/environmentalAny aim	Any social/environmentalAny aim info	https://www.3spectrum.co m/	Spectral Dimensions, Inc.
Any information	Any information	Any information	l-marketAny achieveinformation vings on	IAny information	information IAny information	IAny information IAnv	lAny information	lAny information	Any information	Trinity Security, Inc.

#### Bibliography

Sharam Alijani, Catherine Karyotis, 2018, Coping with impact investing antagonistic objectives: A multistakeholder approach https://doi.org/10.1016/j.ribaf.2018.04.002

Alter, S. K., 2006. Social Enterprise Models and Their Mission and Money Relationships. In A. Nicholls (ed.), Social Entrepreneurship: New Models of Sustainable Social Change. Oxford: Oxford University Press, 205-232.

George Apostolakis, Gert van Dijk, Frido Kraanenc, Robert J. Blomme, 2018, Examining socially responsible investment preferences: A discrete choice conjoint experiment

Marika Arena, Irene Bengo, Mario Calderini, Veronica Chiodo, 2017, Unlocking finance for social tech start-ups: Is there a new opportunity space? http://dx.doi.org/10.1016/j.techfore.2017.05.035

B. Bell, H. Haugh (2015) "Exploring institutional field emergence: Insights from social investment"

Bengo Irene, Arena Marika, Azzone Giovanni & Calderini Mario, 2017, Indicators and metrics for social business: a review of current approaches

Brandstetter, L., & Lehner, O. M., 2015, Opening the Market for Impact Investments: The Need for Adapted Portfolio Tools

Luigi Buzzacchi, Giuseppe Scellato, Elisa Ughetto, 2012, The investment strategies of publicly sponsored venture capital funds

Luigi Buzzacchi, Giuseppe Scellato, Elisa Ughetto,2015,Investment stage drifts and venture capital managerial incentives

Calderini M., Veronica Chiodo, Fania Valeria Michelucci, (2018) "The social impact investment race: toward an interpretative framework", European Business Review, Vol. 30 Issue: 1, pp.66-81, https://doi.org/10.1108/EBR-10-2016-0134

Cetindamar D, Ozkazanc-Pan B. Assessing mission drift at venture capital impact investors. Business Ethics: A Eur Rev. 2017;26:257–270. https://doi.org/10.1111/beer.12149

Chowdhry, B., Davies, S. W., & Waters, B., 2016 Incentivizing Impact Investing. Working Paper

Clarkin, J.E. and Cangioni, C.L. (2015), "Impact investing: a primer and review of the literature", Entrepreneurship Research Journal, Vol. 6 No. 2, pp. 135-173. Daggers, J. and Nicholls, A. (2016), The Landscape of Social Impact Investment Research: Trends and Opportunities, University of Oxford, Oxford, available at: www.sbs.ox.ac.uk/sites/default/files/research-projects/CRESSI/docs/the-landscape-of-social-impact-investment-research.pdf.

Dacin, M. T., Dacin, P. A., & Tracey, P. (2011). Social entrepreneurship: A critique and future directions. Organization Science, 22(5), 1203–1213.

Jacques Defourny, Shin-Yang Kim, (2011) "Emerging models of social enterprise in Eastern Asia: a cross-country analysis", Social Enterprise Journal, Vol. 7 Issue: 1, pp.86-111, https://doi.org/10.1108/17508611111130176

Bryan Dufour, 2018, Social impact measurement: What can impact investment practices and the policy evaluation paradigm learn from each other? Emerson, Jed (2000). "The Nature of Returns: A Social Capital Markets Inquiry into Elements of Investment and The BVP", Working paper, Harvard business school.

Freireich, J., & Fulton, K. (2009). Investing for social and environmental impact. San Francisco, CA: Monitor Institute.

Geobey, Sean & Callahan, Jennifer "Managing Impact Portfolios: A Conceptual View of Scale" ACRN Oxford Journal of Finance and Risk Perspectives, ISSN 2305-7394, 6.4 (2017): 17-36.

Uli Grabenwarter, Heinrich Liechtenstein, 2011, In search of gamma an unconventional perspective on Impact Investing

Grassl, W., 2012. Business Models of Social Enterprise: A Design Approach to Hybridity. ACNR Journal of Entrepreneurship Perspectives, 1(1), pp. 37-60.

Jacob Gray, Nick Ashburn, Harry Douglas, Jessica Jeffers, 2015, Great expectations Mission Preservation and Financial Performance in Impact Investing

Höchstädter, A.K. and Scheck, B. (2015), "What's in a name: an analysis of impact investing understandings by academics and practitioners", Journal of Business Ethics, Vol. 132 No. 2, pp. 449-475.

Lazzarini, Sérgio Giovanetti and Cabral, Sandro and Ferreira, Luciana Carvalho de Mesquita and Pongeluppe, Leandro and Rotondaro, Angelica, The Best of Both Worlds? Impact Investors and Their Role in the Financial versus Social Performance Debate (September 7, 2014). U. of St. Gallen Law & Economics Working Paper No. 2015-06. Available at SSRN: https://ssrn.com/abstract=2492860 or http://dx.doi.org/10.2139/ssrn.2492860

Mikko Jääskeläinen, Markku Maula, Gordon Murray, Markku Maula, Gordon Murray, 2007, Profit distribution and compensation structures in publicly and privately funded hybrid venture capital funds, doi:10.1016/j.respol.2007.02.021

Khrista Johnson, 2015, The Charitable Deduction Games: Mimicking Impact Investing

Donald F. Kuratko, Jeffery S. McMullen, Jeffrey S. Hornsby, Chad Jackson, 2016, Is your organization conducive to the continuous creation of social value? Toward a social corporate entrepreneurship scale http://dx.doi.org/10.1016/j.bushor.2016.12.003

Othmar M. Lehner & Alex Nicholls (2014) Social finance and crowdfunding for social enterprises: a public-private case study providing legitimacy and leverage, Venture Capital, 16:3, 271-286, DOI: 10.1080/13691066.2014.925305

Jason Lortie & Kevin C. Cox, 2018, On the boundaries of social entrepreneurship: a review of relationships with related research domains, Int Entrep Manag J (2018) 14:639–648 https://doi.org/10.1007/s11365-018-0514-7

J.P.Morgan. 2010. Impact Investments: An emerging asset class, Rockefeller Foundation:1– 96.http://www.rockefellerfoundation.org/uploads/files/2b053b2b-8feb-46eaadbdf89068d59785-impact.pdf.

Michael Moody, Laura Littlepage, Naveed Paydar, 2015, Nonprofit Management & Leadership, vol. 26, no. 1, Fall 2015 © 2015 Wiley Periodicals, Inc. Published online in Wiley Online Library (wileyonlinelibrary.com) DOI: 10.1002/nml.21145 Morley, Julia Eva, 2016, Social impact reporting as reputation management: Effective practice, symbolic adoption or business-washing?

Morley, Julia Eva, Draft a, Elite Networks and the Rise of Social Impact Reporting in the UK Social Sector (February 22, 2016). Available at SSRN: https://ssrn.com/abstract=2736167 or http://dx.doi.org/10.2139/ssrn.2736167

Morley, Julia Eva, Draft b, Social Impact Reporting as Reputation Management: Effective Practice, Symbolic Adoption or Business-Washing? (March 27, 2016). Available at SSRN: https://ssrn.com/abstract=2698249 or http://dx.doi.org/10.2139/ssrn.2698249

Marguerite Mendell & Erica Barbosa (2013) Impact investing: a preliminary analysis of emergent primary and secondary exchange platforms, Journal of Sustainable Finance & Investment, 3:2, 111-123, DOI: 10.1080/20430795.2013.776258

Alex Nicholls, Jess Daggers, 2016, The Landscape of Social Impact Investment Research: Trends and Opportunities

Alex Nicholls (2018) A General Theory of Social Impact Accounting: Materiality, Uncertainty and Empowerment, Journal of Social Entrepreneurship, 9:2, 132-153, DOI:10.1080/19420676.2018.1452785

Jarrod Ormiston, Kylie Charlton, M. Scott Donald & Richard G. Seymour (2015) Overcoming the Challenges of Impact Investing: Insights from Leading Investors, Journal of Social Entrepreneurship, 6:3, 352-378, DOI: 10.1080/19420676.2015.1049285

Francesco Rizzi, Chiara Pellegrini, Massimo Battaglia,2017 The structuring of social finance: Emerging approaches for supporting environmentally and socially impactful projects

Philip Roundy, Hunter Holzhauer, Ye Dai, (2017) "Finance or philanthropy? Exploring the motivations and criteria of impact investors", Social Responsibility Journal, Vol. 13 Issue: 3, pp.491-512, https://doi.org/10.1108/SRJ-08-2016-0135 Permanent link to this document: https://doi.org/10.1108/SRJ-08-2016-0135

Sara Rago, Paolo Venturi, 2015 Hybridization as Systemic Innovation: Italian Social Enterprise on the Move

Schwartz, R., Jones, C. and Nicholls, N. (2015), "Building the social finance infrastructure", in Nicholls, A., Paton, R. and Emerson, J. (Eds), Social Finance, Oxford University Press, Oxford, pp. 488-517.

Smith, G., Teasdale, S., 2012. Associative democracy and the social economy: exploring the regulatory challenge. Econ. Soc. 41, 151–176.

Wolfgang Spiess-Knafl, Ann-Kristin Achleitner, 2011, Financing of Social Entrepreneurship

Wolfgang Spiess-Knafl & Jessica Aschari-Lincoln (2015) Understanding mechanisms in the social investment market: what are venture philanthropy funds financing and how?, Journal of Sustainable Finance & Investment, 5:3, 103-120, DOI:10.1080/20430795.2015.1060187

Schwartz, R., Jones, C. and Nicholls, N. (2015), "Building the social finance infrastructure", in Nicholls, A., Paton, R. and Emerson, J. (Eds), Social Finance, Oxford University Press, Oxford, pp. 488-517.

Jean-Laurent Viviani, Carole Maurel, 2018, Performance of impact investing: A value creation approach

Suzette Viviers, Tamzin Ractliffe, Dean Hand, 2011, From philanthropy to impact investing: shifting mindsets in South Africa, Corporate Ownership & Control/volume 8, issue 3, Spring 2011, continued - 1, Department of Business Management, University of Stellenbosch, Private Bag X1, Matieland, Stellenbosch, 7602, South Africa.

Shaker A. Zahra, Lance R. Newey, Yong Li, 2014, On the Frontiers: The Implications of Social Entrepreneurship for International Entrepreneurship, DOI: 10.1111/etap.12061

Elisa Ughetto, L'intervento pubblico a favore del capitale di rischio