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Impact investment fund: an emergent investment opportunity

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Table of Contents

List of Figures

List of Tables

Introduction

This work aims to deeply analyse the market of impact investment fund born as a new opportunity to generate social and environmental impact alongside a financial return. Due to the novelty of this topic we also try to investigate through language techniques which of these funds are real impact funds and which use only this label to make profit.

After having collected several papers and articles we have structured the discussion in four chapters.

The first chapter is a literature review of this emergent market giving a general overview of impact investment funds. It is focused more on the characteristics of these ones giving a definition and trying to define the boundaries. In addition we discuss about the actual situation of this market and which challenges it has to face up to remain and grow in the future.

In the second chapter we conduct a descriptive statistic of 233 funds listed in ImpactBase database in order to understand better the trends of these ones. We take into account 11 main characteristics as impact theme, social and environmental metrics, asset classes, geographical location and investment size. As we expected the emerged trends mirror the overview reported in the GIIN (Global Impact Investment Network) studies.

The third chapter addresses the theme whose language techniques we use to analyse the communication strategy used by the SIVs. In particular we focus more on the content analysis technique because we think it is the technique that better fits with our search requirements. We also deeply discuss the importance of the language style and how much the choice of the words is so relevant.

In the final chapter after having conducted a content analysis of the fund website and calculated several measures such as the complexity of the language we cluster the funds in four categories. These categories vary with the level of distinctiveness and SBS (Semantic Brand Score) measurement. The novelty of this work is properly the use of the SBS tool to study the behaviour of impact investing fund. This is a new measure of brand importance calculated on text data combining methods of social network and semantic analysis developed by the researcher Andrea Colladon Fronzetti. The second step of our study is focused on the association of these four different clusters with the characteristic taken into account in the descriptive statistics of the Chapter 2.

So the thesis concludes with the results of our comparison that try to explain the behaviour of the groups. Some features emerged are predictable while others are more interesting and in some cases also unforeseeable.

CHAPTER 1

1. Literature Review

1.1 The rising of social impact investment

Social impact investment is a recent phenomenon that is growing rapidly in the last 20 years. In 2015 this market was evaluated approximately USD 135 Billion and grow of 17, 86 % is expected in 2020 with an evaluated market of USD 307 Billion (GIIN, 2019).

The rising of this type of investment is due to the necessity to find an effective charitable model that can compensate the inefficiency of public spending (Mario Calderini, Veronica Chiodo and Fania Valeria Michelucci, 2018). So social investment emerged in response to a combination of societal interest in businesses that seek to purposefully generate positive economic, social and environmental impacts (Fisher & Satter, 2001). It is evident that impact investing unlike the simple donation has also an expected economic return aspect. Therefore two aims coexist in the same time: to create benefits at social level but also to permit to investors to have an economic return. Impact investors make financial investments in early-stage organizations with the expectation of receiving financial returns and creating measurable social impact (Mangram, 2018).

This idea to link economic return with a social impact has also lead the birth of social impact bond (SIB) also called "pay-for- success bond". So the impact investing fund is not an isolated phenomenon in this new market. Despite this a social impact bond is a contract between the public sector or government authority and the investors. The aim is the same but in this case if the objective is not achieved investors do not receive anything. So this type of bond tends to be risky investments subject to default and inflation risk.

The rise of impact investing and so of SIB is in line with and part of ''a broader movement gaining momentum in contemporary market economies, one demanding a more ethical and socially inclusive capitalism'' (Dacin et al. 2011, p. 1204).

There are four key drivers that help the birth and consequently the interest of these investments (Jackson et al.2012):

- *The financial crisis* has a fundamental role in this sector. Indeed it caused the limitations of traditional models of investment, decision making and risk. After this event the scenery of investment changed. Investors tried to be more careful with the real risk of these;

- *The growing of social and environmental changes* leads to a greater interest in these problematics. In front of this situation the society feels compelled to find effective solutions;

- *An emerging set of activities and investments* is demonstrating the sustainable and scalable returns of business models deliberately generating "blended value." Some investors who are already investing responsibly are keen to be even more proactive in managing their assets;

- *The born of a new kind of investors* who seek a new approach to money management that enables them to also make a difference. So there is a new set of young professionals starting off their careers seeking both money and meaning.

This initial stage of industry development, characterized by market organization, has been driven by a core group of proponents that has included foundations, high-net worth individuals, family offices, investment banks, development finance institutions and dedicated impact investing fund. So when we take a closer look, we can also have a better view of the main actors involved in this new scenario (Monitor Institute,2009):

- *Prominent family offices* for the world's wealthiest individuals that actively seek to source, vet, and execute investments to address a range of challenges, from the perils of climate change to the suffering of people living in U.S. inner cities, African slums, or rural Indian villages.

- *Clients of leading private banks* who call on their investment managers to provide them with more choices than just traditional investment and pure philanthropy.

- *Private foundations* that partner with investment banks, development finance institutions, and other foundations to make investments in areas related to their social mission.

- *Private equity funds* that aim to provide growth capital profitably to businesses that generate social and environmental returns.

- *Mutual funds* that have dedicated a portion of their assets to emerging companies committed to generating social and environmental value or bond portfolios financing housing for low- and moderate-income families or other civic improvements.

- *Pension funds and sovereign wealth funds* that are using their substantial resources to begin identifying how to deploy capital in ways that benefit the communities they serve and recognize the power of the capital they invest.

- *Corporations* that find ways to materially improve the lives of the poor while creating products and services that generate a profit.

- *Governments investing* in funds that support economic development in poor areas.

Moreover the main organizing instrument of the industry is the Global Impact Investing Network (GIIN), which serves a membership of 50 institutions, firms and funds on its Investors' Council. Till date, most of the major players in this field have been based in the United States or Europe, but there is also evidence of a growing number of networks and actors based in Asia, Africa and the Americas (Jackson and Harji 2012; Harji and Jackson 2012)

1.2 Definition

The term impact investing was coined for the first time in 2007 during a meeting at the Rockfeller Foundation's centre. The discussion was around the reach of an effective investment form that permits to solve social and environment change. So impact investment was defined as investments made into companies, organization, and funds with the intention to generate social and environment impact alongside a financial return (Allman and Escobar De Nogales 2015, 3, GIIN 2017).

Actually there is not a uniform definition due to the recent rising of this new market and therefore to the absence of clear boundaries. So the lack of clarity at a terminological level leads to a ''interchangeably … and sometimes incorrectly'' use of this term (Harji and Jackson 2012, p. 7).

There is a real tower of Babel around this term so you can refer to this type of investment also with several other terminologies such as social responsible investing, mission-related investing, ethical investing, program related investing or blended value.

In particular the term "blended value" was used for the first time by Jed Emerson. It is at the core of impact investing. This concept focuses on combining profitability with social, economic, environmental benefits, with a business model. This will allow it to "… maximize the total value creation potential and performance of organizations (whether philanthropic, below-market or hybrid) and how best to maximize the total performance of capital (whether philanthropic, below-market or market-rate risk adjusted capital; with returns which are financial and social/environmental)". It is possible also refers to is as the product of the action of impact investing: "If impact investing is what we do, blended value is what we produce". It is the nondivisible combination of the three elements: economic, social and environmental. (BuggLevine and Emerson 2011, p.14).

The core of impact investing lies around the orientation of the concept of blended value and several investors and researchers have tried to give their own appropriate definition.

Impact investing is, at its essence, a way to unlock capital and place it in businesses and projects that generate real social and environmental benefits for the people who need those helps the most (Harji and Jackson 2012, p. 4). It is a type of values-based investing that combines financial investment with philanthropic goals (Philip Roundy , 2019).

This new scenario emerges in response to a combination of societal interest in entrepreneurial motivations to establish a businesses that seek to purposefully generate positive economic, social and environmental impacts (Fisher & Satter, 2001).

According to Clerk et al. (2012), the definition is based on two fundamental requirements: a clear aim of obtaining measurable environmental or social impact and the realization of a financial goal.

Social investing includes investments made with the intention of having a positive impact, investments that exclude "harmful" activities, and investments that are driven by investors' values(Monitor Institute,2009).

Furthermore it can be seen along three interrelated perspectives: impact investing as development finance policy for economic development, impact investing as a development in socially responsible investing, and impact investing as capacity-building for inclusive business development in undeveloped economies (Michael Ngoasong, Alex Korda & Rob Paton, 2015,p.1).

Impact investing is also defined as "financial transactions intended to both achieve social objectives and to deliver financial returns to investors" (SITF, 2000).

It can take many forms, but imperative for the concept is the shared idea that capital can be used into an entity that provides a service or product, offering social impact along with generating a financial return (Keith Allman and Escobar De Nogales,2015).

Impact investing does not have to be "finance-first" or "impact-first", but can be "professional-first". Asset managers can apply the same degree of professionalism to investment decision-making as to traditional investing, and so comply with the fiduciary responsibility of institutional investors. (WEF Word Economic Forum, 2013)

Social impact investing provides finance to organisations addressing social and/or environmental needs with the explicit expectation of a measurable social, as well as financial, return. It thus aims to foster economic development while achieving social outcomes. It is one way of channelling more resources towards the Sustainable Development Goals (OECD, 2019). In essence, all investments make an impact on society; some positive, some negative. Impact investors intentionally pursue investments that lead to measured positive social impact (ROCKEFELLER PHILANTROY ADVISORS).

Impact investing can also be seen in three different perspectives: impact investing as a development finance policy for economic development, as a development in socially responsible investment and as capacity building for the creation of inclusive businesses. Impact investing at country level is a process of capacity building for the creation, managing and scaling-up of successful inclusive business (Koh et al., 2012).

So in conclusion the definition of impact investing remains a work in progress, and the term itself is still used interchangeably and sometimes incorrectly with related terms.

1.3 Characteristics

On the financial point of view impact investment funds operate in the market as the other type of investment funds act in the traditional market. The clients invest money in the fund hoping to have a positive return back. What really makes different this kind of investment capitalizes businesses from other is their features. The latest play a relevant role in this scenario because thanks to them it is possible to create boundaries between this new market and the traditional one. In 2019 the GIIN (Global Impact Investing Network) published the Core Characteristics of Impact Investing to give a more precise idea of what impact investment really is and to make clearer this topic. In this paper it is reported the basic four pillars required for an impact investing fund:

- *Intentionality*: It is the fundamental characteristic that really differentiates the impact investing from the other investment. In this case the investor has to have the real desire to solve social or environmental problems. This means that impact investment has to set transparent financial and impact goal with a clear strategy to use.
- *Investment with return expectation*: Impact investments are expected to generate a financial return on capital or, at minimum, a return of capital.
- *Range of asset classes*: Impact investments can be made across asset classes as venture capital or private equity. So the financial returns can range from below market to risk-adjusted market rate.
- *Impact Measurement*: To understand better if the investment follows the real nature of impact investing it is necessary to report the social and environmental performance and progress of underlying investments, ensuring transparency and accountability. Also it is important to point out that a unique measurement method does not exist, but this can vary on the base of investors' goals and so investors' intentions.

Like the other fund and organization that can act in more than one business also for the organization involved in this market it is applied the same rule. In fact if an organization decides to invest in impact investing market it does not imply that it dedicate itself totally to this business. Rather it is more frequently that inside its portfolio it is possible to find also this type of fund. The growing number of impact investing inside the portfolio of an organization it also due to the greater quality to be very versatile.

In fact each impact investing can operate in a one or more different sectors such as education, healthcare, housing, agriculture, environmental, clear energy access, climate change, water, rural development. All these sectors fit very well with various businesses and they arise from the real actual problems.

For example climate change sector arises from the need to decrease CO_2 emission and it is not surprising that this sector is very involved in developed and developing countries where it is a serious problem. In this case impact investing can be achieved through investments into clear energy solution like wind turbines or solar panels. Another example it is the healthcare sector that comes from the healthcare gaps above all in the emergent countries. In this case investment aim to offer a better quality of sanitary infrastructure and to provide pharmacy, training facilities, ambulance and all useful equipment. This sector is also involved in the prevention of diseases trying to decrease the level of the annual death in the poor countries (IRIS, 2016).

Regardless the different sector in which they are involved impact investing, like any market, is a mix of demand, supply and intermediaries. So the main components that all impact investing have in common are (Social Impact Investment Taskforce, 2014):

- *Impact-seeking purchasers*. These are the actors that sustain the investment in the organizations "impact driven". Such purchasers can include governments, private foundations, individual investors or religious institutions;
- *Impact-driven organisations*. These include all types of organisations which have a long-term social or environmental mission. So they can be seen as the way through it is possible to achieve the impact changes ;
- *Forms of finance*. They have different nature to respond to the different requirements of investments. Form of finance are secured loans, charity bonds, equity and more ;
- *Channels of impact capital* – to connect investors to impact-driven organisations in situations where the sources of impact capital do not invest directly in impact-driven organisations. Some example are "social bank", crowfunding or community development finance institutions;
- *Sources of impact capital*. They are necessary to provide the investment flows needed. There are several forms to finance impact investing such as public investment, private investment from bank or institution.

Depending on the country base this entire ecosystem can varies according to the different policies and regulations. The OECD Policy Framework for social impact investing in this

sense helps governments in their effort to design and establish them. This organization works together with each government to build a domestic environmental capable of promote the grow of impact investment. Regulation and financial resources have been equally used to support the supply and the demand side. They are related to competition, trade, taxation, corporate governance or infrastructure. In particular the most active policy maker are the EU, UK, USA, Malaysia and Australia (OECD, 2019).

Despite these geographical legal differences for each impact funds it is possible to carry out a deeper study concerning its main characteristics as mission, investment aims, strategy, governance architecture and capital structure.

Mission and investment aims are the drivers of impact investment, they are basically the main reasons that leads an investor to choose one investment rather than another. Not all investments have the same aim and on the base of this distinction they can be (U. Grabenwarte et, 2011):

- *Investment with target social and environmental themes*. So the aims of these are focused on social inclusion, education, health or environmental problems;
- *Investment with target social or environmental outcomes*. The goals in this case are for example the reduction of a certain percentage of social poverty; improvement of quality of life of target beneficiaries, reduction of level of unemployment;
- *Investment with a return target*. They are those with a reach of absolute return.

To achieve the goals several instruments for SII are used. The most frequent are private equity, private debt and real assets. The private equity is the most commonly used and with this it is possible to achieve high rate returns. Private debt is the largest asset class in impact investing in terms of AUM and they can be taken the form of loans and tradable securities. Due to the several elements that characterized an impact investing fund it is not possible to have a unique investment strategy. There are several variables that influence the strategy decision making (Chiappini, 2017):

- *Target countries* i.e if the country chosen to create an impact is a developed or emerging countries. Obviously depending on the GDP of a country the mission/aim changes;
- *Social target area*. If investment has social impact aim the area in which it acts can be education, unemployment, health sector;

- *Environmental target.* In the opposite case if the impact investing tries to achieve an environmental impact the area in which it acts are for example that around pollution and deforestation problems ;
- *Target beneficiaries* for example at-risk population;
- *Target invest*ees. Each investment should have external certification of social impact or have fixed specific legal clauses that help to maintain the social mission intent;
- *Investment mechanism.* The investment can be done directly or through the help of an intermediate;
- *Good or services offered.* The mission/aim can be to provide a good or a service
- *Asset class.* As equity or social bond;
- *Investment diversification.* This means for example the size of investment and his maximum exposition;
- *Maturity;*
- *Exit strategy;*
- *Return expectations;*
- *Risk;*
- *Social or environmental performance;*
- *Investment process. Bottom-up or top-down.*

So several strategies are used to try to fit better with each different typology of investment. Strategy has a fundamental role because a good strategy also leads probably a good result in the achievement of goals and sometimes this requires also the need of mixing more than one strategy.

After having listed all the elements that characterize an impact investment it is possible to individuate the three processes that define the cycle of an investment strategy: preparation, building and redefinition (Rockefeller Philanthropy Advisors,2019) :
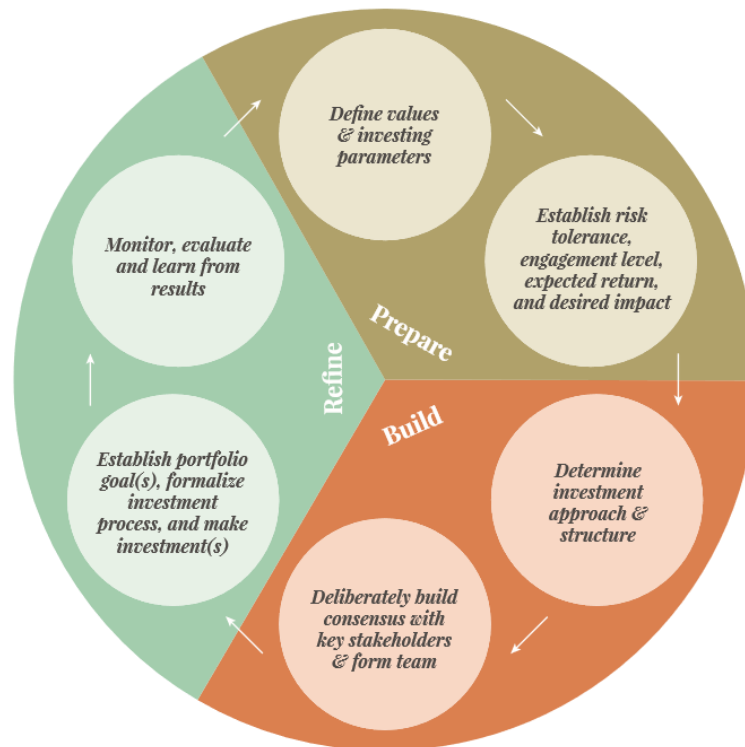
Figure 1.1: Development of an impact investment strategy in three stages: Prepare, Build, Refine

In the first step it is created a draft of the strategy responding to five questions: why, what, how, when and who. In the "why" step first of all are defined the scope of impact, the market-based approach and the investment performance.

The second question is about what kind of change you want to create through your impact investment. The answers can vary from a big challenge like the reduction of poverty to a specific challenge like delivering innovative educational technology.

In the "how" section it is defined how to measure the impact challenges. This phase is very important for three reasons: accountability, decision making and proof of concept point of view.

Moreover in this phase it is expressed which is the financial return desired and which is the level of risk that you are willing to incur.

Due to the double aim of impact investing , in the fourth question "when" it is taken in consideration both the time horizon required for impact challenge and the time horizon required for the financial return. The last question concerns the actors that are involved in the process. So in this point are decided who are the members inside the project and which partner is part of it.

In the building step, that is the third step, there is the real construction of the investment structure. So it is decided the size of the investment and as a consequence its relative risk. In

general larger investment leads to higher risk. In addition in this step there is the formalization of team members, stakeholders and partnership trying to building consensus. Also the choice of right advisors is a part of this step.

In the last step, namely refinishing process, there are the formalization of the structure, the formalization of the process and so the investment policy statement.

After having a drawing of the entire process it is possible also to think how to advance the field overall. So an impact investing strategy is not a static strategy but it is always a continuous process that needs to be adjusted and refined frequently. It also has to face up to the new challenge and so to the new needs of nowadays. In order to perform the strategy better it is important to remain updated to the change and it can be useful to confront similar business with yours to have a better view of the scenery.

About the structure of investment funds it can take the form of both open or closed-end structure. This depends on the type of investment a fund focuses on. This typology of fund have a specific predetermined term around 10- 12 years even if it can be extended for more than one years. In this case the committed capital is locked-up for the established term so the investors can not reallocate investment capital. Closed-end fund often deliver negative returns in the initial years since the investment gains later when the assets are sold. The most advantage of the closed- end fund is the objectivity in the asset valuation. In fact a close-end fund's return on investment is calculated once each asset is sold, and thus that return is based on the market value of each asset.

On the other hand, if impact fund focuses on debt finance provision, an open-end perpetual structure would be most appropriate. This structure offers more liquidity to investors than closed-end economy. Investors have also flexibility as to when to enter and exit the fund. So if the return on investment doesn't not mirror the expectation of the investors the latters can be decide to withdraw the fund and invest their money in another investment. The long-term nature of open-end funds is a good match for investors with the same long term horizon. In fact, the steady income stream makes such funds particularly attractive to certain institutional investors. For example, pension funds find that the long-term nature of open-end funds often matches pension funds' obligations to make beneficiary payments while still providing them with the potential for capital appreciation. The general investment strategy of open-end funds is to maximize cash flow over the long term. This approach makes the open- end fund suitable for example for real estate and infrastructure asset (T. Clark et,2017).

Regarding the governance architecture (Figure 1.2) it involves in the structure of fund control and management. The governance architecture has to be accurate and transparent in such a way that investors can have a clear idea of the actors involved in the fund. Moreover it has the duty to avoid the conflict of interest in its choices and goes directly to the goals that wants to reach.

The majority of funds has at the centre of governance structure the Board of Directors, while the investment committee has the role to take those investment decisions that require more deliberations. For some impact fund there is also an Advisory Group which usually consists of senior decision-makers. Its role is to support strategic decision making by the Board and serve in an advisory capacity in the deliberation of critical issues.
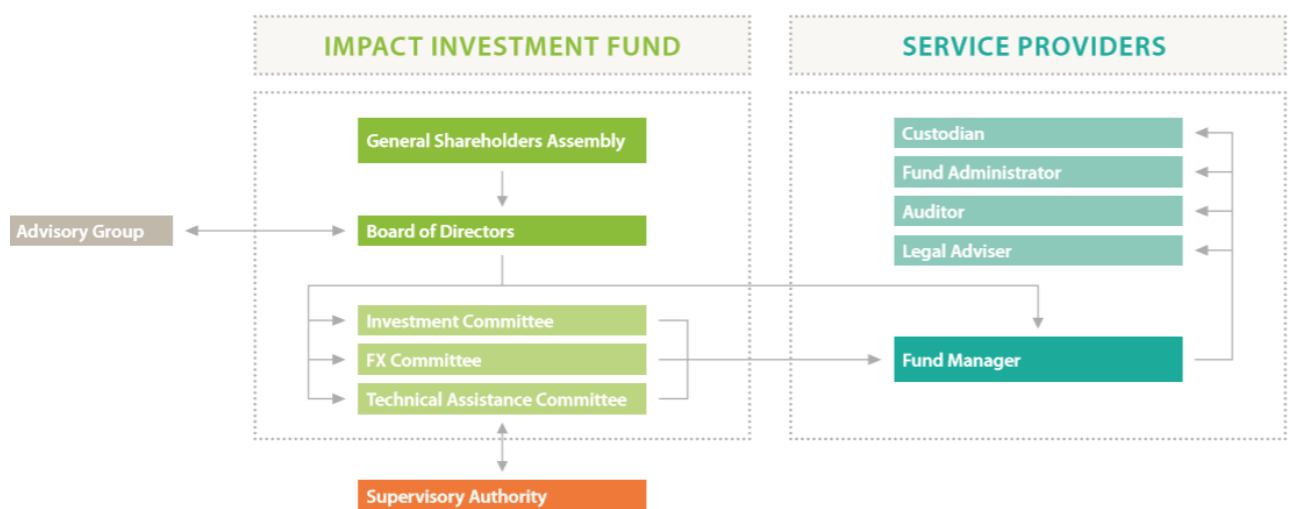
Figure 1.2 : Governance architecture of an impact investing fund

Also the capital structure plays an important role in this market. It includes all advanced private and public financial arrangement that serve to better act in the financial market.

Moreover it is important to distinguish the two possible types of capital structures that can distinguish an impact oriented fund (Chiappini, 2017): plain vanilla funds and structured funds.

The former are the fund in which any owner of share has the same rights of other owners in terms of participation to losses and incomes. This is the more basic capital structure that an impact fund can have. The second one, called also *layered funds,* are the find in which asset owners buy shares with different risk/returns/impact profiles and exit requirements. This type of capital structure is particularly useful in impact investing because it can permit to attract the attention of public and private investors. Thus, public investors or investors with high impact inclination (i.e., foundations, development agencies) can own high risk shares, while private investors need to balance social impact and financial return. Thus, they can

generally buy are less risky shares than shares owned by public investors. Specifically, the fund capital is divided in tranches with different degrees of risk and seniority, similarly to the securitization mechanism. In order: notes, senior, mezzanine, and junior tranches.

After having given a general overview and definition of impact oriented fund we can deeper explicate how an impact oriented fund works (Figure 1.3).

An impact oriented fund acts as a collective investor who finances delivery organizations directly or thought an intermediary, in order to achieve a specific social intent. Delivery organizations provide services or goods to target beneficiaries. The investment is realized with a specific social or environmental purpose that determines the social area of the investment like educational or health area. The last step of this process is the measurement and then the reportage of the social impact realized by the delivery organization.

There are two ways to promote an impact-oriented fund: the bottom-up initiative and the top-down initiative. The first one involves the impact-oriented funds that come from the bottom. Hence, in this situation, the institutions provide to address the specific social needs, identifying the need to create a financial vehicle to combine funds and investment money in environmental and social projects. The second one, instead, promoted by fund manager, has the aim to define the investment strategy and fund goals aligning it with the increasing demand of the investments generation of financial returns.
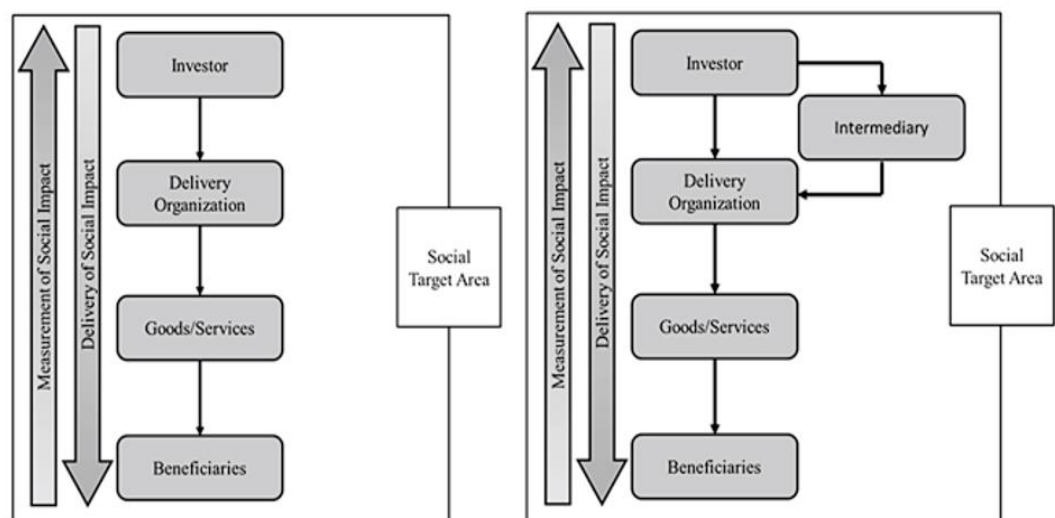
Figure 1.3: Scheme of how an impact investing fund works

So in nutshell all impact are driven by four imperatives vital to deliver sustainable development results: financing imperative, innovation imperative, data imperative and policy imperative (OECD, 2019).

The financing imperatives are focused on ensuring that the financing is going where it is needed most and that no one is left behind. In fact it often happens that the areas helped are always the same despite shifts the improvements towards the least developed ones. So it must serve most that population at risk or that living in underserved or developing areas.

The financing imperative serves to engage local investor to build sustainable SII financing market. It is important that not only the international investors but above all the local investors are involved in this scenario. In fact the latters can better facilitate the development of the project trying for example to search intermediaries.

The innovation imperatives focus on three points. The first is to catalyse innovation and experimentation in addressing social, environmental and economic challenges. The second is to develop an ecosystem that promotes innovation. The last is the recognition of the role of the public sector in scaling pilots that are working.

Also the policy imperatives are based on three pillars. The first is around the requirement of ex post evaluation of the social and environmental results. So policy instruments are required to make the goals measurable and to improve the project. The second ensures that impact represents a substantive commitment. So it tries to avoid that the investing uses the term impact only as a label. The third is to leverage development co operations a vector for policy transfer.

The least imperative is the data imperative. It aims to facilitate transparent, standardization and the sharing of impact data. This helps the growing of trust in the impact investment market above all in government, finance institutions and private sector investors. It also wants to ensure funding for data infrastructure and develop an approaches for assessing impact. This permits that the impact investing are comparable between them.

1.4 Classification

Due to the several definitions there is not a unique classification of impact investing. From a theoretical point Impact-oriented funds can be classified into three main groups (Chiappini, 2017): commercial impact-oriented funds, non- commercial impact-oriented funds and quasi commercial impact- oriented funds.

The first are used to combine the financial and social needs. In this case the risk and return are equally shared through investors so this typology is typically characterized by a plain vanilla capital structure. In this case all investors have the same rights and duties and they have also access to the information about the net asset value (NAV). Due to its features commercial impact-oriented fund are limited in the market. More ordinary are the non-commercial impact- oriented fund. They are promoted by institutions which give a huge importance and priority at the social impact instead of the financial return. In this case this category is beloved by philanthropic organizations, foundations or government and different from the previous typology the NAV isn't shared externally. The last categories, namely quasi-commercial impact-oriented funds, are characterized by the first-loss capital. Providers of this category has been endowments, foundations, and government organizations looking to catalyze a positive social outcome. These investors tend to have a deep focus on a specific target sector, and often a better understanding of the underlying risk associated with an investment than the generalist investors they wish to attract (M. Quigley, 2018).

It is also possible to classify the investment fund on the base of the different asset classes present in the market. Understanding the landscape of impact investing across asset classes is useful for the investors because thanks to this they can know all the risk and the opportunity of each typology.

As it is possible to see in Figure 1.4 there are seven main asset classes: cash equivalents, fixed income, infrastructure, fund, public equities, real estate and other real assets (WEF, 2019).

In the first category, cash equivalents, there are the investments of cash assets such as saving accounts and money market accounts into banks or financial institutions that make investments specifically into organizations that have intentionally the aim to achieve a social or environmental impact.

The second category, fixed income, are bonds with a maturity between less than 1 year to more than 30 years issued by government, corporations or financial institutions that are involved in impact project. For example in this class there are the green bond with a tradition bond structure with a US$ 1 billion three-year AAA rated green bond with an interest rate

set at three-year US treasury rates. This type of bond has as a principal aim the reduction of CO_2 emission in developing countries.

Infrastructure class is the class where investment are made to build facilities or infrastructure where are needed. So usually they are made in undeveloped countries to provide and guarantee the essential service to the BoP (population at the bottom of the economic pyramid).

Instead the investment funds classes include private equity and venture capital and they are made through third-party. Private equity is the most used asset classes together with private debt. More than 250 impact investing funds are registered in ImpactBase that is the largest database of impact fund.

Public Equities includes investments made into impact enterprises that are publicly traded. This class does not have yet several publically listed companies due also to the nascent market. But even if this typology has a small size in the future it can become an optimal choice and opportunity.

In the real estate category there are investments made into sustainably managed properties or properties currently in development in regeneration areas or among low-income population and in which social and environmental objectives are intentionally sought like green building or affordable house. The last category is represented by the other real asset. They are tangible assets whose value is derived from physical properties managed to produce long term value to society and to the environment.

All the asset classes listed are the asset classes more common in this market but there are other forms of these less used like commodities, direct private equity or hedge funds. *For example* commodities are investments made into basic resources that are used in the production of other goods and services. Instead the direct private equity are common asset class for impact investment funds to target, but the deal sizes are usually too small for most of the mainstream. Regarding hedge funds these are funds involved in complex investment strategies of publically traded companies; given the limited number of public listings of impact enterprises, there are currently limited opportunities for hedge funds in impact investing (WEF,2019).

Figure 1.1: The different asset classes of impact investing

To help the classification of this fund two main methods also come to the rescue: correspondence analysis and cluster analysis. They are not properly methodologies for classifying but rather for clustering the funds. These methods permit to create clusters of impact-oriented funds that show similar characteristics. These are largely used by experts for doing statistical and analysis researches.

The first method, that is correspondence analysis, is a multivariate statistical technique that permits to identify dimensions in which qualitative variables can be reduced. Thus, dimensions simplify the number of original variables by removing the abundance and the overlap between variables. Through this technique, variables explaining less of the phenomena in question are eliminated in favor of a combination of dimension that better and synthetically explains the phenomena.

The second method, that is Cluster analysis, is based on statistics models too and is often introduced as the family of techniques aiming to describe and represent the structure of the pairwise dissimilarities amongst funds (A. Ciampi, 2015). It is applied in many research fields: biology, psychology, geography, economy, and also investment funds classification. Cluster analysis classifies data into homogenous groups (cluster) on the basis of similarities or dissimilarities. To cluster each fund is described through especially variable. Totally there are 14 variables and its own attribute. All variable can be seen in the following list (Chiappini, 2017):

- IY : inception years of the fund
- DOM : domicile of the fund
- GEO : Geographical area of investment
- IMPT : Impact theme
- AUM: Asset under management
- FBEN: Financial benchmark
- TINV: Target investors
- IMES: Impact measurement

17

- CURR: Currency
- MAT: Maturity
- MININ: Minimum investment
- ASC: Asset class
- FR: Financial return

Even if all these categories are fundamental after several researches emerge that the three main dimensions that explain 43% of the variance among the funds are: mission, geographical and size dimension. As result of these it is possible to find the four main clusters that can the entire overview of impact investing funds: neoclassical, futurist, hermetic and illuminate cluster (Chiappini, 2017).

In the neoclassic cluster there are the funds that have a mission more focused on the environment and the investment are made in developed countries and have a large size. This is the cluster with the higher number of funds.

Instead the futurist cluster labels funds with a social mission that invest in emerging countries and have a small size. The third cluster, that is hermetic cluster, has as features environmental mission in emerging countries and a small size.

In the last cluster, namely illuminate cluster, there are funds characterized by a highly social mission, an investment in developed countries and small size.

1.5 Risks and opportunity

Risk is a central point in any investment analysis and so also in the impact investing market. Obviously the investor tries to avoid as much as possible the risk about the investment and to reach the maximum rate of return possible. To do this investor has to understand all risks that can cause more. It emerged that the most risks that an investor faces in making impact investments are five (J.P Morgan,2011): illiquidity or long tenors of investments, transaction cost risk, impact risk, capital risk and unquantifiable risk.

For example the illiquidity or exit risk is the risk of not being able to sell their shares and so to disinvest due to the high illiquidity of the sector and of the private equity.

Instead the transaction cost risk regards the cost and the possible time waste spent in searching, drawing up and enforcing the contract. So it concerns all the cost of bargaining policing, enforcement, contracting and allowing for contingencies incurred during non-profitability activities.

The impact risk refers to the possibility that not investment generate a positive impact. This risk can be due not only to internal investment factors but also to external factor that can be forecasted.

The fourth possible risk, namely capital risk, is the risk to lose capital and this varies depending on the total amount invested. The unquantifiable risks are the most dangerous risk due to their unpredictability. These can be refer to nature catastrophes that interfere the project (Barby, 2014).

Other important types of risks to point out are the country and currency risk. The first refers to the economic and political stability in which the investment is made. Obviously the risk increases with the rising of the uncertainty that does not allow to have a stable environment. Related to this there is the currency risk that refers to the money used in the country and it becomes a serious risk above all in the countries where the variation of currency value is high.

A particular attention has also the business model execution and management risk. This is the investors fear that the structure and so the strategy of the investment can change. Moreover the best combination of social and financial risk and return is evaluated in order to understand the level of financial and social risk that is connected with the investment in the impact oriented-funds.

Jointly to these risks there are also the more general risk that affect the traditional market as credit risk, market risk, interest rate risk and operational risk.

Another real problem is that there are not clear boundaries and a precise regulation due to the novelty of this topic and this cause sometimes the abuse of label impact fund from fund managers and advisors. The risk that arises from this situation is the reputational risk. Reputational risk is a risk caused by unethical operations or scandals involving actors actively participating in funds.

In support of this, government's promotion and encouragement play an important role. This promotion not only has a positive benefit for the impact fund industry but also for the government itself. The potential benefit includes the provision of an opportunity to more effectively target limited public resources and the stimulation of creativity and innovation in the market focused on addressing social issue.

Jointly to these one there are the opportunity of leverage private capital for a public purpose in appropriate policy areas and the growth of the pool of capital available to finance creation

of social as well as economic value, including by addressing unmet needs and creating new public goods.

Thus, the stimulation of private investments towards uncovered social areas should be part of public policies (and actions). Partnership between public authorities and private investors can direct capital to opportune social needs.

Also the current assessment of risk and return of impact oriented fund has leaks. An accurate assessment of risks linked to investing in impact-funds is needed. This allows investors to evaluate differences between risks (and returns) of impact-funds and of traditional funds.

To solve all these problems a growing number of universities and research centres are paying attention to this topic despite the limited amount of public information.

For all the reasons listed even if this market is growing it is not possible to consider an impact fund a safe investment.

A possible solution to avoid or at least reduce the risks is a sectorial or geographical diversification. In fact investing in different asset classes leads to have a portfolio of different level of risk. This can be a solution to face up to the variations of the financial market. Also the geographical diversification can be an optimal choice to make your portfolio more stable. In fact the problem and so its relatives risk varies among the different countries.

Clark et al. (2013) identify four main features capable to overcome these risks and so to drive the success of investment funds:

- *Operate with the financial and regulatory support of governments;*

- *Managed by people with financial and non-financial skills (as non-profit or development finance skills);*

- *Provide the same priority for social and financial objectives;*

- *Understand the role of aligning fund investors' objective not only to financial aim, but also to social strategies.*

On the other hand impact investment does not consist only in risks but also in opportunities. In fact through an impact fund it is possible to have a clear overview of the world evaluating for example the population growth and aging. So the main five opportunities can be explained in the followed list (UBS, 2016) : obtained a picture of different attributes as demography or potential area growth, identification of market

inefficiency, collection and evaluation of market data, creation a comparison of model and structure between impact investing, assess the number of investable opportunities and potential deal sizes.

1.6 Measurement performance as a tool to recognize the real nature of fund: criteria and metrics

Actually the real funds attitude to be impact funds is already unexplored. Due to the novelty of this sector many aspects are still undefined and blurred. So in many cases it is really hard to recognize the real nature of this typology of impact.

In support of this, the Organization for Economic Cooperation provides the minimum requirements for being really an impact investment funds. These requirement are emerged during a research that takes in consideration a sample of 156 impact funds.

The six categories found that represent also the six eligibility conditions are (Chiappini, 2017):

- *Social target area*: The investment should be realized in one or more social target areas listed by the OECD (aging, disability, children and families, public order and safety, health, unemployment, affordable housing, education and training) or in other social areas only if the investment is realized in developing countries

- *Beneficiaries*: Beneficiaries should be 'at-risk population.' This may result from a combination of socio-demographical risks (not just income and wealth factors) that can determine costly social exclusion if not managed or supported properly. So in this sense poverty does not represent a sufficient condition. The status of "at risk population" should generate and result in some costs for social exclusion if not managed accordingly.

- *Delivery Organizations:* All the funds should have an external certification and fix clauses in order to prevent social mission drift. So each organization should establish within the organizational structure the duty of social impact accountability.

- *Goods and Services*: the goods/services provided by organizations have to be clearly mentioned by the funds.

- *Measurement***:** Not all the funds use tool to evaluate the social impact because there is not a clear measurement tool. That said 81.4% of funds declare the use of a measurement tool.

- *Investor Intent:* it is one of the most important condition. Understanding and clarifying which is the intent is one of the first thing to recognize if a fund is impact or not.
- *Return Expectation:* According to the OECD social impact investments definition, funds should provide return expectation that ranges from the payback of capital to market rate return

In particular the social funds are the funds that more follow the OECD requirement. They meet up to five OECD requirements instead of three as the environmental funds so we can say that this type of fund is more complete and near to the definition of social impact find than other.

Among these six conditions maybe the most important condition to understand the real nature of an impact investing is that about the measurement. This is also the fundamental requisite of an impact investing that gives the more evidence of the fund's work.

Regarding this topic it was open a real discussion during the years and now the debate is still opened. The controversy is about the best methodology to use because there is not a standard measurement yet. The evaluation is so important for two reasons. First of all on the point of view of investors this is important for tracking the impact challenges to give credibility to the investment. If investors see improvements they probably continue to invest in the project on the contrary they leave. If the fund is credible it can be also supported by the government or by other associations. This is at the base to create a good network and to permit that this market continues to grow. Evaluating the progress in terms of value creation permits also to consolidate the purpose of investment. If the mission is achieved all components of the project can be satisfied.

The second reason is that with a standard measurement it is possible to compare all the investments. So this can facilitate the recognition of "true" investments from the investments that only use the label of impact to make profit. This is also important to protect the image of impact investing.

The real problem is that the value creation in impact investing is subjective, malleable and variable (Watson and Whitley, 2016) so it is difficult to find a right way. Now the tools use to measure this specific category of investment are often the same used for the normal investment so this can bring some problems and mistakes.

According to Watson and Whitley (2016) there are four methods possible: cost benefit analysis, social accounting, basic efficiency resource analysis and social return investment

(SROI) and a method that mixes the Social Impact Assessment (SIA) and the cost-benefit analysis.

All these methods try to ensure comparability between different activities or entities. To do this for example the Social Return On Investment (SROI) transforms the social value created in monetary term and compares this with the amount of money used for input. While a traditional cost benefit analysis is used to compare different investments or projects, SROI is used more to evaluate the general progress of certain developments, showing both the financial and social impact that an organization can achieve. SROI is useful to corporations because it can improve program management through better planning and evaluation. It can also increase the corporation's understanding of its effect on the community and allow better communication regarding the value of the corporation's work. The problem of this method is that it is so difficult to estimate the real value of both input and output even if several methodologies have been developed. An example is the Analytical Hierarchy Process (AHP) that converts qualitative information into quantitative values. To overcome the problem of assigning a dollar value to the social impact Kroeger and Weber(2014) suggest to compare the result of impact with the subjective satisfaction but also this system leads problem for the non- objectivity. Instead Viviani and Maurel (2019) propose a new model based on the comparison of social organization and for-profit companies with similar activities**.**

In support of this, in 2009 GIIN gave two specific measurements of performance for impact investing: impact Reporting and Investment Standards (IRIS) and the Global Impact Investing Rating System (GIIRS).

Their aim is not only to track the impact but also to permit a comparison between the investments giving standardization rules. IRIS is focused on financial and operational measures and consists in a collection of a measurement standard. It covers more than 500 measures, both quantitative and qualitative and supports transparency, credibility and accountability. It is easy to compare to any organization's exiting metrics and is organized in six categories (GIIN, 2018):

- *Organization description*. In this category are reported all information about the mission, business model and the geographical location of the organization;
- *Product description*. This includes the description of service and/or product provided by the organization and also the description of the target client base;
- *Financial performance*. In this section are reported the financial performance metrics that are consistent with both Generally Accepted Accounting Principles (GAAP) and the international Financial Reporting Standards(IFRS);

- *Operational Impact including organization's policies, employees and environmental performance;*
- *Product impact*, including descriptions and measures of the benefits of an organization's products services
- *Glossary of definition* for common terms that are referenced in IRIS

It is a kind of registry that permits to compare several organizations at geographical, sector and asset classes level. So visitors can search for users by type, sector and region. It can be also useful as a guide to understand which metrics better fit each impact investing. The investors using IRIS may choose to track whichever IRIS metrics are most relevant to their social, environmental and financial goals. In the library of IRIS there is also an IRIS resources section which includes several impact reports, interviews about why organizations decided to use IRIS and IRIS use case. So this means that investors approaching IRIS for the first time may be helped by referencing real-life example of IRIS use from other investors in the field. For this reason more than five thousand organisations in more than 23 countries are using IRIS to evaluate, communicate and manage their social and environmental performance (International Trade Centre, 2011). In addition, it is very easy to use this metrics because the access to IRIS is free and it is only necessary a registration without the need of certification if the organization decides to follow the metrics.

There are three steps to follow to adopt IRIS metrics. Firstly it is necessary to identify the impact Area so to identify which social and environmental aim the organization wants to achieve. The second step consists in the determinations of which IRIS indicators are applicable. So for each impact area identified in the first step it is necessary to browse the IRIS standards and after that to identify the applicable metrics. It is necessary to start with the cross sector indicator and then to   look at the specific sector indicator for those sectors which are relevant for the organization. The last step establishes report protocols determining how the required data will be collected and how frequently it will be reported. So this leads also to adapt or establish a business process to collect the data (International Trade Centre and IRIS, 2011).

The problem of IRIS metrics is that they do not measure an outcome result and for many critics these metrics do not help comparisons between different projects. To solve this problem GIIN also developed another system: the Investing Rating System (GIIRS). GIIRS is a rating tool that rates the company and funds with a maximum of 5 stars. The number of stars is assigned to a company on the base on the number of point scores and the maximum possible score is 200 points. Before that an investment is rated it is necessary to catalogue it

on the base of the market in which the investment is (emerging market, frontier market or developed market), the size, the sector in which it operates (manufacturing, service or agricultural) and its business model. Taking into account all this information GIIRS generates one of the 40 alternative assessment questionnaires. All questionnaires contain 50-120 weighted questions based on IRIS metrics. The number and the weight of the questions depend on the information collected in the first step. After that all questions are grouped into four different impact areas (governance, worker, community, and environment). The total score is the weighted sum of the points that are assigned to respond to items in the questionnaires and the number of points granted for an answer depends on several assumptions (Kroeger e Weber, 2016).

IRIS ad GIIRS have emerged as leading global initiatives but need more time to refine their method and business models. As initiatives still in development they have not yet been universally adopted and a variety of other initiatives will likely continue to co- exist with them (E.Jackson et, 2012).

1.7 Market

The social impact investment market is growing rapidly both in terms of new investor members as well as in terms of commitments by those already operating in the market. The number of investors grows from less 50 in 1997 to over 1300 around the world in 2018(OECD, 2019). Moreover some studies establish that impact investing will constitute 5%-10% of portfolio in 10 years.

In the end of 2018 this industry was estimated around USD 502 billion with a CAGR (Compound Annual Growth Rate) of 17.86% from 2015 to 2020. This market includes foundations, organization, pension fund, development institution, bank and asset under management (AUM). Even if it is becoming an actual phenomenon there is not still a defined track of all the impact investing born. The GIIN was able to track more than 400 organizations all over the word but it is sure that it is not the correct number due also to the lack of a clear boundary. The forecasts about the growing of this market are positive even if it is necessary to make some changes and resolve some gaps as said before. At the base of this forecast growth there are also some psychological studies. These studies are about the connection between the motivation to help other and the decision making. Empathic and mood management feelings have different functions in determining donation decision and donation amount. These studies also affirm that the need to help the others is increasingly an actual topic due to all awareness movements and the focus of media (J. Wiley, 2010).

A fact is that governments cannot solve alone the world's most pressing problems and this must be the starting point.

Climate change, poverty, healthcare and education require an annual estimate expenditure of USD 2.3 trillion and so the help of private capital is also necessary. Investing in impact fund permits to be a part of social change and to make a difference for future generations.

Obviously there are not only psychological motivations that lead an investors to enter this market but there are also financial reasons. Investors make this choice not only to achieve market rate return but also to stabilize the portfolio and put capital to work. In fact some studies demonstrate that impact funds have lower volatility than non-impact funds, i.e the oscillations of the value of a fund during a certain period. Moreover it is a useful way to obtain more ROI than a simple donation or grants.

Another reason that leads to have positive expectations about this market is the growing trend of firms and organizations to offer this type of investment to meet client demand. So on the point of view of firms it is becoming also a necessity to stay competitive in the market (AlHusseini, 2017).

Thanks to GIIN it is also possible to map all the impact investment tracked all over the world. Several differences exist across countries and the size of each country market is due to above all the number of intermediaries that can help clients to invest in the impact market. For example in the developed economies with a more mature SII market there is a big variety of intermediary operators including accelerators and social investment wholesalers. On the contrary this is one of the main obstacles to the rise of impact market in undeveloped countries.

The main countries involved in this market are 15: Australia, Brazil, Canada, Finland, France, Germany, India, Israel, Italy, Japan, Mexico, Portugal, UK and USA. But there are over than 157 countries not already tracked due to the lack of sufficient information (OECD,2019).
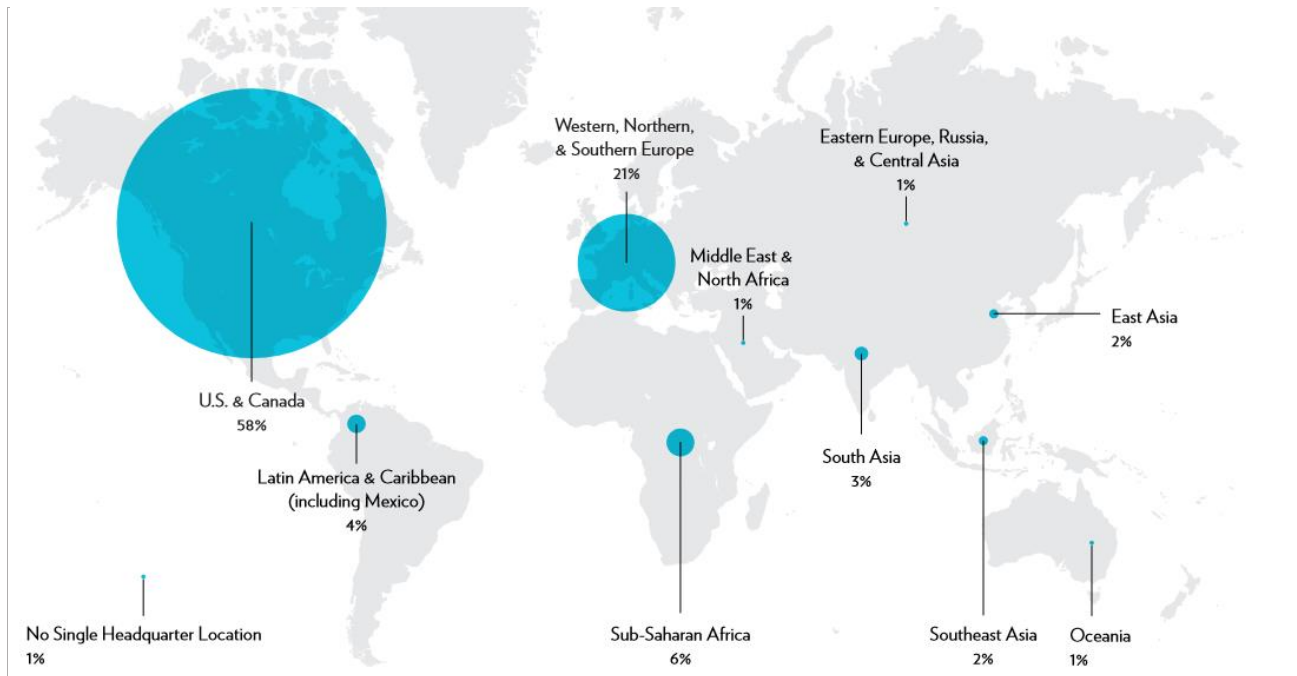
Figure 1.1: Distribution and size of impact investment

The U.S is the largest impact investing market in the world. It is expected for this country a size of more than USD 100 billion by the end of 2020. It represents alone the 38% of the market and with Canada they are able to achieve 58% of market share so more than the half of the market size. The second position is reached by Europe that has more than 21% of market size with around a CARG between 12-23%. All the other countries are not able to achieve more than 7% of market size and together they arrive at not more than 21%. But these countries are also the countries with the most optimistic level of CAGR in the future.

In particular the countries with the higher value are Argentina with 55, 6%, Brazil 51.1% and Mexico with 45, 0% (GIIN, 2011).

	Number	%	Notional (USD, mm)	%
Latin America	629	30%	639	15%
Sub-Saharan Africa	251	12%	297	7%
South & Southeast Asia	228	11%	240	6%
Eastern Europe, Russia & Central Asia	227	11%	317	8%
Emerging markets (as reported)	52	2%	276	7%
Middle East & North Africa	34	2%	25	1%
South Pacific	0	0%	0	0%
Emerging Markets (sum of above)	**1,421**	**67%**	**1,794**	**44%**
US & Canada	632	30%	2,122	51%
Western Europe	21	1%	47	1%
Australia & New Zealand	0	0%	0	0%
Developed Markets (sum of above)	**653**	**31%**	**2,169**	**53%**
Global (as reported)	**32**	**2%**	**159**	**4%**
Total	2,106	100%	4,122	100%

Table 1.1: Number, percentage and relative USD amount of impact investing in the emerging and developed countries

Moreover, it is also important to understand the size of the main different sectors such as microfinance, food and agriculture, housing or healthcare. For example housing, microfinance, rural livelihood, healthcare and education characterized the emergent economies like India while healthcare, parental care, clean technology, climate change infrastructure characterize more the developed economy of Europe (J.Morgan, 2011).

	Number	%	Notional (USD, mm)	%
Microfinance	742	34%	1,612	37%
Food & agriculture	339	15%	247	6%
Clean energy & tech	291	13%	281	6%
Cross-sector	286	13%	650	15%
Other	270	12%	436	10%
Housing	165	7%	906	21%
Healthcare	59	3%	89	2%
Education	44	2%	139	3%
Water & sanitation	17	1%	16	0%
Total	2,213	100%	4,377	100%

Table 1.2: Number, percentage and relative USD amount for each of nine sectors in which impact investment operate

The most developed sector is the microfinance sector that represents more than 34% of market size with a number of investments of 742. In the second position there is food and

agriculture sectors with less than 400 investments and in the third position there is clear energy and tech with a percentage of 13%.

The sectors that most require to be involved are healthcare, education and water that represent together less than   7% percent of the entire market.

In addition to this it is interesting also to understand the distribution of impact investors options (GIIN, 2018).
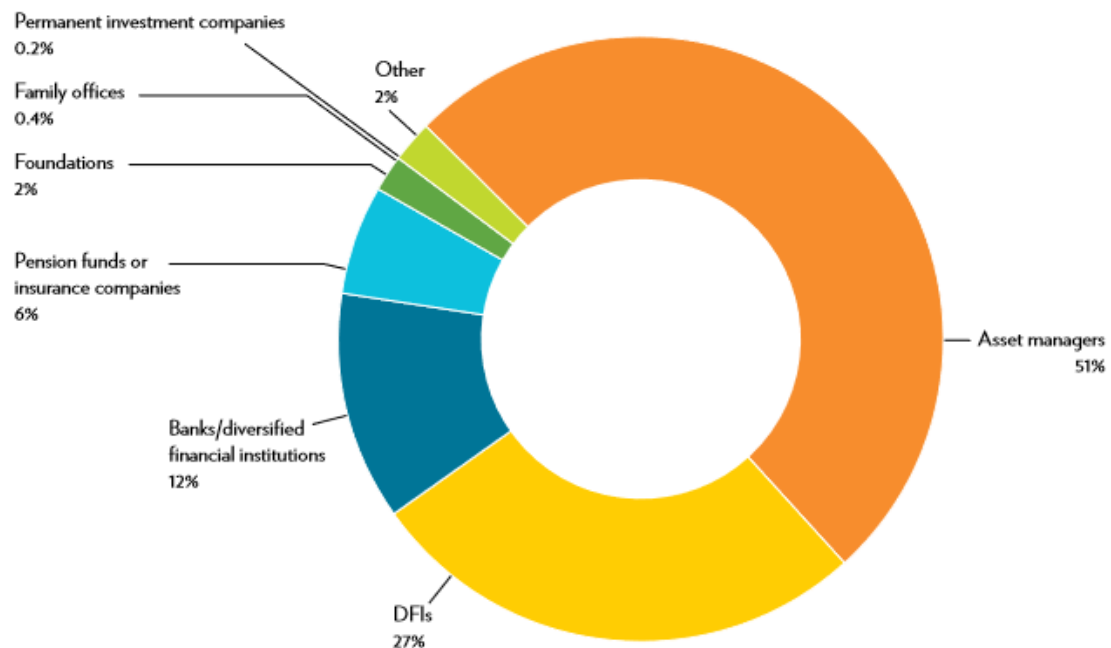
Figure 1.2: Distribution of impact investors' options

As it is possible to see the asset managers is the most used form in impact investing sector. It represents more than 51% of the entire market and this is due to the fact that these institutions provide client support to take investment decision. The goal is to grow a client's portfolio over time and mitigate the risk. So it is useful to address the client in what he really wants to achieve trying to help him in each phase of the investment. Under this type of investment it is possible to do a distinction between the main four instruments used: private debt, private equity, public debt, public equity.

Private debt represents 41% of the total asset management and their usual forms are loans, tradable securities like bonds. In particular green bond has becoming increasingly important in these last years even if they have not a specific definition and so this causes the existence of labelled and not labelled green bond. Instead private equity represents 18% of asset management market. Generally this class allows to achieve a higher degree of financial rate

return than private debt. In the third position there are the public equity (14%) followed by public debt (6%). The public equity even if it is safer than private equity is less utilized. The motivation has to be found in the method of payment return. In the private equity the investors are paid through distributions while in the second case with stock accumulation. DFIs (development finance institutions) are the second most used choice. They are specialised development banks that support private sector development in developing countries. Usually they are majority-owned by national governments and source their capital from national or international development funds. But there are other forms to invest in impact investing as pension funds and insurance companies, foundations, retail investors or family offices.

1.8 Next Steps for the Impact Investment Sector

Even if the market of impact investing is in continuous growing there are some points to change to face up better to the future. In fact if these leaks are not resolved they can affect in a negative way this new market. Only strong foundation can lead a strong success. The gaps and so the changes to be immediately implemented are essentially three (Monitor Institute, 2009): lack of efficient intermediation, lack of clear standard of financial performing and lack of enabling infrastructure.

Regard the lack of efficient intermediation. This market is characterized by the lack of sufficient and effective intermediation due to the investment industry structure. So there is the need to construct a better network between the parts involved as investment consulting, syndication facilities or independent third-part source. This gap leads also an unclear communication and information about this. A financial services provider in Europe reported this following sentence: "Trustees are extremely conservative and are more prepared to invest in a hedge fund they don't understand than to invest in a mission-driven fund they don't understand." (Monitor Institute, 2009). The solution to this problem can be solved with the new generation, more open minded. For Stephen DeBerry at Kapor Enterprises notes, relevant interest groups need to be developed further: "We need to form meaningful categories of interest so that existing and new impact investors can effectively find their relevant peers. Silicon Valley venture investors have done this organically and effectively. We should do the same."

The second important gap to resolve is the lack of clear standard of financial performing. As already said impact investing are defined as investments made with the intent to contribute to measurable positive social or environmental impact alongside a financial return. So a

fundamental point is the measurability of the goals achieved, information necessary to the investors to manage their portfolio. Even if in the last year several progress are made in tracking changes in social and environmental outcomes still a lot has to be done. In fact there is not a really defined metrics of financial investing performance. During the years several approaches and tools are used and this heterogeneity creates only confusion and not a perfect clarity. So it is necessity to establish rigorous and unique parameters of evaluation that can also help the comparison between the impact investment.

Instead the lack of enabling infrastructure emerges due to the novelty of this market. The problem of an emerging industry is the gap of models, theories, policies, regulatory, standards, and an established language to adopt. This leads a misunderstanding about risk and opportunity. Also the absence of a definite definition creates problems around the boundary of impact investing. All these elements contribute to create a grey area around this market. As a consequence not all the impact investing really are and also their relative financial performances are not sure. So to avoid the non-credibility of this market is necessary to keep some measures. The solution to these problems is the institution of metrics that can clarify better the boundaries of impact investing without any mistake.

Another problems that have to be changed are around the identity itself of this investing, unlocking more capital, placing and management better capital, strengthening demand for capital, improving the enabling environment and renewing and broadening industry leadership.

First of all it is necessary to give a clear definition of impact fund to build strong boundaries. So this means to create a proper identity and a sense of purpose. This permits to avoid the uncertainty about the nature of an impact investing and to make this market surer by alleviating barriers associated with the definition confusion. A strong identity also leads to encourage new actors into the space, lower transaction costs for current players and reduce the risk of impact washing. In addition with a clear definition it is possible to include all impact investing in a database and track them. The more data are collected the more information is possible. So this is a necessary step to transform a nascent market in a mature market.

Secondly, it is important to recognize the key role of government and how its effort is decisive. Including the participation of the government also the image of this market becomes more recognized. Government has the power to stimulate this market using its financial power to low cost capital and to mitigate the risk. It is demonstrated that the countries with the biggest market size of impact investing are the same countries where

government is involved very well. This because government is able to set regulation, tax, policy, accountability so to set rules that permit a clearer growth of this market. Generally the participation of the government leads also the grown of DFIs and in fact this is a phenomenon that characterize the development countries.

Together with the government also those who control capital must set incentive and requirements to access their capital that encourage positive social and environmental impact. So the asset owners have to align incentives with impact, launch campaign, update fundamental investment theory

Regard the unlocking of more capital, there are some recommendations useful for the future. It is important to strengthen this business to try to mitigate the risk and encourage a move from individual deals to multi-investment portfolios. The foundations also have a fundamental role in the growth for the future and they have to continue to innovate their business model to fit better with the challenge of the future. The sector has to continue to develop and test hybrid business model that have credible social impact.

Another step to ensure a better growth in the future it is the management of the capital. Starting with the rising of new intermediaries can help investors decision making until the creations of new options by matching investors risk/return with investee businesses. To stimulate the rising of intermediaries new platforms have emerged like ImpactBase but they are not enough.

The last important point is to anticipate the challenge and opportunities of building the market.

The market changes so fast that to remain it is necessary to anticipate and forecast the possible changes. A valid helper in this case is always the government. If impact investing market works together with government it may be able to anticipate many policy or opportunities that can permit to the impact investing market to get advantages (E. T Jackson, 2012).

CHAPTER 2

2. Statistical description overview

The most important part of any research project is the planning process. We could argue that this statement is as true for data analysis as for any of the other steps in the research process. Statistics could describe what it is (in this case it is named *descriptive statistics*) or it could usually determine the likelihood of a real difference present in the population, and in this case it is inferential. In general we know that a descriptive statistic is made with the aim to understand more information about funds.

2.1 What is statistics?

Statistics is a science that analyses the collective phenomena, namely phenomena that are composed of a huge number of elementary units. In order to have approximately an idea, various elements of collective phenomena could be the whole students of a university course.

Generally, the main targets of statistics could be description, generalization and forecast. It is the whole of methods, based on the calculus of probability, that permits on one side the correct planning of an experiment and on the other side the elaboration of the data that have been collected.

The purpose of any statistical analysis is therefore to simplify large amounts of data, and present the information in an interesting and easily understandable way.

Modern statistics could be differentiated in:

- **Descriptive statistics:** the aim of descriptive statistics is to *describe* a big quantity of data in an effective way using tables and graphs, and to synthetize the information in mathematics index to identify the fundamental characteristics of the sample;

- **Mathematic statistics:** it aims to use the calculation of the probabilities and shows the theoretical distributions for discrete and continuous measures.

- **Inferential statistics:** it deals with the deduction of the general laws by arranging a variable sample. It involves techniques for making inferences about the whole population on the basis of observations obtained from samples.

Basically it is the whole of methods that permits the knowledge of the conclusion that exceeds the empirical evidence.

In order to understand our analysis it is important to know the language of descriptive statistic. Consequently it could be important to take into account the level of measurement that this science used.

Levels of measurement are usually referred to the amount of information that is contained within the data elements and to some extent the degree of details present in them.

The data of any kind of research are measured at the categorical (nominal) ordinal, interval, or ratio (continuous) level. The term *nominal level (or categorical) data* refers to data that can only be put into groups.

With nominal level data no category is better than another, and the difference between categories cannot be determined.

In addition it is also important to point out the importance of *statistic population*, *statistic units* and *variables*.

The *statistic population* is the whole of all possible objects of statistical survey, *statistics unit* is any element of statistical population, while the *variables* are any characteristic of a single statistic unit which could be affected to changes in value.

2.2 Descriptive statistics

A descriptive statistics in the *count noun sense* is a summary statistic that summarizes or describes features of a collection of information, while descriptive statistics in the *mass noun sense* is the process of analyzing and using statistics.

Descriptive statistics is distinguished from inferential statistics (or inductive statistics) because the target of descriptive statistics is to summarize a sample, rather than use the data to learn about the population that the sample of data is thought to represent.

This means that descriptive statistics is frequently nonparametric statistics and that it is not developed on the basis of probability theory. It is important to point out that descriptive statistics is widely used, in fact even when a data analysis draws its main conclusions using inferential statistics, descriptive statistics is frequently used to show these conclusions.

If we want to understand better, we should know that, for instance, descriptive statistics is used in papers reporting on human subjects, or like our case, funds. In fact, in this case , a table is typically used in which it is included the overall sample size, sample sizes grouped in important subgroups, demographic or geographical characteristics such as the country, term, number of investments, committed capital, minimum investment required to invest , etc.

Descriptive statistics, in short, helps to understand and describe the features of a specific data set by giving short summaries about the sample and measures of the data. People use descriptive statistics to repurpose hard-to-understand quantitative insights across a large data set into bite-sized descriptions.

In addition, *descriptive statistics* could be interpreted like numbers that summarize the data with the purpose of describing what occurred in the sample. It also can be used to compare samples from one study with another. Moreover, descriptive statistics helps researchers detect sample characteristics that may influence their conclusions.

Frequency distributions are a valuable method for describing ordinal or nominal level data (discreet data) and moreover they are often the first analyses to be done on a data set and also they can help detect data entry errors. A frequency distribution consists of a description of the number of subjects selecting each possible option and could include the percentage of the sample that this number represents. Frequency distributions could be often univariate

(one variable only) or bivariate that include two variables or multivariate frequency distributions that describe more than two variables. A bivariate frequency distribution is often presented as a table with the name and values of one variable across the top and the name and values of the second variable down the left side.

In descriptive statistics, the *mode* is the value that most frequently occurs within the dataset. A mode is the primary measure of central tendency available for nominal level data can be used with all levels of measurement.

Another important measure to take into account in descriptive statistics is the *median*, the value that is in the exact middle of the sample. The median is the point at which half of the subjects lie above this value and half of the subjects lie below it. The median is better to measure rather than the mode because it is not influenced by an accidental grouping of values. Important is, also, the *mean* which is calculated by adding up the value for all subjects and dividing by the total number of subjects.

Nevertheless, all these measures do not inform the reader regarding the variability from one subject to the next distribution or about the variability of data across possible values. To solve partially this problem, there is one method that describes a collection of values. It is called *distribution*. A normal distribution is typically described as being bell shaped, with a middle that is exactly in the center of the distribution.

In descriptive statistics the use of diagram is most important. In fact using diagrams can often show the facts far more clearly and bring out many important points.
Usually, the most common diagrams that are used are **bar chart** and **histogram.**

The bar chart is strictly only used with qualitative data, where usually there is no scale on the horizontal axis and gaps are left between bars, while with quantitative discrete data a frequency diagram is commonly used (figure 2.1).
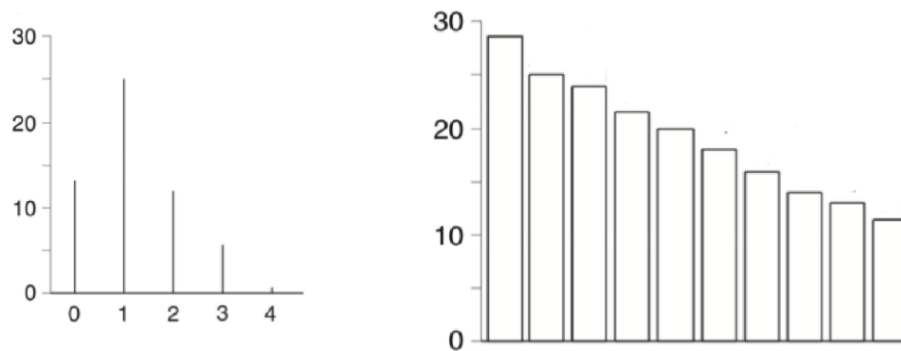
Figure 2-1: Quantitative bar chart (left) and Qualitative bar chart (right)

A **histogram** is, instead, used to describe a bar chart used with continuous data.

It is important to state that usually a horizontal axis is a proper numerical scale and that no gaps are drawn between bars.

After having spoken about this useful tool we can use it to analyze and so understand better the features of impact investing market. To do this we take into consideration the data provided by ImpactBase.

ImpactBase is a database that collects actually 425 funds and was born in 2009 in association with the Global Impact Investing Network (GIIN). It arises from the necessity to create a platforms and market infrastructure that could address inefficiencies in the impact investing market. In fact before that moment even if the number of impact investing was in continuous growing it was difficult to connect each fund and so investors together. To overcome this lack, this online search tool was conceived to connect members of the impact investing community with one another through a single platform that would permit more efficient networking and communication. So ImpactBase becomes a searchable and online database that provides information about the activity of investment, track record, social and environmental metrics, target return, and more. It has become a very useful tool for all the players involved in this market, not only for the individual investors but also for foundation, family office, private bankers and development finance institutions. Its access is free and to become a subscribed accredit investor an easy registration in this database is only requested. The members have access to all information while GIIN Members have been grated "Premium Access" that allows them to export and download search results.

So the key features of ImpactBase are three:

- *Global platform for investors;*
- *powerful search capability;*
- *fund managers.*

The first feature allows to explore impact investing opportunities and the market landscape. The second one permits to have a quality search across asset classes, impact themes, geographic targets, fundraising status, assets under management, and other parameters. The third permits the fund managers to gain visibility in the investing market.

It is important to underline that ImpactBase is useful for funds and products, but also for investors and advisors at the same time.

As for funds managers, ImpactBase is not only a powerful tool to increase the visibility of a fund in the impact investing funds, but it has more benefits that can be resumed in the following list (ImpactBase,2019):

- *Exposure to global impact investing community* of institutional and individual accredited investors
- *Reduced search costs*, which allow fund managers to more efficient gain exposure to those who may be interested in their impact investment strategy
- *Easy online interface* for uploading and updating information about your fund
- *Appropriate directory* access where only accredited investors may search through the full platform

Also for investors and advisors there are several benefits in the using of this database. Not only it is a tool to have access to financial and non financial information but it also provides:

- *Comprehensive dataset of impact* investment funds and products across asset classes, geographies, and social and environmental impact goals;
- *Database management* and profile curation provided by the Global Impact Investing Network (GIIN)
- *Comprehensive fund and product profiles.* This permits to have a clear view of the fund thanks to the description of key attributes, such as investment asset classes, geographic focus, fund impact objectives, investment style/stage, fundraising status, committed capital, minimum investment size, and more
- *Powerful search functionality*

- *Reduced search costs,* freeing up time for investment teams to focus on due diligence, critical investment judgments, and portfolio management
- *Enables advisors.* It permits to meet the growing client demand for impact investments
- *Ability to bookmark*/save funds to track fund updates

The major funds listed on ImpactBase have been intercepted in recent years. Nearly 70% were born after 2009 and only 13% of fund arisen before 2006. More than 50% of funds arisen before 2016 are fixed income, while the ones born after 2016 only 16% have been fixed income. So ImpactBase is also useful to track the trend across the several attributes during the years.

ImpactBase lists funds and products across several asset classes, such as: Venture Capital/Private Equity, Fixed Income, and Real Assets. To list on ImpactBase it is required to declare the fund's impact objectives, impact measurement and impact targets.

 Each fund is catalogued in the database in 4 sections: overview, financial, impact and contact information. Overview section includes important profile information including fund managers, track record, fundraising status, current investors, and more. Financial section includes detailed information of the fund's strategy, target return, asset class investment and more. Impact section provides more valuable information on a fund's impact strategy such as impact goals and measurement of social and environmental metrics (ImpactBase Snapshot, 2015).

In the following table an example is shown:

Overview

FUND MANAGER/FIRM NAME	AA Invest
FUND/PRODUCT NAME	AA Invest IV - Agribusiness Accelerator
FUND/FUND MANAGER TRACK RECORD	Fund has < 3 years of track record
FUND DESCRIPTION	AA Invest IV is the fourth fund for AA Invest, a follow-up to the successful $100M AA Invest III. With this new fund, AA Invest has expanded beyond Kenya to include opportunities in Tanzania.
	The fund will keep its traditional core agribusiness investment target, with a focus on opportunities that are inclusive of smallholder farmers. AA Invest IV invests with a view to realize its investment in 7-10 years. The fund will seek risk-adjusted returns while promoting rural economic growth in key Sub-Saharan African countries.
COUNTRY WHERE FUND IS DOMICILED	Tanzania
INCEPTION YEAR	2006
VINTAGE YEAR	2007
FUND STATUS	Open – post first close
TARGET GEOGRAPHIES	Africa > East Africa > Kenya, Tanzania
INVESTMENT TERM	10 years
FUND INVESTMENTS TO DATE	5
FUND EXITS TO DATE	1
LIMITED PARTNERS	European Emerging Market Bank, South African Pension Fund
LIMITED PARTNER TYPES	DFIs, Family Office/HNWIs, Foundations, Pension Funds

Financial

FINANCIAL DESCRIPTION	With few specialist risk capital providers in the agriculture sector in sub-Saharan Africa. AA Invest IV is well positioned to access deal flow opportunities and to co-invest with the limited number of other investors in the sector. The fund targets a return of 17% per annum. AA Invest IV targets businesses with (i) strong cash flows and attractive growth prospects, (ii) potential for vertical integration, and (iii) attractive entry valuations and exit opportunities for the fund. The fund's core investment focus will be on later stage investments and expansion of existing ventures. The fund will have limited exposure to primary production, focusing instead on value-added components of the agriculture value chain.
ASSET CLASS	Private Equity > Early Stage, Growth Stage
CURRENCY FOR FUND FIGURES	USD
TOTAL FIRM AUM (INCLUDING OTHER FUNDS)	$220,000,000
TARGET FUND AUM	$80,000,000
COMMITTED CAPITAL FOR FUND	$40,000,000
MINIMUM LP INVESTMENT REQUIRED	$2,000,000
TARGET RETURN CATEGORY	Risk-adjusted market-rate of return
TARGET IRR	17%
CURRENCY OF FUND INVESTMENTS	KES
INVESTMENT SIZE	Min: KES 40,000,000 ; Max: KES 400,000,000 ; Average: KES 100,000,000
CO-INVESTMENT POLICY	With LPs and non-LPs, LPs have priority
MANAGEMENT FEE	2.5%
CARRIED INTEREST	20%
HURDLE RATE	8%

Impact

FINANCIAL DESCRIPTION	Investment into the agribusiness sector has clear potential to contribute to poverty reduction and overall economic growth in Kenya and Tanzania. AA Invest IV targets innovative market-based solutions, offering high-impact opportunities that employ smallholder farmers in sub-Saharan Africa while responsibly cultivating land according to biodiversity principles. Performance improvements in primary production to value-added components of the agriculture value chain (e.g., processing, distribution) improve the food quality, and hence the levels of health and well-being of the poor. AA Invest IV will only make investments meeting the following criteria: (i) a demonstrably positive impact on rural socio-economic development, with a particular emphasis on smallholder farmers (ii) utilization of local resources, and (iii) environmentally responsible with strong environmental resource managements system. AA Invest IV tracks more than 15 non-financial IRIS indicators and has committed to being a Pioneer GIIRS-rated fund.
IMPACT THEMES	Access to Basic Services > Agriculture & Food Environmental Markets and Sustainable Real Assets > Sustainable Land Use (Agriculture & Forestry)
FLAGS	Rural
SOCIAL & ENVIRONMENTAL METRICS	Fund tracks IRIS compatible metrics
SOCIAL & ENVIRONMENTAL RATING	GIIRS Pioneer Fund

CONTACT

Jim Smith, Fund Manager | Jimsmith@aafund.com | 222-222-2222

Figure 2-2: An example of how impact investing is listed in the ImpactBase

Moreover, ImpactBase recently has made some innovation in the database such as the inclusion of a new contributor dashboard. This allows fund managers to easily track views of their profiles by investor subscribers, as well as compare those numbers to site averages. The dashboard also provides detailed, real-time data on ImpactBase subscribers with charts segmenting the total number of subscribers by type of investor and geographic location.

Going back to our research we have taken into consideration 233 funds of the total funds listed in this database. To better assess and understand the main characteristics of the social funds, it is interesting to point out the main information regarding them. This may be done in order to understand why, how and where investors decide to invest a medium-high financial capital in social funds.

We believe that the use of descriptive statistics, at this point, could help us to understand the main features that some funds could show. In line with this, we have made some important choices in the selection of several indicators that could explain and highlight some characteristics.

We have made this using the most appropriate tools and contents that could show the main features that funds could have. So we have conducted a descriptive statistics choosing these eleven main characteristics that we consider the most important:

1. Number of investment
2. Limited partner type
3. Impact theme
4. Social and environmental metrics
5. Target IRR
6. Asset classes
7. Target fund product asset under management
8. Committed capital
9. Maximum and minimum investment
10. Maturity
11. Geography

1)Number of investment

 A starting point could be the assessment of the investment. Looking at graph 3.3, we can observe the number of investments that are conducted in the social impact field for each fund that we have analyzed. We have put in the X axis 10 kinds of ranges of the number of investment from 0-20 to 180-200, according to our dates. As we can notice from the graph, the major number of investments that have been done are included between the ranges 0-20. As a consequence, this leads to the result that for each fund assessed we could notice a number of investments that are below 20; this could make sense because , probably, potential investors of each fund do not want to invest a lot of their money in this kind of business that have already several lacks.
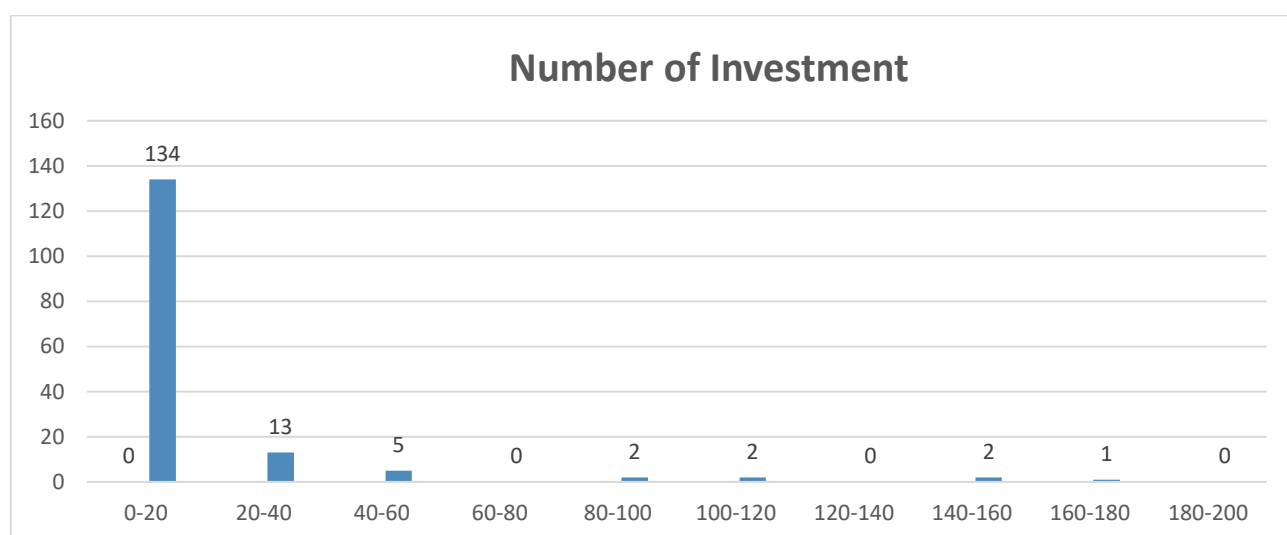

Figure 2-3: Histogram of number of investment

2) Limited partner type

The second characteristic that we decide to analyze is the limited partner type.

As said in the first chapter, there are different types of investors' options and so it is very usual to find a heterogeneous distribution of partners inside an investment. The graph (FIGURE) reflects perfectly what the figure 1.8 in the first chapter showed. This is due to the fact that ImpactBase allows to have a good view of the entire impact investing market.

Analysing the histogram below the major class of limited partner is the one of developmental financial institution together with other types of investors. It represents more or less 50% of the investments taken into consideration with a size of 113 investments of which 6 are pure DFIs.

Developmental financial institutions (DFIs) in emerging economies play an important role because they provide new technology platforms to support investments in new ventures, established firms and technology institutions (TIs). Their financing decisions are guided by national and global priorities such as the reduction of CO_2 emission. Due to their structure DFIs are well placed to consciously channel finance into designated priority impact areas.

The primary goal of DFIs is the economic development of emerging economies. Their birth can be attributed to government mandates or directives that sought to promote industrial development in core industries (Deutsche Bank Research, 2007). Though the government is a dominant stockholder, DFIs tend to behave as large institutional investors with independent managerial control (Bhatt, 1993). Given the low investment capacity and a lack of financing options in many emerging economies (Khanna and Palepu, 1997), DFI finance can encourage R&D in areas where both firms and TIs, playing complementary roles (Rosenberg and Nelson, 1994), find it difficult to take the investment risk (Dahlman et al., 1987). For example to give a general view there are nearly 75 national-level DFIs in the Asia-Pacific region (ADFIAP, 2000), 70 in Africa and about 90 in the Latin-America region (IMF, 2001), among others.

About family office and Endowment/Foundation they have more or less the same concentration of market size. The first represents around 49 investments, while the second nearly 41 so respectively 21% and 18% of the total. Family office has a unique role in the building of the impact investment ecosystem. Due to its flexible structure without some restrictions and pressures faced by venture capital it is able to make large investments. "Family capital seems very well placed for allocation to impact investments, especially those early-stage, higher-risk undertakings that might not otherwise be in a position to take investment from more mainstream investors" (Robert J.).

According to the Global Office Report 2018 the participation of family office in impact investment market has seen an increase of 4.2% in 2007. Even if there is positive news about the family office scenario, it is reported that only one third of the actual family offices are involved in this market. The principle reason to this reluctance can be found in the lack of awareness, the understanding of this sector and the financial underperformance. This gap can be overcome in the future thanks to the changes of the market and the entrance of the new generation of investors more dedicated to doing good with their money more than their parents.

According to its latest financial snapshot, the foundation's endowment has an estimated market value of more than $13 billion. The endowment generated "risk-adjusted returns" of

7% in 2016, and annualized returns of 9.2% over the five years ending Dec. 31, 2016. The foundation stated that it has "an equity bias to achieve high rates of return, favouring value-oriented investment strategies, and a diversified portfolio with a moderate level of risk" (Edsel Ford, 2016).

The main two missions of the foundation are the affordable housing and the financial inclusion in emerging economies. Financial inclusion aims for example to provide financial service to the underserved and low cost insurance products.

Together with DFIs, Family Office and Endowments/Foundations, there are other limited partner types but more specific. For example it is possible to find Pension funds, Individual Accredited Investors, retail investors and other institutional investors. These are marginal partners due to their atypical structure or specific requirements. For example to be an accredited investor a person must have an annual income exceeding $200,000 or $300,000 for joint income for the last two years and the expectation of earning the same or higher income in the current year. An accredited investor can be also an entity as a company or an organization that earn more than $ 5 million per year. These are the rules in the USA, but regulations vary with the different country. On the contrary, retail investors are non professional investors who invest smaller amounts through traditional or online brokerage firms or other types of investment account. The limitation of this type of partner is their lack of knowledge, skills, discipline and expertise as professional investors.

About the pension fund they see impact investing a way to invest with a conscience capable also to obtain steady returns and weathers wider market fluctuations. But also in this case there is a reluctance about this sector because still unknown.
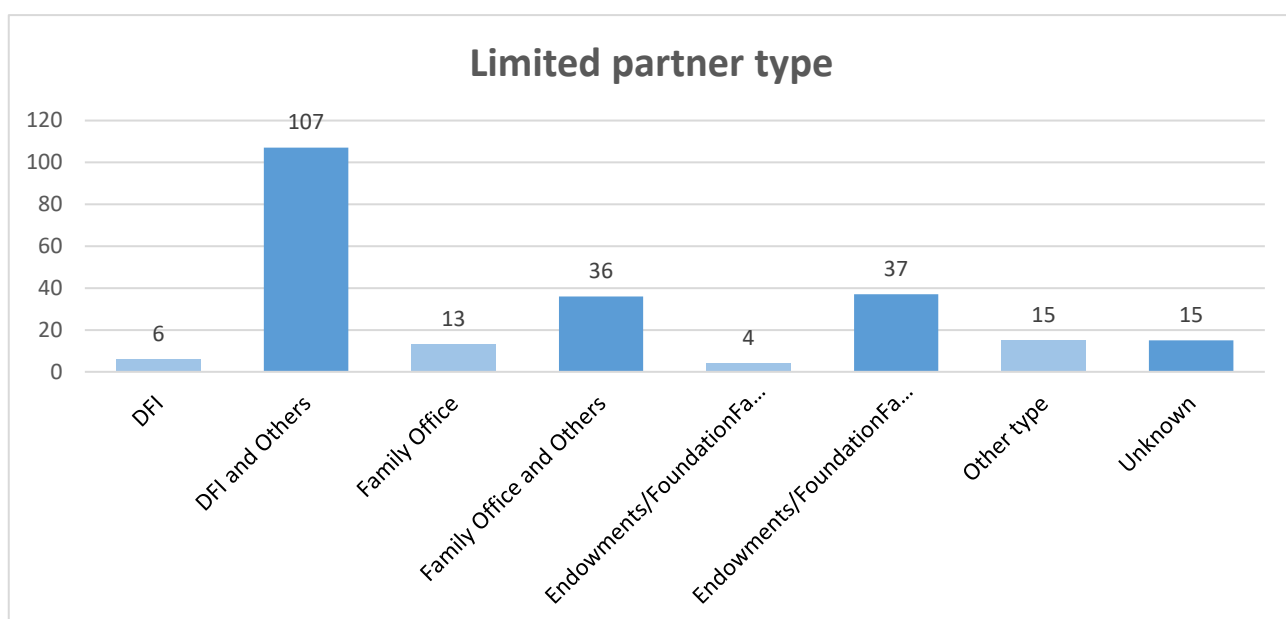
Figure 2-4 : Histogram of limited partner type

3) Impact theme

The third feature is the impact theme that it is also one of the central points of impact investing.

The impact sector can vary due to the different objectives that an impact tries to achieve. Also in this case the followed histogram illustrates more or less the same results reported in figure 1.7.

The predominant sector (figure 3.5) is the microfinance sector with 29%.

The microfinance sector represents an emerging investment opportunity for institutions and individuals. This is also due to the fact that it tries to explore new funding opportunities as securitizing microfinance loan portfolios or go public. The investors appreciate this kind of sector firstly because it permits to reduce the global problems like the level of poverty and secondly because offers an attractive risk- return profile that is characterized by largely stable financial returns, low credit default rates and low correlation to the mainstream financial assets as well as the general domestic economy.

The central service of microfinance is the provision of microcredit. Generally these are small loans to the working poor and their amount depends on the different country. For example in Asia the average loans amount is around USD 150, while in Eastern Europe is around USD 1600. Obviously the size of borrowers depends on the region. In addition Microfinance starts to offer also micro-deposits and micro-insurance services to their clients.

The second major sector with more or less 24% is the food and agriculture sector. According to the United Nations global population it is forecasted to grow from 7.96 today to 9.7 billion by 2025. So there is the necessity to increase and implement the productivity to meet the future needs of the global population. But the increase of productivity has slowed down due also to climate changes. In fact the frequent extreme weather events as drought, wildfires and flooding contrast this growth. Moreover, according to the intergovernmental Panel on Climate Change farming is responsible for nearly 12% of the total gas emission and occupies more than 40% of the planet's land. So in the global productivity two opposite souls coexist, on one side the necessity to grow and on the other side the necessity to protect and preserve our globe. The solution to this is a green and sustainability growth thanks also to the help of new technologies.

Due to the complexity of this topic the food and agricultural theme is divided into five subthemes (K. Lang et, 2017):

1. *Sustainable production*
2. *Sustainable consumption*
3. *Sustainable Agricultural Technology*
4. *Conservation and climate change*
5. *Social equity and sustainable livelihoods*

The first cluster aims to promote sustainability standard for production of food, livestock and seafood, and forest products.

The second cluster tries to provide right information about a healthy nutrition. So it gives tips about which the healthy foods are, which the ones to avoid and which are the risks of genetically modified organisms (GMOs). With a good food education it is also possible to reduce food waste and save food.

Instead, the sustainable agricultural technology tries to improve agricultural efficiency sustainably through technologies such as smart irrigation, computer software, and bioplastics.

The Conservation and climate change cluster aims to have an environmental impact such as the reduction of gas emissions, the smarter use of water, land restoration.

The last cluster concerns the workers' rights, fair trade and the abolition of child labour.

Clean Energy and employment represent respectively 17% and 14%. Clean energy and tech, despite their lower percentage, is a very actual theme that surely will grow more and more.

Behind this topic there are several sub- concepts such as renewable energy, green power, sustainable energy and alternative energy. On the one hand it helps organizations, household and individuals to reduce the energy consumption and on the other hand to generate unconventional energy. The main goals fixed for 2030 are to ensure universal access to affordable, reliable and modern energy services and to increase the share of renewable energy in the global energy market (PRI,2018). This topic together with the employment sector are topics that refer above all to developed and developing countries.

Affordable housing, education and health are the social themes with the lower percentage of investors interested with respectively 5%, 3.9% and 3.4 %. Nevertheless affordable housing is a crucial point to achieve the social equality. The data refer that around 1.6 billion people have an inadequate house, of which 1 billion live in slums. This is an urgent need above all in emerging countries such as Africa or Latin America. Affordable housing not only consists in the provision of accommodation for the population at the base of the social pyramid, but also tries to provide students, social, elderly and management houses.

On the other side education is a basic human right and can be considered as the powerful drivers of development and one of the strongest instruments for reducing poverty and improving gender equality. According to "Save the children" organization in 2016 there were still 58 million of children without the possibility to go to school (Save the Children, 2016). So the goals in 2030 ensure that all girls and boys will complete free, equitable and quality primary and secondary education (PRI,2018).

About the health theme the investors in this sector want not only to finance health facilities, health clinics and pharmaceuticals, but try to reduce the global internal mortality ratio. By 2030 the aim is to ensure that all people in particular the poor and the vulnerable have the equal right to the access to basic health service.
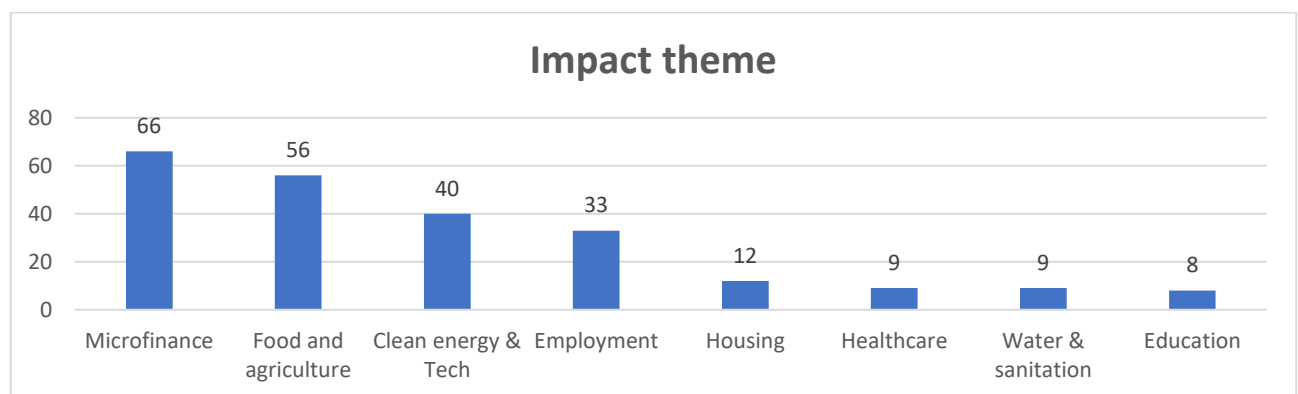

Figure 2-5: Histogram of Impact theme

4) Social and environmental metrics

Another characteristics to point out is the social and environmental metrics and its result can be observed in Figure 3.6.

Ninety-six percent of ImpactBase funds use performance metrics to quantify their social and environmental impact, of which over half track IRIS-compatible metrics. The funds that do not report tracking impact metrics are concentrated in developed markets in particular in North America and Europe (ImpactBase Snapshot, 2019). The majority uses IRIS metric because it was created by the global impact investing Network (GIIN) that tries to increase the scale and the effectiveness of impact investing. In this case GIIN tries to provide a standardized measuring and reporting. As already said IRIS is a catalogue of more than 400 accepted performance metrics. Due to its ability to fit with different characteristics and context, not only investors use this tool widely but also entrepreneurs, researchers, policy makers, government aid funders, philanthropists and all the participants in the impact.

 Another factor that has brought to the success of IRIS is that this metric is a free resource, and it provides a common language for the impact investing market. It makes it easier to compare both financial and non financial investment performance. It also helps in accurately aggregating and analyzing results from a variety of impact investments (U. Hayat, 2013). Metrics are selected or developed for the IRIS catalog through a formal and transparent process that includes review and inclusion of existing third-party standards (including the International Financial Reporting Standards, the Microfinance Information Exchange, and the Global Reporting Initiative), input from expert working groups and advisors, and feedback from users and the public. IRIS contains different sectors each with their different metrics. For example a cross- sector metrics is "Permanent Employees" and it indicates the number of people employed by the organization at the end of the reporting period. In the same sector there is the "Target Beneficiary Demographic" that defines the demographic group of beneficiaries targeted by the organization and they can be children, adolescents, disabled groups, poor population and others. Instead the sector specific metrics includes six social and environmental sectors. These ones are agriculture, education, energy, environment, water, financial service, health, housing and community facilities. For example about water sector there is the voice "Potable Water Produced" that identifies the amount of potable water produced during the reporting period.

The other 38% of fund uses other social and environmental performance metric system 30% of which uses Global Impact Investing Rating System (GIIRS), while the others are rated

by some other rating system such as ImpacAsset 50, CARS, SROI or IFC Performance Standards.

The structure of GIIRS is different from IRIS in fact it provides a score by assessing performance against a number of several impact areas. The categories scored by GIIRS are five: Governance, Community, Workers, environment and business models. Moreover GIIRS provides data for each impact area. For example governance category reports data about transparency and reporting, anticorruption, mission and engagement, while for the community the supply chain, the local community, job creation, civic engagement and charitable giving.

The SROI metrics is less used due to its complexity to calculate this one, even if it is widely used in other financial sectors. It is the result of the division between the amount of impacts and inputs. So it is easy to understand that the complexity for this operation derived from the identification of the right amount of impact and input. For example the quantification of impact is defined as the expected outcomes over time minus negative consequences and minus those things that would have happened irrespective of the organization's involvement. So the degree of liberty and subjectivity in the calculation of this is too high to take this metric as the standard one.
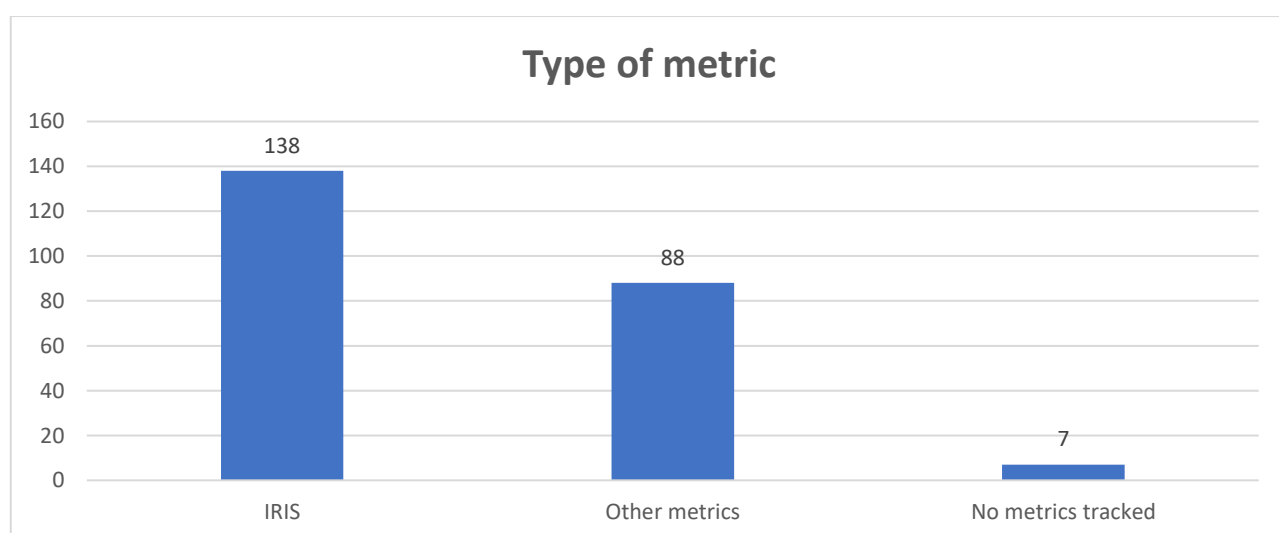

Figure 2-6: Histogram of type of metric

5) Target IRR

The internal rate of return is a useful tool for evaluating whether to proceed with a project or not. The project can be pursued only if the IRR of a project is greater than the minimum required rate of return that typically is the cost of capital. As in the general investment a good IRR necessary also for this type of investment is a fundamental feature. In particular the IRR in impact investing is strongly influenced by size, vintage year and strategy adopted. Even if this rate has a relevant role in impact investing decision, more than 27% of funds do not have a track of this as it is possible to see in Figure 3.6. Instead 25 % of them have a IRR between 10% - 19% and more or less the same percentage have a rate between 20% - 29%.

 14% have a level of IRR less than 9% and only 7% have a rate between 30% - 39%. Despite some preconceptions the impact investing benchmark has exhibited strong performance during the several years of studies. For example the impact fund with a vintage year between 1998 and 2004 has outperformed funds in the comparative universe (GIIN Benchmark, 2015).

 Besides this, from the benchmark studies it emerges also that smaller funds and impact investing funds in emerging countries have the strongest performances. In particular the fund focused on giving an impact in Africa performs very well. The successful key in this case is the manager selection and due diligence.
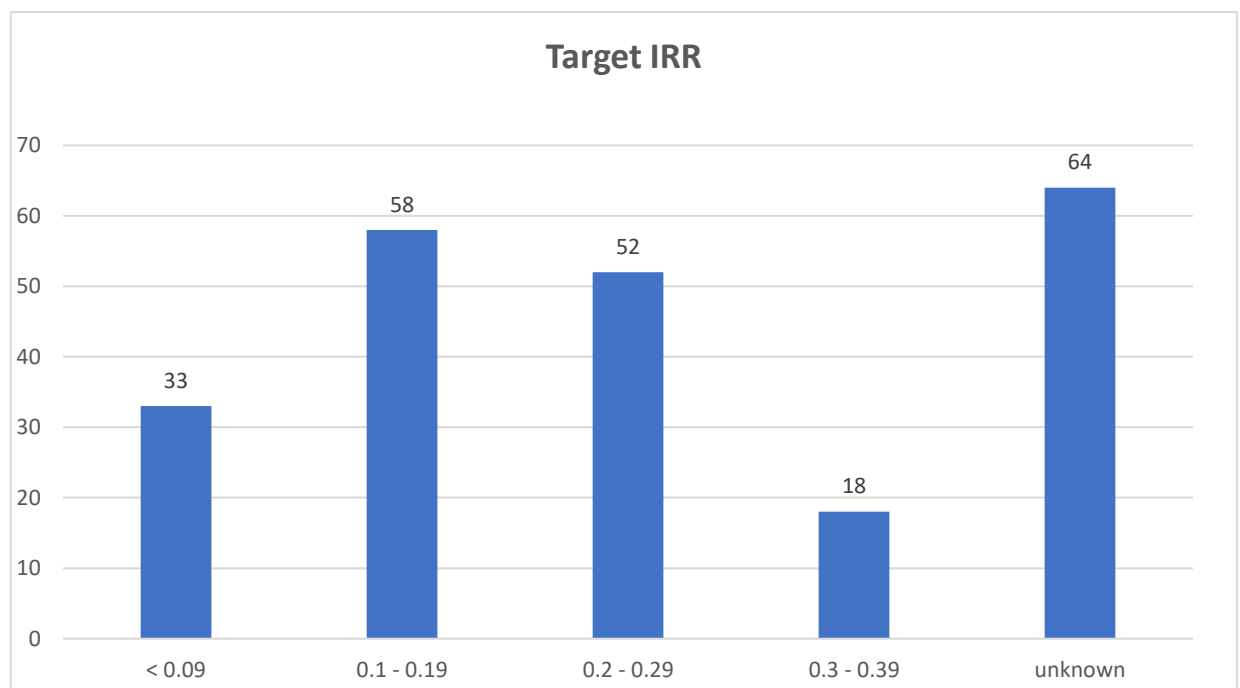

Figure 2-7: Histogram of target IRR

5) Asset class

The portfolio of impact investing is really various, it includes not only private equity but also fixed income, real estate, fund and other more.

In figure 3.7 it results that private equity/venture capital is the widest asset class with 84%. Several investors choose this one because they can shape portfolio companies' strategies and work directly with companies to achieve the goals really. So this asset class permits the investors to be involved in the evolution of the investment. Obviously to participate actively a good knowledge about the financial market is required. About the feature of private equity/venture the main legal structure used is the limited partnership which involves two main types of actors: general partner and limited partners. The limited partnership is usually a fixed life investment vehicle, while the general partners have unlimited liability. Moreover the general partners receive management fee and a percentage of the profit, while the other actors receive a portion of income and capital gain.

The enterprise chooses this form for various reasons, but the first aims to increase its profitability and ensure a stability that can attract other investors.

The rest of 16% is divided between fixed income, real estate, real asset and fund. Each of this does not overcome 5%. While the private equity/ venture capital are quite dispersed in terms of geographic focus, fixed income and real asset funds have an especially strong focus on North America. The majority of fixed income fund have a social focus (76%), while private equity/venture have both social and environmental impact objective in equal measurement.
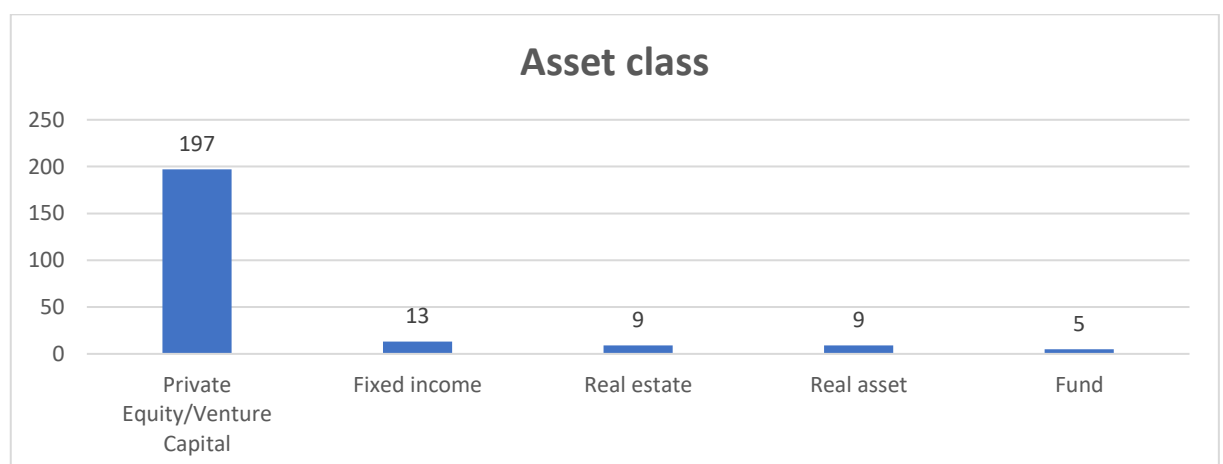

Figure 2-8: Histogram of asset class

Moreover, Figure 3.8 shows the correlation between the different asset class and the geographic area. As it is possible to see PE/VC are concentrated in Africa (27), Asia (29) and North America (31), while real asset is a strong presence only in North America (18). Fixed income dominates North America (21) and the emergent market (13) without considering Africa (Impact Base Snapchot, 2015).

			ASSET CLASS				
	FIXED INCOME ONLY	PE/VC ONLY	REAL ASSETS ONLY	PUBLIC EQUITIES ONLY	FUND OF FUNDS ONLY	MULTIPLE INSTRUMENTS	TOTAL
AFRICA ONLY	3	27	3	0	0	9	42
ASIA ONLY	2	29	2	0	0	4	37
LATIN AMERICA ONLY	6	17	0	0	0	4	27
EUROPE ONLY	1	17	1	0	0	2	21
NORTH AMERICA ONLY	21	31	18	0	0	12	82
OCEANIA ONLY	0	0	4	0	0	1	5
MULTIPLE EMERGING MARKETS	13	19	0	0	2	18	52
MULTIPLE DEVELOPED MARKETS	0	0	1	0	0	1	2
MULTIPLE GEOGRAPHIES	16	13	1	2	0	10	42
TOTAL	62	153	30	2	2	63	310

Table 2.1: Distribution of the several asset class in the geographic areas

7) Target fund product assets under management

Another important indicator that could be assessed is the target fund product assets under management. In this case, it could mean the target that each fund analyzed has in the product assets. The product assets for each fund have the aim to increase the diversification of an overall portfolio by distributing investment and for this a target is necessary. This target is usually offered by an investment company that seeks to grow their assets in a specific period.

In the graph below (3.9) we have grouped in eight ranges the amount of money that is considered target and we have collocated it in the X axis. We can observe in the graph that a big majority of funds have a target asset that is between 300 million and 500 billion, while more than 500 million the target asset fund decreases.

Therefore, the increase from 0 to 500 million and the successive decrease is evident, and in addition we could argue that the best range target starts with 5 million and ends to 500 million.
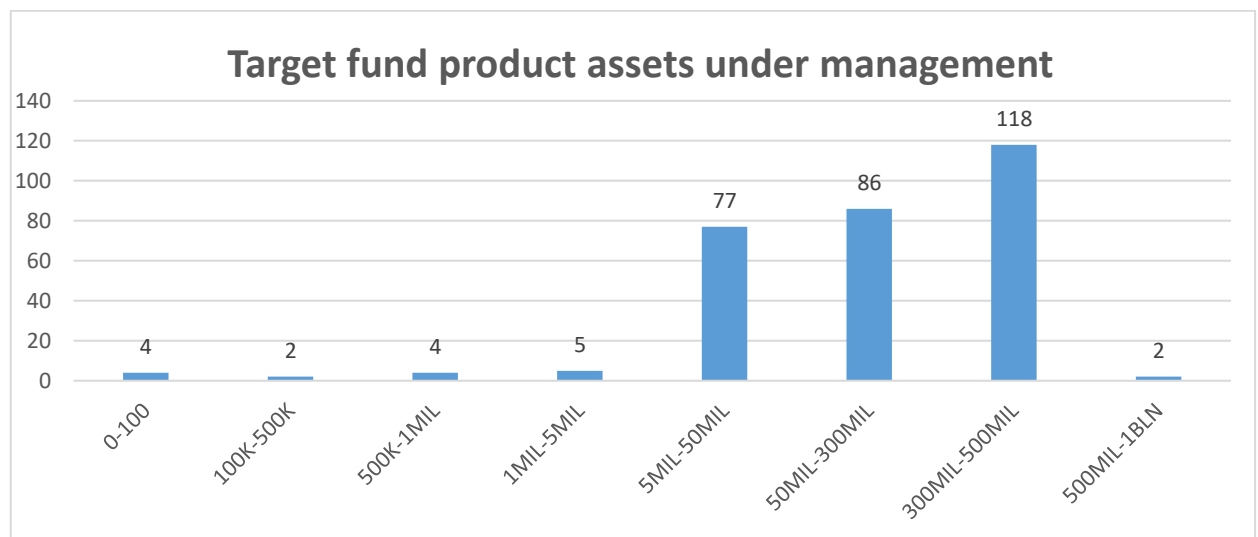

Figure 2-9 : Graph of target fund product AUM

8) Committed Capital

Another key element that could be analyzed for each fund is the committed capital. As we know the committed capital is a contractual agreement between a venture capital fund and a simple investor that obliges the investor to contribute money to the fund.

The simple investor could pay the entire sum of committed capital at one time or distributing it over a period of time that is usually a certain number of years.

The application of committed capital could be various, in fact for example it could be put towards a blind pool where the potential investor does not know exactly how and where to invest the money. This is done in order to offer better generated high internal rates on return for the investors. In the graph below (3.10) we can notice that 82 funds have a committed capital in the range 5-50 million, while 51 between 50 and 300 million. We can notice that any kind of fund analyzed does not use a committed capital between the range of 50 and 100 K.
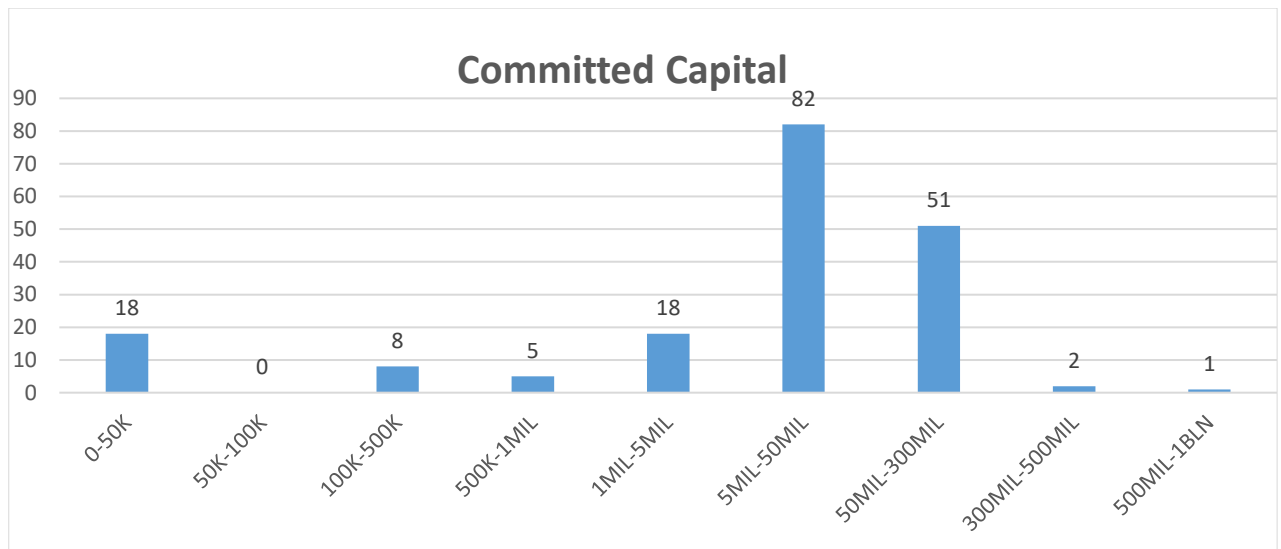
Figure 2-10: Graph of committed capital

9) Maximum and Minimum Investment

In addition to the main key characteristics, a relative importance is given to the minimum and maximum investment size of a fund.

Before analyzing the graph we should know that the minimum investment is the specified smallest amount of capital that is required to buy into or invest in a security, asset, or opportunity for a fund.

Generally, hedge funds and social funds typically have minimum investments, although these can vary drastically from hundreds or thousands of dollars.

In the graphs below (3.11 and 3.12) we can examine accurately respectively the maximum and minimum investment size that the funds use. In both tables the X axis showed the amount of money, but we can notice that in both graphs, for a maximum amount of money are required much, while for minimum, the extent of money is less.

To confirm this, the range in graph 3.11 starts from 0 and could reach 5 million, the first range for instance, while in graph 3.12 the range analyzed is lower (from 0 to 500K).

Note that the graphs show us the highest minimum investment range between 0 and 500K, while the maximum is between 0 --5 million and 5 million -- 50 million. After this amount we can see a decrease that is caused, probably, by the big amount of money.
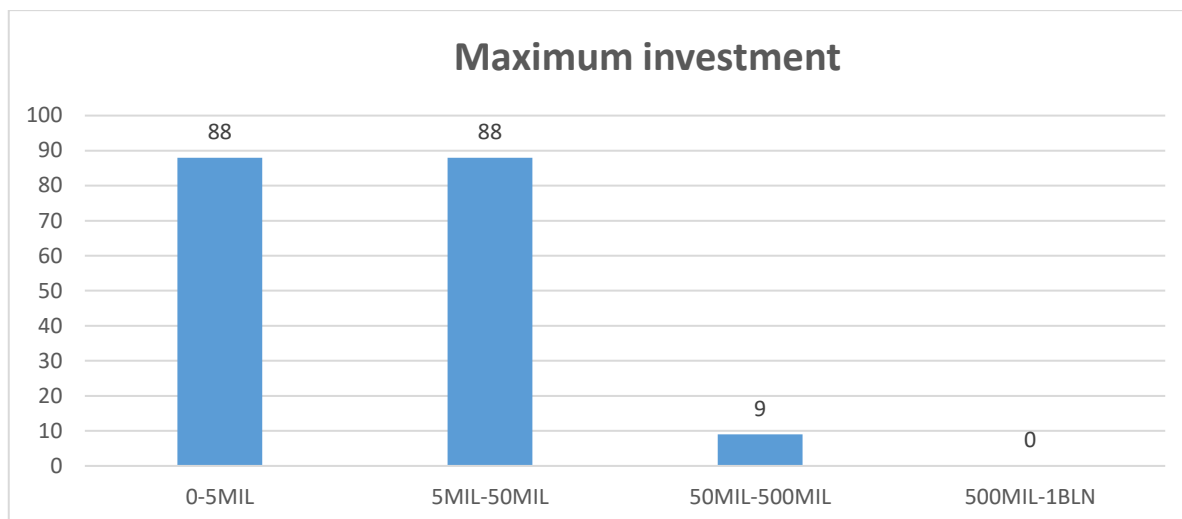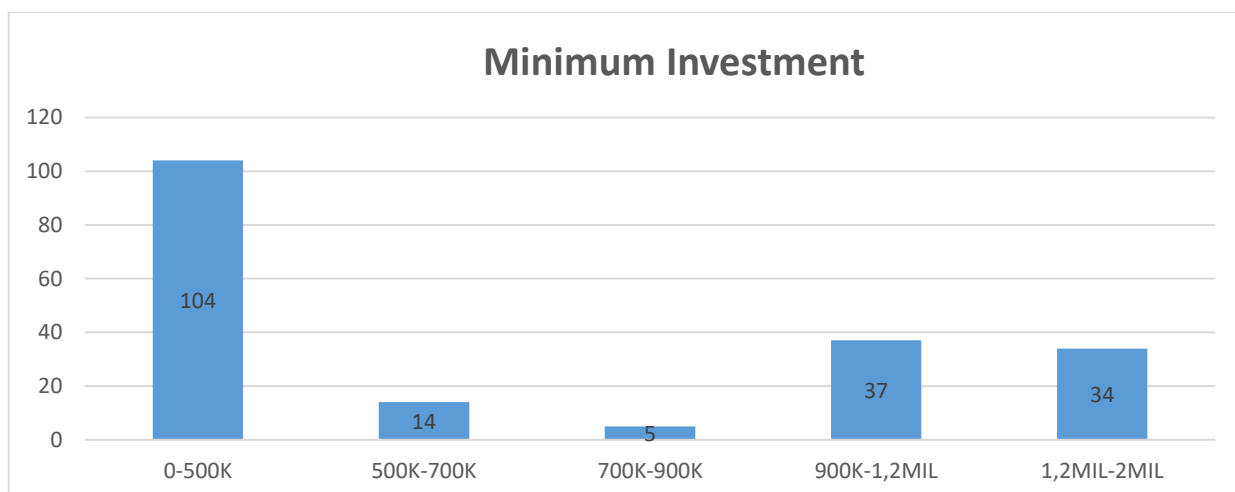
Figure 2-11: Graph of maximum investment

Figure 2-12: Graph of minimum investment

10) Maturity

Another important indicator is the maturity of a social fund. In general, the maturity is the date on which the life of a fund or a transaction ends, after which it must either be renewed, or it will cease to exist.

The term is also commonly used for deposits, foreign exchange spot and forward transactions, interest rate and commodity swaps, loans and options.

In the graph below (3.13) the maturity commonly used is 10 years, in fact it is used by 139 funds.
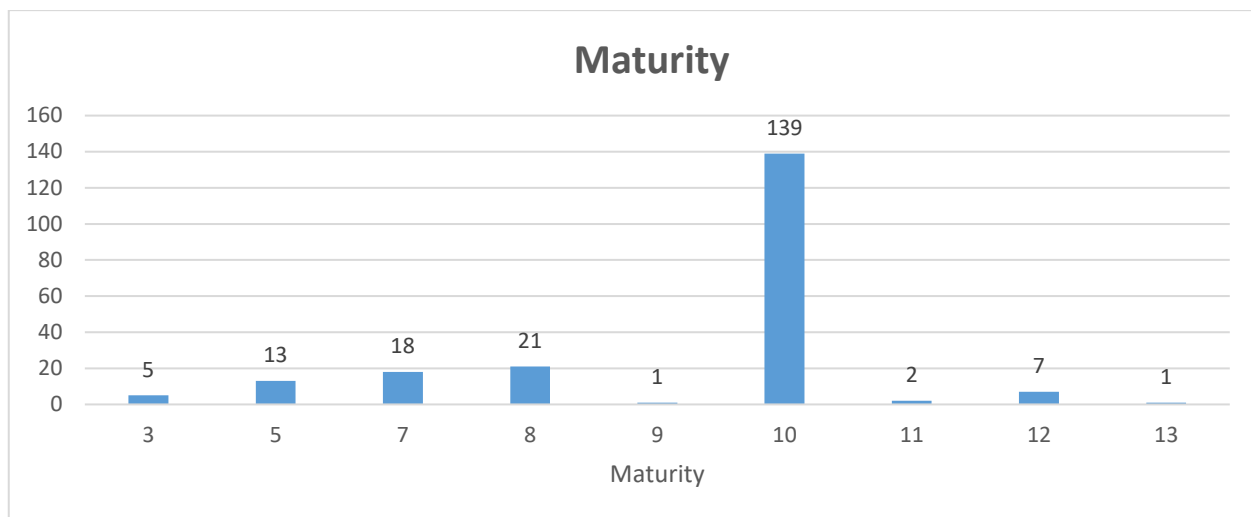
Figure 2-13: Histogram of Maturity

11) Localization

The localization of a social fund is extremely important in order to understand what are the main geographical areas where social funds are spent .

Thanks to our data information we can show, in the graph below, the amount of funds invested in each continent and the relative percentage (3.14)

The two numbers in each slice of the pie chart represent in fact respectively this (the first indicates the number of social funds that are invested in each continent and the second the relative percentage). We can observe that the majority of our social funds analyzed are spent in Africa and North and Latin America, while the rest is spent in Europe, Asia and emergent countries.
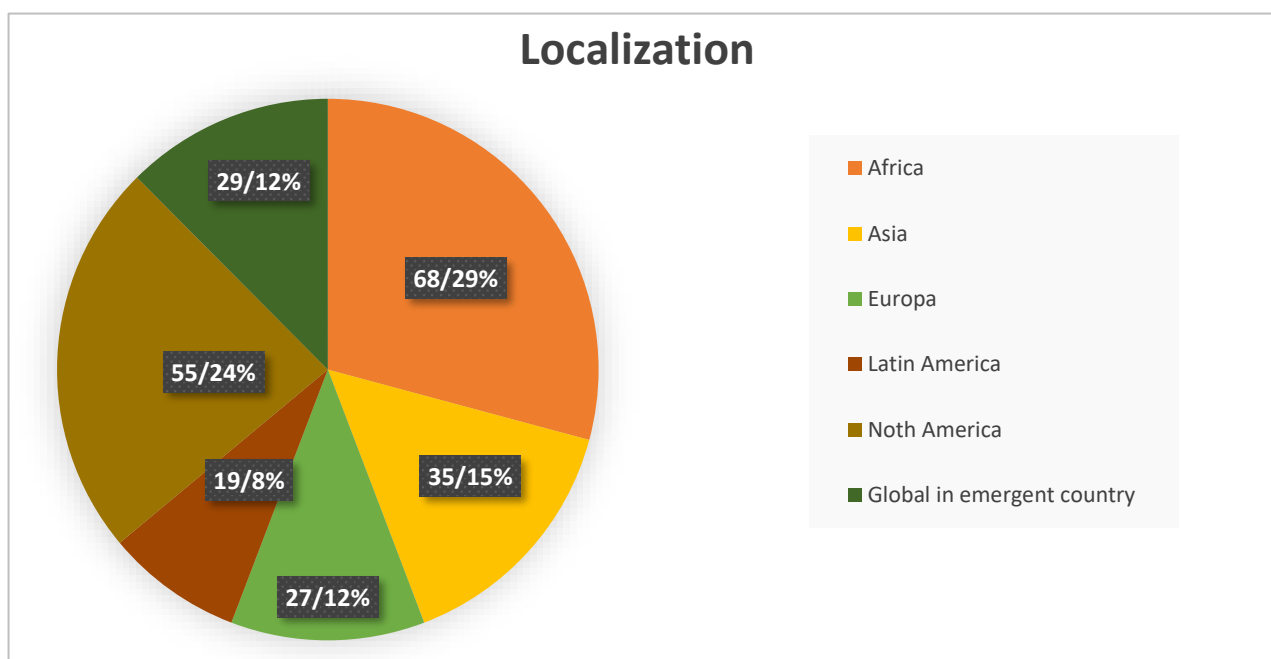

Figure 2-14: Pie chart of the Geographical distribution of impact investing

CHAPTER 3

3. Techniques and Methodologies

3.1 Approach of working

In order to understand our work better we should focus on what and why we have moved in this direction of analysis of the social impact VC funds (henceforth, SIVFs). The answer is simple: the SIVFs analysis is aimed to generate a positive and measurable social and environmental impact alongside a financial return. It is important to point out that SIVFs are characterized by a range of returns that can be below or equal to the market rate, depending on the investors' strategic goals. They typically target sectors such as education, agriculture, conservation, energy and affordable and accessible basic services, including housing, water procurement and healthcare.

 The principal aim of this thesis is to assess what are the communication strategies that SIVFs use to attract interested ventures and to present themselves to the market. In particular, we want to examine how much "social intensive" they appear on their communication campaigns through their website. To do this we need the support of content analysis, a strategic tool that has given us the possibility to understand what we are looking for. To identify active worldwide SIVFs, we have extrapolated information from ImpactBase, an online database managed by the GIIN (Global Impact Investing Network). We have used this tool because it is the best source currently available on SIVFs and takes responsibility in verifying the social nature of these funds.

Of the 445 active funds reported in the dataset, only those included in the "private equity" and "venture capital" categories were selected. Subsequently, we complemented information using a second commercial database, Thomson One Banker, managed by Thomson Financial. We restricted our analysis to 195 SIVFs for which an active website was available.

We analyzed these 195 SIVFs using Internet Explorer in order to get additional and detailed information on each specific fund. To make it accurately we created 11 folders (about_us, homepage, impact, investment_approach, mission, news, other_contents, performance,

portfolio, press_release, teams) each of which has been assigned the information related at each fund that we were analyzing.

Proceeding in this direction we ascertained that not all the funds that we were analyzing showed us the characteristics we are looking for. For instance we found some funds that did not have a homepage, others did not exhibit the team and others did not own the website. Afterward we parsed the importance of the linguistic style and the importance of it in the crowd funding in order to understand better what the terms utilized to attract the potential investors are.

To do this, we conducted a text mining analysis and calculated a number of measures to identify the complexity of the language used in website communication, as well as the importance attributed to the social impact theme. Therefore we measured the Semantic Brand Score (SBS), a new and innovative measure of brand importance calculated on text data, combining methods of social network analysis and different indexes, in order to analyze the nature of language used.

Then we clustered the analyzed SIVFs into four different categories, based on the intensity of the social impact theme and the distinctiveness of the language used in their websites. In addition we explored whether our clusters of funds have some common traits or rather they differentiate in terms of language sentiment and emotionality.

3.2   A brief definition of Content Analysis

3.2.1 Content Analysis

Content analysis is described as a research technique for making valid and replicable inferences from texts (or other meaningful matter) to the contexts of their use. (Krippendorff, 2004).

As a technique, content analysis includes specialized procedures.

Content analysis provides new knowledge, increases a researcher's understanding of particular phenomena, or informs practical actions. It is a scientific tool where the techniques are expected to be reliable. Content analysts hence use some guidelines for inference (based on current and available theories, previous research or experience) and rigorous procedural (coding) rules to move from unstructured text to answers to their research questions (White & Marsh, 2006).

At this point it should be apparent that content analysis is a positivistic, rigorous method to extract 'content' from texts, images or any type of meaningful message. Every content analyst, before proceeding with the actual research, should think of uniting and sampling (pre-coding) the coding itself and evaluative tests of the process. Therefore, content analysis is undoubtedly one of the most important research techniques in the social sciences.

The content analyst views data as representation not of physical events but of images, texts and expressions that are created to be analyzed, read, interpreted, and acted on for their meanings.

The term **content analysis** is more or less 60 years old. It was introduced in Webster's Dictionary of English Language in the edition of 1961, defining it as " analysis of the manifest and latent content of body of communicated material through classification, tabulation, and evaluation of its key symbols and themes in order to ascertain its meaning and probable effect".

Contemporary content analysis has three distinguishing characteristics:

1. It is an *empirically grounded method*, exploratory in process and predictive or inferential in intent;

2. It transcends traditional notions of symbols, contents and intents. This may be seen in the evolution of the concept of communication, in how the development of media technologies has shaped our attention to communication, and in the role of culture in assigning significance to what is being analyzed.

3. It has been forced to develop a methodology of its own, one that enables researchers to plan, communicate and critically evaluate the results.

In addition, content analysis has had to develop this methodology, this means not a value in itself. The purpose of methodology is to allow researchers to examine and plan critically the logic, composition and protocols of research methods, to evaluate the performance of individual techniques and to estimate the likelihood of a particular research design to contribute to the knowledge. In this sense methodology provides a language for talking about the process of research.

Continuing to explain what the content analysis is, it is proper to state what results important to understand the utility of this method. Berelson described content analysis as the use of mass communication as data for testing scientific hypothesis and for evaluating journalistic practices.

After the World War II, the use of Content Analysis spread to numerous disciplines. Psychologists, for instance, began to use content analysis in four primary areas. The first was the inference of motivational, personality characteristics and mental areas. A second application was the use of verbal data gathered in the form of answering to open-ended interview questions, while a third application concerned the process of communication in which content is an integral part.

Another field in which content analysis was used was social science. Social scientists recognized the usefulness of education material, which had long been the focus of research. In nutshell content analysis is a discrete technique that allows researchers to analyze relatively unstructured data in view of the symbolic qualities, meanings and expressive contents they have and of the communicative roles they play in the lives of the data sources.

3.3 The importance of Linguistic Style

We have understood that content analysis is very important to analyze a text. We have used this tool to focus better on the words used in the website that potentially could induce the investors to finance a specific social fund or social project.

In order to understand and assess this, we have conducted some researches in which we have noticed that the importance of the crowdfunding theme is always present and directly linked with the future of social funds. In fact, nowadays most social entrepreneurs argue that crowdfunding is a relevant technique of funding to test if it is inadequate for starting and sustaining the growth of many forms of social organization (Boslet, 2015; Lehner, 2013).

It has been studied that an important key factor of any crowdfunding proposal is a video pitch, where the entrepreneurs display the project to be financed. To be clear, firstly it is important to explain what a crowdfunding is. Computer-mediated crowdfunding is nowadays a new and rising technique used to request funds in the realization of a particular project.

Crowdfunding usually uses web technologies, such as online payment systems, in order to facilitate the daily transactions between people who request funds (creators) and people who give money (funders).

For the standpoint of economists it is important to study the consumer's behavior and how consumers continually make choices among products and services. This is done to understand why a potential consumer decides to choose to invest in one fund rather than another.

We are going to analyze these reasons, realizing that a fund is financed by many investors only if it is advertised better that others. To confirm this, most researchers argue that motivations for investing are related to interpersonal connections between the giver and the requester and communication styles. Similarly marketing and psychologists try to understand why certain people invest and what influences people to invest more.

Lots of entrepreneurs are in trouble with the matter of how to deliver a successful fund-raising pitch on crowdfunding platforms. Previous research has proved the importance of communication content (what one communicates) for funding purposes. Nowadays it is studied that social entrepreneurs may achieve the goal of attracting people to invest in their funds by adopting linguistic styles that make their campaigns more understandable to their target audiences and establish a personal relationship with the crowd.

Therefore, it results that linguistic style is a relevant indicator of crowdfunding success for social entrepreneurs (an emerging category of new ventures). To be more specific, whereas

preciseness, concreteness, and interactivity induce the success of social campaigns, psychological distancing hurts their fund raising efforts. (Agrawal et al., 2011; Ahlers et al., 2015; Mollick, 2014b)

In addition, it is important to point out that short crowdfunding pitches, which are often scrupulously rehearsed and planned, provide a context where entrepreneurs result more efficient in adapting their own style according to the expectations of their audiences.

It is important to highlight that the function of linguistic style differs for crowdfunding campaigns, for instance social entrepreneurs that launched an emerging category of new ventures present a linguistic style that is opposite to campaigns of a consolidated category launched by commercial entrepreneurs.

Resting on the language expectancy theory (Burgoon et al., 2002; Burgoon and Miller, 1985) we can argue that in order to obtain success entrepreneurs seeking crowdfunding need to fulfill the expectations of their audience. But what is the language expectancy theory?

3.3.1   Language Expectancy Theory (LET)

Language expectancy theory (LET) has the target to offer the foundation to study the relationship of literal and ironic messages in terms of expectedness and persuasiveness.

Language expectancy theory (LET) tries to invoke expectations in language patterns. Specifically, it relies on how message characteristics (e.g., intensity, word choice, length, etc.) negatively or positively violate expectations concerning appropriate communication. Furthermore, these expectations could be different for certain categories of entrepreneurs and their audiences (Burgoon and Miller, 1985). We state that the expectations could be difficult to anticipate for an emergent category and even still ill-informed, whereas the expectations for commercial entrepreneurs have become more explicit and homogeneous, differently, hence, than the expectations proposed by social entrepreneurs.

It may be theorized that during the emergence of a new category it is the style of communication that might help communicators appeal to an audience. We rely on previous researches in psycholinguistics that show us that linguistic style is more closely tied to the measures of people's social and psychological worlds than linguistic content (Chung and Pennebaker, 2012; Tausczik and Pennebaker, 2010; Toma and D'Angelo, 2015) and therefore it could be a relevant factor for building a connection in line with the goal of audience.

Consequently, linguistic style is related to one's job performance and academic (Berry et al., 1997; Robinson et al., 2013), and also explains crowdfunding campaign performance of social entrepreneurs.

Based on the language expectancy theory, already mentioned, (Burgoon, 1995; Burgoon and Miller, 1985) it could be important to highlight that effectiveness of entrepreneurs' linguistic styles depends directly on if they belong to an established category (commercial crowdfunding campaigns) or a nascent category of new ventures (social crowdfunding campaigns).

Language expectancy theory focuses, as we have already said, on how message properties, such as word choice or sentence structure, negatively or positively break the expectations of the receiver. (Averbeck, 2010). Positive violations, such as exceeding the expectations, could increase the persuasiveness of the message and result in greater attitude change, while negative violations could produce an opposite effect and they are the failure to meet the expectations.

In the words that we use we can find both style words and content words (Abe, 2011; Toma and D'Angelo, 2015).

Style words (also called linguistic style) contribute to how something is said and include traditional language components, such as the use of verb tenses, prepositions, negations, articles, as well as the use of emotion words (affective tone of communication), words describing cognitive processes. Different is the use of content words (nouns, adjectives and verbs) that, instead, convey much of the meaning.

3.3.2   The importance of the words

It is relevant to highlight that one of the challenges in understanding consumers is comprehending the language they use to express themselves. Words are difficult to understand because of their varied meaning among people.

Marketing, for instance, has a long history of figuring out ways of cutting through the ambiguous use of words by designing experiments and questionnaires in such a way that questions are widely understood and expressed in simple terms. The challenge in analyzing text data is to understand what the words mean. To make it, there are specific topic models which help us to understand the prevalence of the topics present in the text and to make inferences about the possibility of the appearance of different words. Topic models provide a simple, yet powerful way to model high-level interaction of words in speech.

The meaning of speech comes from the words that are jointly used in a paragraph of a document or in a simple sentence. It is important to stress that the simple meaning of a single word could usually not be derived from looking at singular words. This can be observed in consumer reviews where, for instance, consumers might use the adjective "great" in conjunction with the noun "experience" or "disappointment." When doing so, they may refer to different attributes of a particular product or service.

Consumer reviews and text-based analysis of user-generated content (UGC) have showed considerable attention in the recent marketing literature.
Textual consumer reviews have been used for a variety of purposes in marketing research:

• Forecasting the impact of consumer reviews on sales using the valence of sentences (Berger et al. 2010)
• Determining the relative importance of reviews in comparison to one's own experience in the learning process of consumers about products (Zhao et al. 2013)
• Analyzing the change in conversion rates as a result of changes in linguistic style of online reviews and affective content (Ludwig et al. 2013)
• Predicting the sales of a product based on review sentiment and content (Godes and Mayzlin 2004, Dellarocas et al. 2007, Ghose et al. 2012)
• Eliciting product attributes and consumers preferences for attributes (Lee and Bradlow 2011, Archak et al. 2011)
• Deriving market structure (Netzer et al. 2012, Lee and Bradlow 2011)

Furthermore, previous research in cognitive linguistics, sociolinguistics, psychoanalysis, communication research , narrative and discourse analysis (Eckert, 1999; Freud, 1901; Guillaime, 1984; Lacan, 1968; Schriffin, 1994) proposes that the use of style words (more so than the use of content words) is indicative of people's attentional focus, thinking styles, social relationships, personal characteristics and emotionality (Abe, 2011; Chung and Pennebaker, 2012; Pennebaker, 2011; Pennebaker et al., 2003).

Crowdfunding audiences and also investors of social funds are sensitive to the linguistic styles adopted by entrepreneurs in their campaigns, the style of message delivery permits more meaningful comparisons across project domains. As we have already argued, linguistic style is a significant communicative tool for social entrepreneurs. To identify linguistic styles that raise the success of crowdfunding campaigns (commercial lower than

social), it is important to consider how entrepreneurs are able to approach and build a relationship with an audience (McCracken, 2012; Ordanini et al. 2011)

The starting crowdfunding campaign for financing the social fund needs to be concrete (Larrimore et al., 2011; Toma and D'Angelo, 2015) and precise (Short and Palmer, 2008). From this perspective, entrepreneurs might help the crowd to understand better their campaign by using concrete language (Larrimore et al., 2011; Toma and D'Angelo, 2015).

Concrete language refers to a linguistic style detailed representations of objects in order to grant a deeper and more rapid processing of information and is more easily remembered (Marcshark and Surian, 1992; Paivio, 1991; Schwanenflug and Stowe, 1989), whereas abstract language (language containing few representations of objects) can be challenging to follow and to understand.

3.4 The importance of language in social entrepreneurialism and the modes (or techniques) to captivate investors

For years business organizations have publicly reported their social/environmental performance (KPMG, 1993, 1996, 1999, 2002, 2005, 2008; UNEP/SustainAbility, 2004), but questions persist about the quality, meaning and effects of their actions. Some critical theorists exploit a variety of discourse and interpretive analytic approaches to illustrate how the language used in environmental/social reports facilitates its socio-structural effects.

Language not only builds discourses that influence business behavior and thinking, but it also excludes alternative discourses (Livesey, 2002) and creates the way how other social actors come to 'do' and 'know' sustainable development (Milne et al., 2009). Moreover, nowadays the use of language specifying concreteness can be positively correlated with the success of funding. The linguistic features, although serving to achieve context-specific goals, might also be predictive of persuasion success in other contexts such as social fund field. In this prospective, language could be analyzed as performative and constitutive (Berger & Luckmann, 1967; Fairclough, 1992; Foucault, 1972).

During everyday social interaction language reproduces or transforms discourses providing a different way of thinking and talking about the world (Jorgensen & Phillips, 2002; Phillips & Hardy, 2002). Different discourses legitimize different understandings and influence the 'normal' roles for business in society or the 'appropriateness' of policy options, highlighting some activities over others and investing some people with experience and authority

(Foucault, 1972). Social actors build on and combine discourses in the attempt to delineate 'reality' in the ways they prefer and reflect their interests (Livesey, 2001).

Investors' impressions of a new venture may be more or less based on the subjective, non-verifiable statements that are made by the entrepreneur (Maxwell et al., 2011), and it is clear that entrepreneurs know that investors will consider product quality, market growth potential, innovativeness, and expertise of the entrepreneurial team when making their investment decision (MacMillan et al., 1985; Mason and Stark, 2004; Sudek, 2007).
Attempts to successfully manage the investors' sensations have been identified by previous entrepreneurship literature that has produced an impressive list of variables likely to affect business investment decisions. These variables include the characteristics of the entrepreneur , the product, the target market, the projected financial performance, and the venture (for a review, see MacMillan et al., 1985; Mason and Harrison, 2003; Maxwell et al., 2011; Sudek, 2007; Tyebjee and Bruno, 1984; Zacharakis and Meyer, 1998). Some scholars claim that the existing studies, although such information is rarely available at the time investors make their initial funding decision, give an excessive amount of attention to product-related data and "objective" market.

At this point, it is fundamental to know and understand what the most important techniques of impression that are used by entrepreneurs to persuade the potential investor are.
Impression management manifests itself in a wide variety of behaviors, such as the use of non-verbal or expressive behaviors or in verbal statements (Ellis et al., 2002; Goffman, 1959), in order to influence investors to attain a specific goal (Bolino and Turnley, 1999; Bozeman and Kacmar, 1997; Goffman, 1959).

Impression management techniques can be divided into:

- *Direct techniques*, which involve "techniques presenting information about one's own traits, abilities and accomplishments" (Cialdini, 1989: 45)
- *Indirect techniques*, which are performed to "enhance or protect one's image by managing information about the people and things with which one is associated" (Cialdini, 1989: 46).

The scope of this is that both direct and indirect impression management tactics are relevant for entrepreneurs seeking to raise business funding.

Besides, it is also possible to make an additional differentiation between *assertive* and *defensive* tactics (Mohamed et al., 1999; Tedechi and Norman, 1985). While *assertive* tactics are used in situations that actors view as opportunities to promote their image, *defensive* tactics are designed to repair or minimize the damage to one's image (Mohamed et al., 1999; Schlenker, 1980; Wayne and Liden, 1995) after an embarrassing and awkward event, such as a corporate scandal.

Combining direct technique and indirect technique with the assertive one we obtain ***direct assertive techniques*** and ***indirect assertive technique***.

- ***Direct assertive techniques*** include organizational promotion, ingratiation, exemplification, supplication and intimidation (Bolino and Turnley, 1999; Jones and Pittman, 1982; Mohamed et al., 1999).

  1. Organizational promotion refers to behaviors that present the organization as highly competent, effective and successful (Gardner and Martinko, 1988; Jones and Pittman, 1982; Mohamed et al., 1999; Stevens and Kristof, 1995). Moreover, organizational promotion can manifest itself in the use of positive language in describing one's organization in general, or in the promotion of its specific strengths and talents, such as its innovativeness (Bolino and Turnley, 1999; Crane and Crane, 2002; Ellis et al., 2002; Stevens and Kristof, 1995).

     Organizational promotion can also be especially helpful in situations in which the promoter is in competition with others for scarce resources (Judge and Bretz, 1994) or in a situation in which most nascent entrepreneurs are likely to find themselves as they seek funding.

     Using positive language that promotes these aspects could, therefore, enhance entrepreneurs' chances of raising business funding taking in view that the use of positive language will help them only up to a point.

  2. Ingratiation denotes actions that stimulate interpersonal attraction or pleasure (Stevens and Kristof, 1995; Wayne and Kacmar, 1991; Westphal and Stern, 2007), such as other-enhancing communication, flattery, smiling and rendering favors (Bolino and Turnley, 1999; Wayne and Kacmar, 1991; Westphal and Stern, 2007).

  3. Exemplification involves behaviors that an organization exhibits meant to project images of social responsibility, integrity and moral worthiness.

- *Indirect assertive* techniques include:

    1. *Boasting*, referring to attempts to associate the organization with a favorably viewed entity. It would manifest itself in entrepreneurs' proclaiming a link to prestigious alliance partners, educational institutions or financiers.

    2. *Blaring*, denoting attempts to disassociate it from an unfavorably viewed entity. It may involve entrepreneurs' decisions to proclaim a negative link to organizations that are likely to be viewed unfavorably by the general public.

    3. *Burnishing*, intended to increase the favorability of observers' perception of an entity that an organization is associated with by pointing out its favorable characteristics.

    4. *Blasting,* intended to tarnish the image of negatively linked others, such as rivals, by emphasizing their unfavorable features (Mohamed et al., 1999).

The variables discussed are listed in table 3.1

	Direct tactics	Indirect tactics
Assertive	Independent variables • Organizational promotion • Ingratiation • Exemplification[a] • Supplication[b] • Intimidation	Independent variables • Blasting[c] Control variables • Boasting • Burnishing[d] • Blaring[e]

[a] Closely related to a defensive impression management technique "prosocial behavior".
[b] Closely related to a defensive impression management technique "organizational handicapping".
[c] Closely related to a defensive impression management technique "belittling".
[d] Used very rarely by our sample companies.
[e] Not used by our sample companies.

Table 3.1: Impression management tactics covered as independent or control variables

Research has argued that the use of an intermediate level of positive language should, hence, preserve sufficient levels of perceived competence without prejudicing the attributes of predictability, sincerity and likability (Brickman and Seligman, 1974; Cialdini and DeNicholas, 1989; Leary and Kowalski, 1990; Schlenker, 1980: 232)

To sustain this, scholars have, hence, foreseen that positive language could have a curvilinear relationship with progress in the business and fund-raising process, with both high and low

levels of positive language being associated with a decreased likelihood of progress in the business fundraising process.

In addition to this, it is important to notice that at high levels the promotion of innovativeness may increase the investors' awareness of the possibility that new products and services may violate accepted conventions (Arndt and Bigelow, 2000; Jones and Livne -Tarandach, 2008; Zuckerman, 1999). Therefore, as a consequence potential investors might perceive proposals, which stress novelty, as being riskier because of the related challenges associated with commercialization and profit appropriation (Branscomb and Auerswald, 2002; Dimov and Murray, 2006).

Previous entrepreneurship studies have produced an impressive list of variables likely to affect equity investors' funding decisions (see, for instance, MacMillan et al., 1985; Mason and Stark, 2004; Sudek, 2007). The "objective" market and product and performance-related data have received much attention, although such data are seldom available at the time of the funding decision.

Nevertheless, some researchers have pointed out that the use of innovative language was in line with the current entrepreneurship and communication literature (Barry and Elmes, 1997; Jones and Livne-Tarandach, 2008; Landstrom, 1998; Martin, 1986; Mason and Harrison, 2003; Mason and Stark, 2004), confirming that investors attribute significance to the innovation of the business concept.

Additionally, it is important to argue that an excessive use of language with innovative connotations might be counterproductive because potential investors could interpret it as a sign of upcoming challenges in commercialization or product development.

In nutshell, to study the language in social entrepreneurship is clearly important since only in this way it could be a good business to promote funds in order to attract as many investors as possible.

3.4.1 How the proper usage of language could condition and influence the decision making investors' choices. The "warm-glow" theory.

Moving on this way, it seems important to reflect on the importance of language in social entrepreneurship, because it is a starting point of a decision making process of a potential investor. For this reason a particular importance is given to the field of entrepreneurship research, which is now characterized by approaches that face differently with the subjectivity of the topics.

Recent studies have focused on the social, historical, cultural and structural factors (see Jones and Spicer 2005: 235, for a review of works focusing on structural factors of entrepreneurship) and an emerging approach tap into economic and sociology of enterprise (Zafirovski 1999). Studies in many areas of social science and social policy have taken advantage to use discourse analysis to explore ideological, relational and political struggles (Atkinson 1999, Collins 1999, Hastings 1999, 2000, Stenson and Watt 1999, Jacobs 2004). To confirm this, Foucault (1972), a renowned expert in entrepreneurialism, argued that discourses represent meaning and determine how knowledge and power are produced in the society (Foucault 1972). Fairclough (1989, 1992, 1995) and Wodak (1997), instead, suggest that discourse is more than reflective of social power situations, in that language uses influences, as much as it is influenced by social practice.

To sum up discourse must therefore be studied with reference to the social and political context (Fairclough and Wodak 1997) taking into account that it could include social identities, situations and relationships between people and groups of people (Weiss and Wodak 2003).

Beyond that, few studies have evaluated how the language used in entrepreneurial narratives influences the funding of new ventures. Even in research of entrepreneurial narratives (e.g., Martens et al., 2007), the language that entrepreneurs use and the consequence that this receives on investors' decisions has not been much examined. Therefore, there is a gap between what we need to know in order to better understand how entrepreneurs ensure funding and what we know about how potential investors evaluate entrepreneurs' funding requests.

To solve this, there are some techniques, but the best that has been used is the **warm-glow** theory. It puts forward that people help the others in order to feel good about themselves (Andreoni, 1990). The Warm-glow theory is used as a lens to comprehend why the language used in entrepreneurial narratives affects the speed with which social funds are funded by individual investors.

Some results of certain studies argue that the language used in entrepreneurial narratives influences how quickly social funds are funded. Specifically, we find that narratives where entrepreneurs use language and repeat few social themes express investors' attainment, accomplishments and confidence with the themes and are associated with a slower funding, whereas the entrepreneurs who use the language conveying blame and highlighting the present are associated with faster funding. In an additional research, we find that narratives where entrepreneurs use language emphasizing the innovativeness of the venture are connected with slower funding. Therefore, in entrepreneurial investment profiles the use of persuasive language with potential investors in order to secure their investment in the venture is a key aspect of the process of securing funds for an entrepreneurial venture.

Furthermore, while a substantial body of research has investigated how entrepreneurs secure funds (Cassar, 2004; Ebbers and Wijnberg, 2012), few studies have examined how the language used in entrepreneurial narratives impacts on the funding of new ventures (e.g., Martens et al., 2007).

Entrepreneurs also use rhetoric in fundraising for making a political discourse a valuable goal for assessing the language used in entrepreneurial investment narratives and also for the launch and growth of their ventures. Some researches (e.g., Gastil, 1992) offer a valuable goal to examine how language is used to seduce investors to fund social funds, while politicians use rhetoric to influence institutions, organizations and individuals to take action and contribute funds in support of their agenda at the same time (Flowers et al., 2003; Hart, 1984).

This is analogous to the creation of investment profiles in pass-through social funds, where the local non-governmental organization and entrepreneurs try to work together to create an investment profile crafted to encourage individual investors to provide funds to support the entrepreneur and the social themes. For this reason, at this point it is extremely important to know how to use language in investment profiles, because it might influence individuals to invest in an entrepreneur's social fund.

Accordingly, investors rely on the narrative contents in making an assessment of the extent to which their funds will be effective in the mitigation and reduction of the problems

addressed by the entrepreneur. When entrepreneurs convey confidence and tenacity, they decrease the investors' perceptions of risk that the funds will not significantly aid in the realization of the entrepreneur's goals (cf. Siegrist et al., 2005).

In conclusion, for entrepreneurship scholars the language used in entrepreneurial narratives may influence the decision to invest in a new venture. Entrepreneurs instead believe that entrepreneurial narratives are carefully crafted to maximize the likelihood of securing funds from potential investors.

But what is the decision making process used by an investor to choose which fund to invest in?

These days consumers have a wide variety of different funds to choose from, where different funds specialize in different regions, countries, industries, and investment styles (e.g. Bogle 2005; ICI 2009).

One type of mutual fund that has received a lot of attention and experienced a fairly rapid growth is that of *socially responsible investment* (SRI) profiled funds. SRI is essentially an investment service with a dual nature (Knoll 2002; Sparkes 2002). First, it is an investment scheme, meaning that investors desire future financial return for the risk that they take on through the investment. However, in the investment process SRI also incorporates a socially responsible dimension by including *social, ethical, and environmental* (SEE) issues as a second selection criterion for choosing investment objects.

When explicitly including a socially responsible dimension into the investment process, SRI profiled funds become an investment service of a dual nature. They deal both with the notion of receiving a good financial return from the investment and taking social responsibility while doing so (Michelson et al. 2004). Consumers can, in this way, incorporate consideration for social, ethical, and environmental issues in how they choose to invest their savings. With social investment some potential investors are exposed to a situation where they have to attempt to make both an appropriate *financial* investment decision as well as an appropriate *socially responsible* investment decision.

As mentioned above, making appropriate financial decisions is often very difficult due to such factors as the challenges associated with the vast amount of expert-type information and the influence of external factors (such as general economic environment) on the results. In short, the decision making environment contains a number of challenges that are based on the *financial* and the *socially responsible* dimension of SRI. These challenges present in

each dimension are based both on the *internal* characteristics of the SRI fund as well as on the *external* surroundings of the SRI fund.

When viewing the SRI a potential investor tries to make a decision listing at least four separate categories of challenges. As presented in Table 3.2, these challenges are based on both the financial and socially responsible dimension. Thus, the consumer of "regular" funds may meet each of these challenges and face a difficult decision.

Challenges consumers face in the SRI decision making environment	Examples from the financial dimension	Examples from the socially responsible dimension
Vast amount of information from multiple sources	Previous return, fee, risk, type of fund, active/passive management, rating, manager tenure, region, industry, specific stocks, etc.	Type of screening, industries screened, minimum thresholds, engagement practice, specific stocks, etc.
"Expert type" terminology	No easy comparisons of past performance, "Standard deviation", "Sharpe ratio" etc.	Minimum thresholds, "positive" and "negative" types of screening, engagement, etc.
Future oriented	Results of financial investment at the end of investment period	Result of influence and screening on corporate behavior during and after the investment period

Table 3.2: Highlighting the challenges consumers face in the SRI decision making environment

3.5   The technique used in the methodology

In order to analyze the text to identify linguistic styles used, we believe that it is relevant the procedure how we try to extract the text from each website that shows the potential characteristics of each fund that we have analyzed. This was done using the technique called " text mining".

In fact, text mining (that is sometimes called "knowledge discovery") is referred to the process of extracting meaningful, useful information from unstructured text (Dörre et al. 1999, Feldman and Sanger 2006). With the development of digitized data sources, the world of business has undertaken to explore the opportunities offered by text-mining tools to gather competitive intelligence, to analyze automatically the infinite stream of financial report data to search for patterns or irregularities and to syndicate and meta analyze the wealth of information posted online by consumers (e.g., Feldman et al. 2010). Recently, a handful of studies have applied text mining to marketing applications.

The information that consumers voluntarily and willingly post on consumer forums and message boards opens a window into their associative and semantic networks, as reflected by co-occurrences of brand references and descriptions of those brands in the written text.

If we want to theorize the Text-Mining Apparatus it is significant to point out the extracting structured product and attribute data that involve four main steps:

Step 1. Downloading: The Web pages are downloaded from a given forum site in HTML format.

Step 2. Cleaning: HTML tags and non-textual information such as images and commercials are cleaned from the downloaded files.

Step 3. Information extraction: Terms for product attributes and products are extracted from the messages.

Step 4. Chunking: The text is divided into informative units such as messages and sentences.

In order to analyze our text to use content analysis to extract the word and subsequently analyze it with specific tools (or software) to understand and to get some information we have used the technique described above more or less.

In a nutshell, we have decided to create an excel sheet that was very important to understand which kind of information we had found in the text of the site, for instance, presence of website, information about fund, mission and value, etc. (All of this is showed in the table 3.3 below).

It is quite obvious that if the information was present we write yes, otherwise no.

C	HOMEPAGE	MISSION	TEAM	ABOUT US	PRESS RELEASE	NEWS	PORTFOLIO	PERFORMANCE (IRR)	OTHER CONTENTS	IMPACT	INVESTMENT APPROACH
fund1	yes	yes	yes	yes	no	no	no	no	yes	yes	no
fund2	yes	yes	yes	yes	yes	yes	yes	yes	yes	no	yes
fund3	yes	yes	yes	yes	yes	yes	yes	yes	no	yes	no
fund4	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	no
fund5	no	no	no	no	no	no	no	no	no	no	no
fund6	yes	yes	no	yes	yes	yes	yes	yes	yes	yes	no
fund7	yes	yes	no	yes	yes	yes	yes	yes	yes	yes	no
fund8	yes	yes	no	yes	yes	yes	yes	yes	yes	yes	no
fund9	yes	yes	yes	yes	no	yes	yes	yes	yes	yes	no
fund10	yes	yes	yes	no	no	no	yes	no	no	no	no
fund11	yes	yes	yes	no	no	no	yes	no	no	no	no
fund12	no	no	no	no	no	no	no	no	no	no	no
fund13	yes	no	yes	yes	no	yes	no	no	yes	yes	yes
fund14	yes	yes	yes	yes	no	yes	yes	no	no	no	no
fund15	yes	no	yes	yes	no	yes	no	no	yes	no	yes
fund16	yes	yes	yes	yes	no	no	yes	no	no	yes	yes
fund17	yes	no	yes	yes	no	no	yes	yes	no	yes	no
fund18	yes	no	yes	yes	yes	yes	no	yes	no	no	yes
fund19	yes	yes	yes	no	no	no	yes	yes	no	yes	yes
fund20	yes	no	yes	yes	no	yes	yes	no	no	yes	yes

Table 3.3: Excel table that shows our analysis

Continuing in this sense, we copied and pasted the entire webpage or each specific content or argument to collocate it in a specific folder, whose name is the same as the name of each column that is present in the excel sheet.

Important to point out that the format about how we saved each file was UTF-8 and each single file was copied and pasted in a specific software called Notepad++. Then searching the information on the text to analyze the language and after that saving it, we could find the file in a specific folder. It is important to make clear that each file in each folder was named as the fund that we were analyzing. The reason why we have made this is clear.

All of this information, later, has been analyzed by our researcher Andrea Fronzetti Colladon in order to extract information from the text and put him in the condition to start making content and sentimental analysis using specific computering and engineers tools and software to analyze the linguistic style in order to obtain results.

3.6   Software and Innovative techniques used

Strategic management scholars frequently rely on content and sentimental analysis to gather data in a wide range of research streams.

The use of these two analysis is appealing to researchers in strategic management because examination of narrative texts such as annual report text, press releases, interview transcripts, mission statements, allows the discrete study of a number of statements, beliefs, and cognitions from top-level executives that are generally difficult to obtain (Morris, 1994).

Despite its dissemination, content analysis is very laborious and researchers must go to great lengths to insure reliability in data coding and subsequent analyses. To improve these concerns, researchers have supported the use of computer-aided content for the coding of organizationally produced texts such as annual reports and mission statements (Morris, 1994).

In general, three kinds of content methodologies exist (Deffner, 1986; Morris, 1994). They are named human-scored schema, individual word count systems, and computerized systems using artificial intelligence.

- *Human scored systems* involve training of coders to classify text according to specific classification categories. In this system, the first step is a determination of what aspect of text will serve as the unit of analysis (word, phrase, sentence, paragraph, full text). Then, categories are developed for coding rules and classification are developed for each category. Coders are then trained to classify text and reliability is subsequently assessed.

- *Individual work count systems*, different from human-scored schemas, aim to classify into a number of semantically equivalent categories the text and then, by using frequency, it counts in order to determine the relative importance of each category in a text (Weber, 1990).

- *Artificial intelligence systems* incorporate features that consider the lexicon and syntax of words (Rosenberg, Schnurr, & Oxman, 1990). Therefore, there is a mechanism to resolve words with more than a single meaning. Artificial intelligence systems have been the least prevalent technique in management research (Morris, 1994).

Keeping this in mind, nowadays there are specific software that could be useful for the application of individual word- count systems and artificial intelligence systems. Although word count systems can be performed by human coders, computerized systems such as DICTION, LIWC and SBS could be advantageous because of their near perfect reliability, speed, and cost effectiveness.

Therefore, the linguistic style of crowdfunding campaign for financing social fund that we have discussed above could be analyzed using DICTION or LIWC (Linguistic Inquiry and Word Count) or the SBS (Semantic Branding Score) which are innovative software packages that help us in the content analysis of a simple test.

The functioning of these software packages relies on the assumption that the use of words signals psychological information beyond their literal meaning and independent of their semantic context (Pennebaker et al., 2003). All these software packages analyze spoken or written text on a word by word basis, clustering the words into pre-established linguistic categories.

There are obvious disadvantages and advantages to using software packages utilizing such word count approach. To understand better the difference it is important to explain each kind of software a little bit better. Firstly we are going to describe DICTON and LIWC, in order to understand why we chose to adopt the SBS, an innovative tool developed by Andrea Fronzetti Colladon.

3.6.1 Dicton

The DICTION software was originally developed to analyze the speeches of politicians (Bligh et al., 2004; Hart, 1984, 2001) and is currently used widely in management research (Rogers et al., 2005; Short and Palmer, 2008). Its target is to count the types of words frequently identified in contemporary English to apprehend the linguistic style (Davis et al., 2012; Hart, 1984).

In a nutshell, DICTION is a computer-aided content analysis program built in a number of theoretical bases in linguistic research. DICTION has a number of attractive characteristics that could be used to assess unique elements of language in narrative texts germane to strategic management research. Specifically, DICTION software package (Hart, 2000)

contains more than 10,000 search words and 31 predefined dictionaries that are used to analyze any given text.

Based on linguistic theory (Bligh et al., 2004b) the dictionaries were developed based on a number of different types of narrative texts including business texts such as mission statements, annual reports and CEO speeches. These 31 dictionaries do not contain duplication and they have been selected to identify frequently encountered words used in public discourse.

Some papers suggest that DICTION can be extremely useful in research involving language usage, because DICTION taps into difficult-to-measure "unobservables" inherent in strategic management research (Godfrey & Hill, 1995). Additionally, DICTION allows for the integration of theoretically rich word count techniques, while also provides the benefits of artificial intelligence techniques that are rare in strategic management research. At the same time, DICTION has many of the abilities of other computer-aided content analysis packages such as the ability to create user-defined dictionaries.

3.6.2 Linguistic Inquiry and Word Count (LIWC)

The LIWC (Linguistic Inquiry and Word Count) software (Tausczik and Pennebaker, 2010) is the most commonly used language analysis tool for researching the relation between psychological variables and word use (Chen et al., 2014; Malal, 2014). Developed within the context of emotional writing (Pennebaker and Francis, 1996; Pennebaker et al., 1997), it is particularly well suited for tracing stylistic aspects of language use (Pennebaker et al., 2003). The words analyzed by LIWC have previously been assigned by independent judges into over 70 linguistic dimensions.

While some LIWC categories derived from psychological theories (e.g., discrepancy words, inhibition words), most categories characterize language at a very primary psychological (e.g. cognitive words, positive and negative emotions,) as well as linguistic level (e.g., prepositions, pronouns, articles) (Pennebaker et al., 2003).

3.6.3 Semantic Brand Score (SBS)

Figure 3-1 : Image of SBS

https://semanticbrandscore.com/

For our text analysis, we have decided to adopt Semantic Brand Score (SBS) that is a new measure of brand importance calculated on text data.

The SBS is usually used to support the process of decision-making within companies. For instance, it can be applied both to assess the importance of a brand respect to competitors and to forecast a company's stock price. Additionally, it is important to argue that the major benefit of SBS is that to offer new views for effective strategic management of brands in the current era of big data.

In the era of big data, it is fundamental to examine the stakeholders in their spontaneous expressions and even other consumers' opinions.

As above said, Semantic Brand Score can be calculated for any set of text documents and it can be applicable to different contexts. Basically, SBS is expressed along the three main dimensions of brand prevalence, connectivity and diversity.

Customer-based brand equity was traditionally conceptualized along the dimensions of brand image marketing activities and brand awareness which can influence consumers' response and purchase intentions and that can generate thoughts, feelings, attitudes and experiences (Grohs et al. (2016) even Erdem and Swait (1998)). Some authors state that brands are seen as the company's response to information asymmetries and customers' uncertainty while others decided to attribute greater importance to brand loyalty, consumer satisfaction and experiences (Nam, Ekinci, & Whyatt, 2011).

A more exhaustive picture regarding the value of a brand could be achieved combining the SBS with sentiment analysis. The Semantic Brand Score has been conceived with the aim of allowing a fast assessment of brand importance while considering multiple points of view

and opinions included in relatively large sets of text documents (Andrea Fronzetti Colladon, 2018). Its computation tries to tie social network analysis and methods of semantic (Leydesdorff & Welbers, 2011; Wasserman & Faust, 1994) and is based on the construction of word co-occurrence networks (where words that co-occur within a specific range are related together).

SBS could be described as the combination of the three dimensions of prevalence, diversity and connectivity (in figure 3.2).

Figure 3-2: Dimensions of the Semantic Brand Score
https://semanticbrandscore.com/

3.6.3.1 Dimensions of the Semantic Brand Score

It is really important to assess and analyze the fundamental three characteristics of SBS:

- ***Prevalence*** represents the frequency with which the brand name emerges in a set of text documents. A high prevalence of the brand corresponds to a high expectation of familiarity for the text authors (Andrea Fronzetti Colladon, 2018).

Moreover, it is quite sure that readers memorize a brand more easily when it is frequently repeated, respect to one that rarely appears.

This suggests a possible link between the dimension of brand awareness and prevalence (Aaker, 1996; Keller, 1993),

- ***Diversity*** is partially tied to the concept of lexical diversity (McCarthy & Jarvis, 2010) and to the study of word co-occurrences (Evert, 2005); it has the target to measure the heterogeneity of the words co-occurring with a brand. This measure is

directly linked to the construct of brand image and hence with the association of other words with the brand (Keller, 1993; Wood, 2000).

- *Connectivity* is instead an innovative measure in the brand equity scenario that derived from social network analysis. (Wasserman & Faust, 1994).

3.6.3.2   Calculation of the Semantic Brand Score

The Semantic Brand Score is a measure of the importance of a brand in a kit of text documents.

Once the set of documents has been identified (and collected), the analyst should proceed with some common text preprocessing procedures. (Andrea Fronzetti Colladon, 2018). The most common steps in SBS analysis are:

1. Textual dates collection, in our case from website pages;

2. The removal of html tags, hashtags, punctuation, special characters, numbers and stop-words (i.e. words like "the" and "a" which usually provide little contribution to the meaning of a sentence) (Andrea Fronzetti Colladon, 2018);

3. The transformation of all the text into lower case words; (Andrea Fronzetti Colladon, 2018);

4. The computation of bigrams (pairs of words recurring together in the same order);

5. The extraction of stems, removing the affixes of words (Jivani, 2011), or the replacement of words with their root words using a dictionary - also known as lemmatization (Asghar, Khan, Ahmad, & Kundi, 2014).

The image below is a synthesis of these steps.
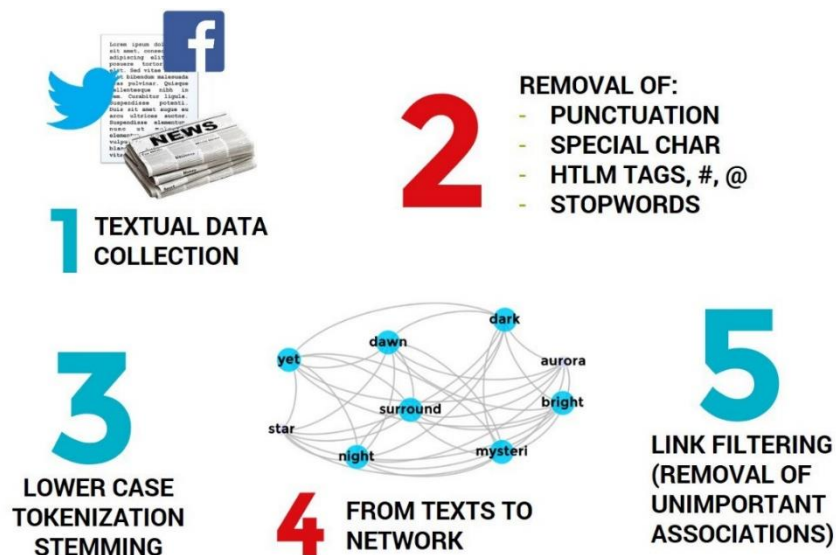
Figure 3-3: Steps of SBS analysis

https://semanticbrandscore.com/

It is important to say that these steps are necessary to reduce the language complexity and retain the most important words which can better convey the meaning of a discourse.

As previously said, SBS has been conceived to express the importance of a brand along the three characteristics of diversity, prevalence and connectivity, which come from the combination and use of semantic metrics and social network (Evert, 2005; Wasserman & Faust, 1994). For the calculation of the SBS, it is important to define its value by summing up the standardized values of diversity, connectivity and prevalence in order to attribute the same importance to each dimension that is analyzed.

It is fundamental to take into account that the Semantic Brand Score does not revel us if the lexical associations around a brand have a negative or positive value. For this reason, the SBS should always be intended with the characteristics of the specific context where it is measured, assessed and analyzed. At this point, in order to evaluate the negativity or positivity of a set of text documents, content analysis might come to help.

It is, in fact, for this reason that we have chosen to adopt content analysis in our research. As previously mentioned, lots of programming languages or software programs permit a multilingual classification of the sentiment of text documents (Gloor, 2017; Mostafa, 2013). The analyst may classify and comment the text documents which include the brand name. In addition, it would be possible to divide the text corpora into two subsets, one with negative and one with positive statements about the brand. In this way, the SBS could be calculated

twice, once for each subset, to understand where the brand is stronger. (Andrea Fronzetti Colladon, 2018).

It could be interesting to note that studying the sentiment of the words of an entire document there could be the possibility, for instance, of having an average positive sentiment for the entire document, but a negative sentiment in the phrases where the brand is mentioned. Furthermore, it should be taken notice that the polarity of the brand co-occurrences is expressed in the range $[-1, 1]$, where positive numbers indicate, on average, a positive sentiment and negative numbers a negative sentiment. Additionally, in the case that the polarity of the brand co-occurrences is correctly calculated, we should choose the possibility of multiplying the score obtained by the SBS, in order to obtain a final number which takes the valence of the textual brand associations into account.

The score zero may come either from a brand which is never mentioned and therefore has a zero SBS or from a very high SBS and a totally neutral sentiment. As a result, the suggestion is to have two separate scores (polarity of associations and SBS) which could be interpreted together.

(In table 3.4 below there is an example of SBS that was computed)

	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT	AU	AV	AW
1		0,997569031					0,71768	CUT SUI PERCENTILI, MAGGIORE DELLA MEDIANA o MAGGIORE UGUALE DEL 75esimo											
2	SBS_MAX100_LOCAL		PR_max100	NEWDI2_max100	CO_max1	SBS_MAX10		COMTFID	COMTFIDI	INFO_PRE	INFO_PRE	COMTFIDI	COM	INFC	INFO	SBS_MA	SBS_M	SBS_M/	SBS_M
3	0,196393144		0,636363636	0,757889127	0,37476	1,76901227		0	0	0	0	0	0	0	0	0	0	1	0
4	0,793443693		1	1	1	3		1	0	1	0	1	0	1	0	1	1	1	1
5	0,228512956		0,476190476	0,285528022	0,250874	1,01259287		1	1	1	1	1	1	1	1	0	0	1	0
6	0,63784488		0,651162791	0,608000219	0,355847	1,6150097		1	0	1	0	1	0	1	0	1	1	1	0
7	0,928759571		1	1	1	3		0	0	0	0	0	0	1	0	1	1	1	1
8	0,060768491		0,0625	0,015520082	0	0,07802008		1	0	1	1	1	0	1	1	0	0	0	0
9	0		0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0
10	0,146647425		0,136363636	0,244914696	0,034711	0,41598923		0	0	1	0	0	0	1	0	0	0	0	0
11	0,638381188		1	1	1	3		0	0	1	0	0	0	1	0	1	1	1	1
12	0,793443693		1	1	1	3		1	0	1	0	1	0	1	0	1	1	1	1
13	2,555546638							1	1	1	1	1	1	1	1	1	1	1	1
14	0,358740992		0,279069767	0,383663625	0,132187	0,79491995		1	1	1	1	1	1	1	1	1	0	0	0
15	0,155227422		0,16	0,215449948	0,114014	0,48946353		1	1	1	0	1	1	1	0	0	0	0	0
16	0,230210511		0,222222222	0,253304171	0,254231	0,7297573		1	1	1	0	1	1	1	0	0	0	0	0
17	0,932520986		0,871794872	0,726429915	0,647164	2,24538868		1	0	1	1	1	0	1	1	1	1	1	1
18	0,06120311		0,034482759	0,070812063	0	0,10529482		1	1	1	1	1	1	1	1	0	0	0	0
19	0,441412673		0,619047619	0,814770395	0,484091	1,91790859		1	0	1	0	1	0	1	0	1	0	1	1
20	0,705381239		1	1	1	3		0	0	0	0	0	0	0	0	1	1	1	1
21	0		0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0
22	0		0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0
23	0,209314005		0,333333333	0,464255574	0,219552	1,0171412		1	1	0	0	1	1	0	0	0	0	1	0
24	0		0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0
25	0,493223026		1	1	1	3		1	1	0	0	1	0	0	0	1	0	1	1
26	0		0	0	0	0		1	0	0	0	1	0	0	0	0	0	0	0
27	0,058756198		0	0,031247162	3,98E-06	0,03125114		1	1	1	1	1	1	1	1	0	0	0	0
28	0,314225163		0,28125	0,570840844	0,053641	0,9057317		1	0	1	0	1	0	1	0	1	0	1	0

MATRICE TUTTO HP SELEZIONATETRANNEHP HP_MOSTCOM TUTTO ...

Table 3.4: Excel table of Semantic Brand Score

In addition, probabilistic topic modeling algorithms might come to help, as a convenient way to extract meaning from large text corpora.

A high SBS is often assigned to a brand that appears frequently, while a low SBS induce a negative sentiment of the brand co-occurrences. This could motivate an intervention for enhancing the dialogue with consumers, reducing the causes of discontent. Generally, we can argue that if a brand is almost ever cited in a specific context, this will result in a high SBS, otherwise negative.

As previously mentioned the SBS is a new measure of brand importance which combines methods of social network analysis and semantic and can be applied to large text corpora, across markets, products and languages. (Andrea Fronzetti Colladon, 2018). The main advantage of SBS is that it can be used to estimate the importance of a brand in contexts where stakeholders, or other consumers, can express themselves more spontaneously than when formally interviewed or when in a focus group. Moreover, SBS could be applied to big data, and its measurement is usually faster and more flexible than that of traditional survey-based approaches.

3.6.3.3   Advantages of SBS

The SBS could have several advantages:

- Firstly, the score, as previously said, has three dimensions of diversity, prevalence and connectivity. These three dimensions outline different constructs, offering comprehension compared to the researches where the final score is limited to the analysis of a single construct, such as brand popularity on the web or to the calculation of a single metric.

- Secondly, in the calculation of the SBS social network metrics are applied to word co-occurrence networks that can be obtained from any text data, making this measure appropriate for multiple comparisons.

The SBS has the supplementary advantage of being flexible as it can be calculated for any set of words, without being limited to brands. Moreover, it is important to take into account that the SBS is not an overall measure of brand equity and its value could be modified depending on the context that is being analyzed.

To conclude, the final score should always be presented together with the features of the domain which is being considered, and possibly with an evaluation of the negativity or the positivity of brand co-occurrences. (Andrea Fronzetti Colladon, 2018)

CHAPTER 4

4. Analysis of matrix and final results

4.1 Matrix of Funds

In order to assess and understand the importance and the correlation between the use of language in entrepreneurship and the importance of SBS in it, we have believed that it could be appropriate to build a matrix in which we could classify the funds in four main groups. The indexes which we have chosen for the matrix are the **Semantic Brand Score (SBS)** and the **Distinctiveness**.

Our choice has been done in order to promote the innovation of these two measures to assess and realize how the distinct usage of language could induce the shareholders to invest in social impact fund. For this reason we have decided to choose these two indexes because the SBS shows an innovative technique and measure that is not developed yet, while the distinctiveness tries to explain the complexity and the sophistication of the language.

		DISTINCTIVENESS		Total
		0	1	
SBS	0	118	35	143
	1	27	15	42
		145	50	195

Table 4.1: Matrix of Funds

As we can see in Table 4.1, the matrix is made up of four main groups. We have thought to name each group with a proper name in order to attribute a specific characteristic for each name. Therefore, the group which presents an index of 0 in both distinctiveness and SBS is named ***dorky wimp***. It is important to highlight that number 0 wants to express a low usage distinctiveness in the language and even a low SBS. In addition the funds of this group want to represent a simple communication style that does not give a relative importance on the social theme.

The second group is called, instead, ***smart wimp*** and shows us a high presence of distinctiveness and a low SBS. This means that here the distinctiveness of languages used is very high while the semantic brand score is low. As a consequence, here we can find a poor social identity but the sophistication in the communication is taken into account: this means that there are the tools to communicate the social theme, but it is not done.

The third group is characterized by a high presence of SBS and low presence of distinctiveness, it is named ***dorky hero*** and wants to represent a strong social identity that cannot use an appropriate communicative style; while the last group, that is called ***smart hero***, represents a high level of SBS and distinctiveness.

It could be interesting to point out that only a small number of funds that we have classified shows us a high level of SBS and distinctiveness, while the majority are in group dorky wimp.

As it is clearly showed in the matrix, 118 funds have both low degree of SBS and distinctiveness, while only 15 funds present both distinctiveness and SBS high. Moreover, we could conclude that 143 funds out of 195 show a low degree of SBS, while even 145 funds out of 195 point out a low degree of the usage of distinctiveness.

Additionally, taking it in mind, it is showed that even in the case of a high SBS and distinctiveness the ratio among these two indexes remains constant; in fact, we have a total of 50 funds with high distinctiveness and 42 funds with a high SBS.

4.2 Descriptive Analysis of the Results

The construction of the matrix is been useful to define the 4 main groups in order to assess and better understand the single characteristics of each group. To analyze each specific group we have tried to use the same characteristics that we have already used in the Chapter 2, in order to evaluate for each group what the main proprieties and contents are.

Therefore, descriptive statistics in this case has been done choosing these eleven main characteristics, above mentioned, that are, for each group, the following:

1) Limited partner type
2) Number of investments
3) Impact themes
4) Social and environmental metrics
5) Target IRR
6) Asset classes
7) Target fund product asset under management
8) Committed capital
9) Average investment size
10) Maturity
11) Geography

4.2.1 Characteristics of the Group ''Dorky Wimp''

The main characteristics that could be relevant are the following:

1) Limited Partner type

In this graph it is extremely important to focus our attention on 56 funds that invest in DFI. As for the remaining, instead, see Figure 4-1, with a number of 27 and 22, which correspond respectively to endowment and others and family offers. Finally, there are other types with a small number related.
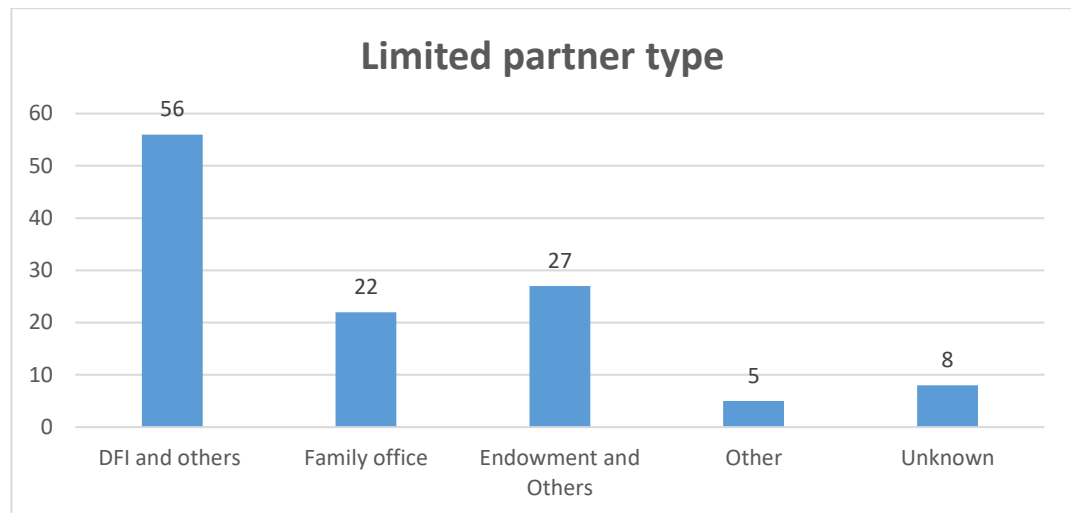
Figure 4-1: Histogram of Limited partner type of Group DORKY WIMP

2) Geography

In this case we can observe that the main percentage of the fund (among all) is concentrated in North America (28%), while 21 % is in Africa. Therefore, about the 50 % out of the 118 funds present in group dorky wimp is located in North America and Africa. Only 11% is located in Latin America while 12% is in Europe.

This could mean that 28% out of 118 funds on 195 uses a low distinctiveness of language and therefore it is evident that in the North America entrepreneurs do not give most relevance at the usage of language to induce potential investor in social funds' investments.
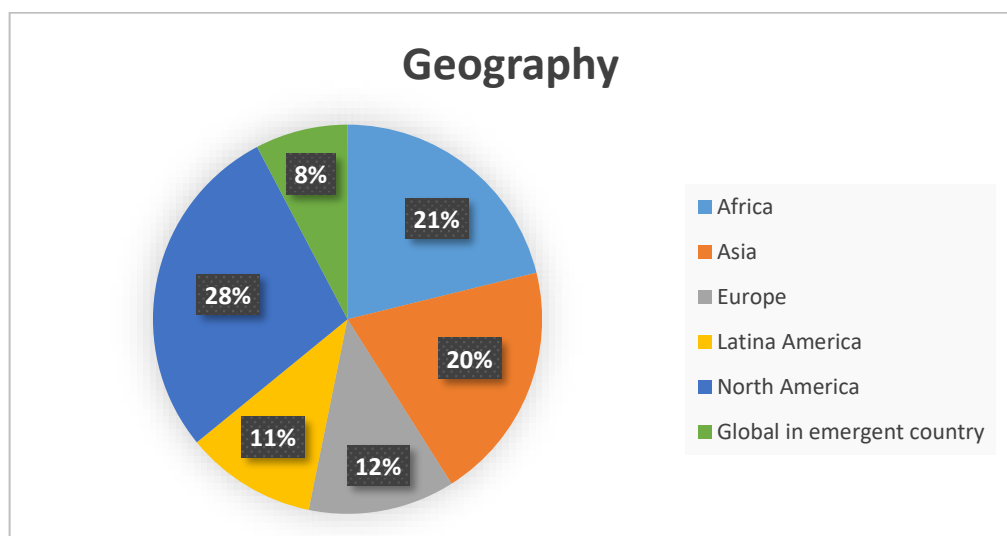
Figure 4-2: Pie chart of Geography of Group DORKY WIMP

3) Themes

In this case the majority of themes treated in the 118 funds is Microfinance that is dealt in 38 fund out of 118. Then we have food and agriculture in 25 funds and clean energy and technology in 24 funds.

It could be interesting to note that the health theme is not widely dealt, in fact only 1 fund deals with the issue.
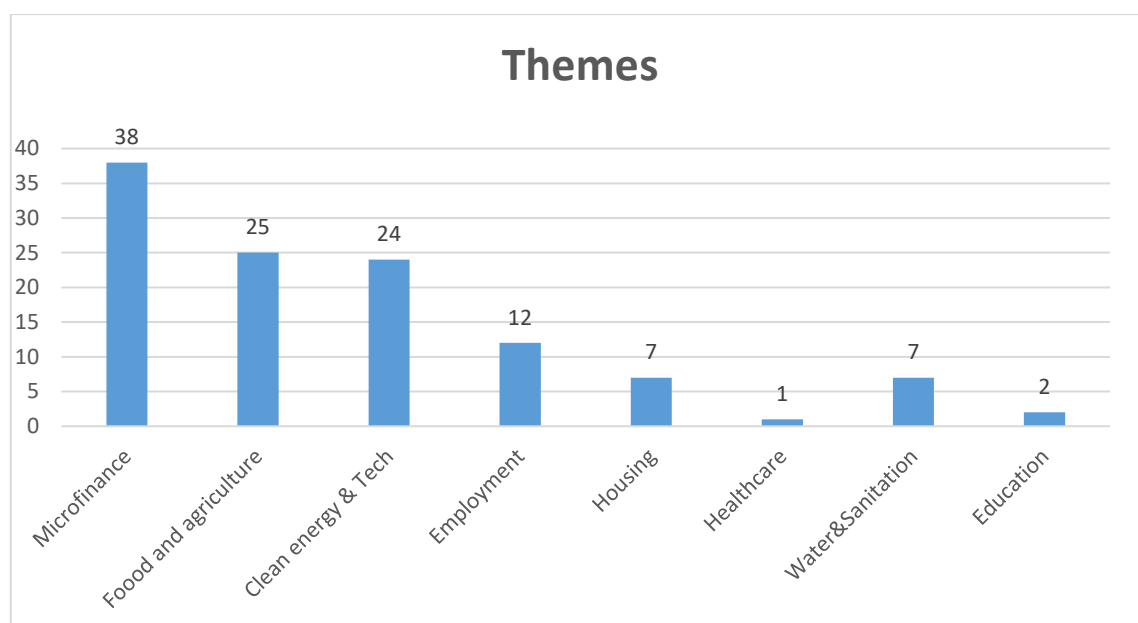
Figure 4-3: Histogram of Themes of Group DORKY WIMP

4) Type of Metric

In this graph, it is showed that 62 out of 118 funds use IRIS while 51 use other types of metric. It could be relevant that about 1/3 of total funds uses this type of metric.
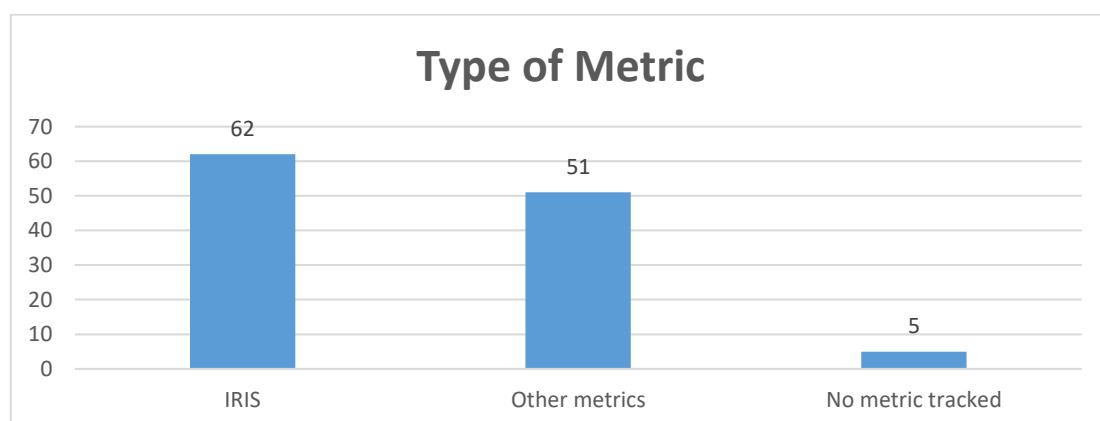
Figure 4-4: Histogram of Type of Metric of Group DORKY WIMP

5) Asset classes

The asset class analysis is important to have an idea where funds are invested.

As we can observe in Figure 4.5, 107 funds out of 119 use Private equity / Venture capital, while the minority use other. We decided to show this result because we claim it is important and particularly relevant that 107 funds out of 119 have this kind of asset class.
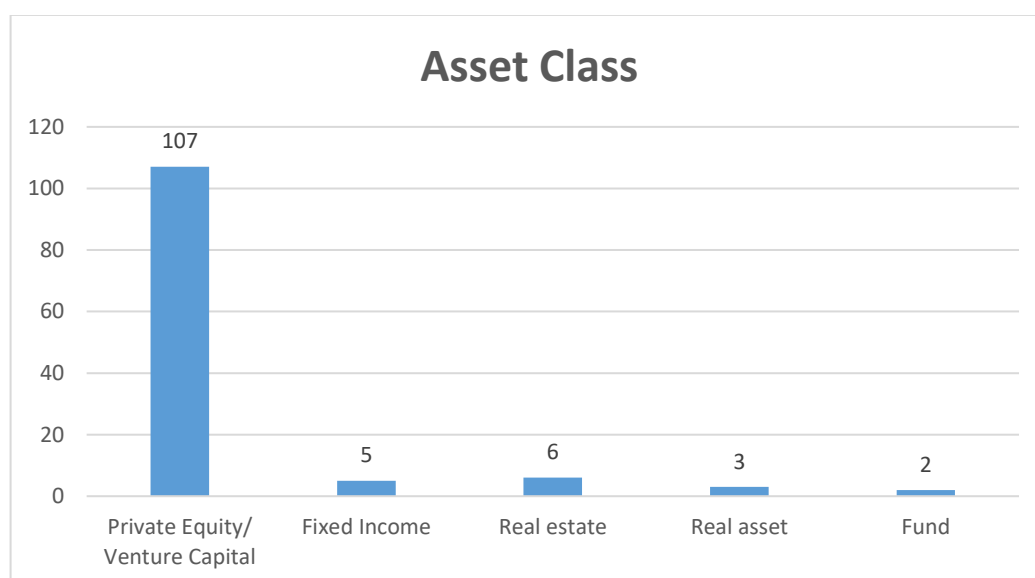
Figure 4-5: Histogram of Asset classes of Group DORKY WIMP

6) Target IRR

A particular importance is even given at IRR that includes value between minus 0.09 and 0.39.

It is clear that 20 funds out of 118 show an IRR included in the range 0.2- 0.29. Only 12 funds are included in the range 0.3-0.39, while for the 43 funds we do not have the IRR.
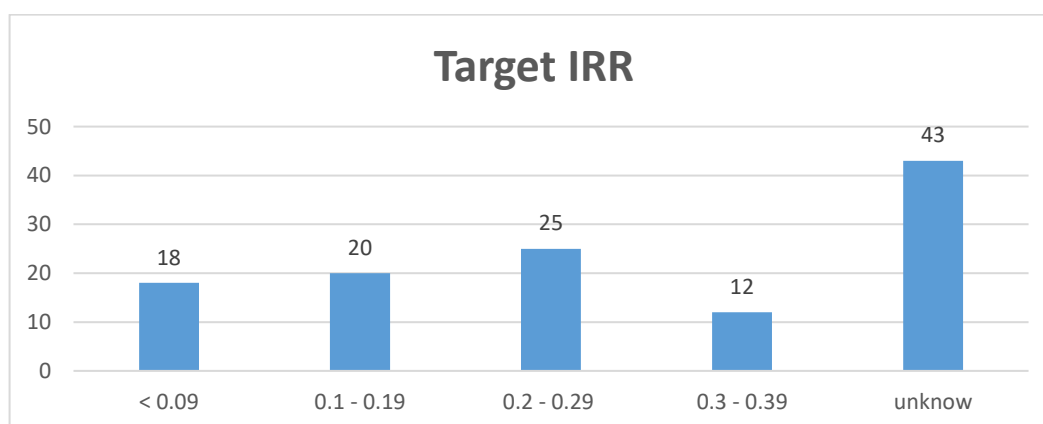
Figure 4-6: Histogram of Target IRR of Group DORKY WIMP

7) Number of Investments

In this graph the majority of investments that are done by 118 funds is included in the range 0-20 investments. This means that the main part of funds of the 118 uses less than 20 investments for each fund. Only one fund includes a range of investment between 80 and 100 investments.
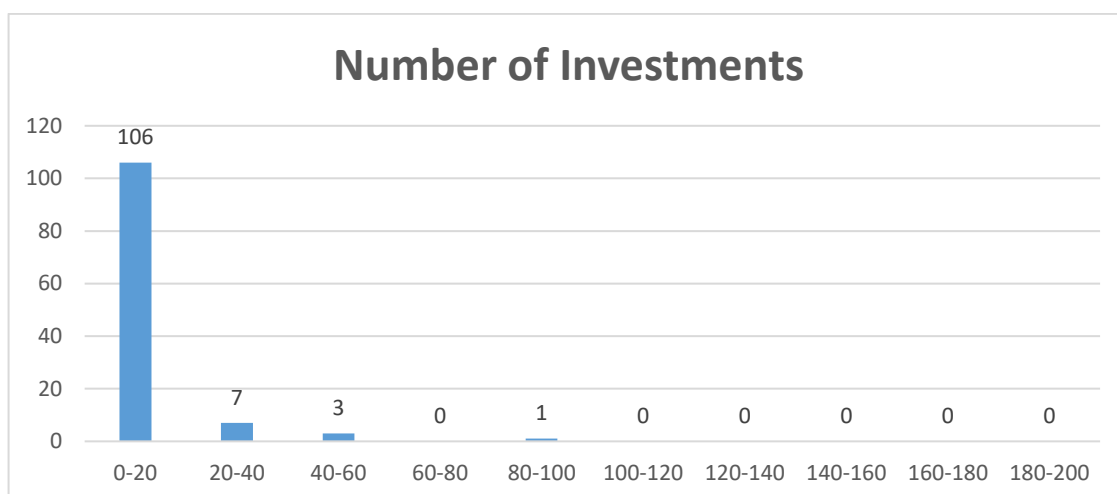
Figure 4-7: Histogram of Number of Investments of Group DORKY WIMP

8) Target fund product

The majority target fund product is between the range of 50 and 300 million, in fact 44 out of 118 funds are included in this range. Other 40 out of 118 funds are, instead, contained in the range 5- 50 million, while the remaining is present in the other ranges with a small number.
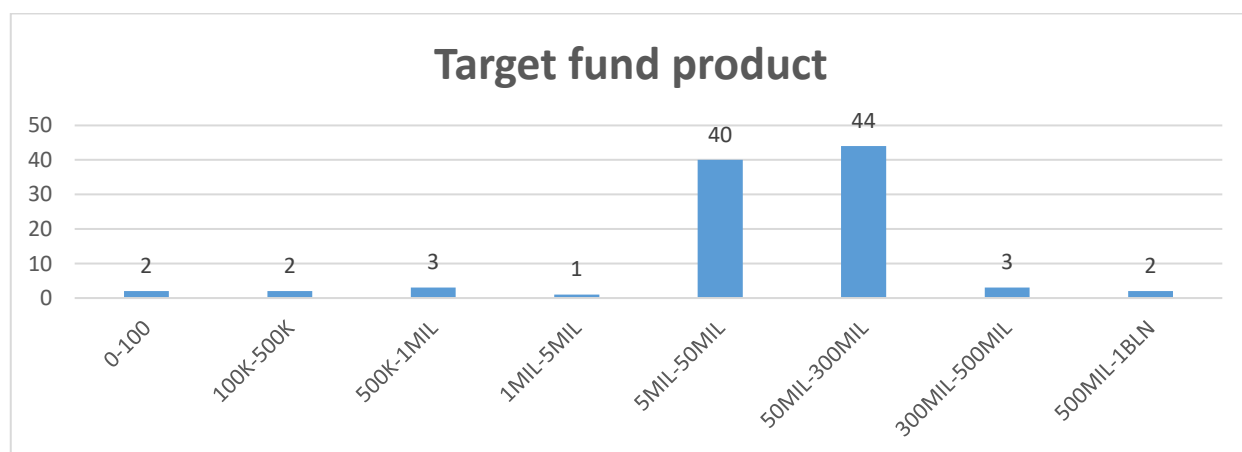
Figure 4-8: Histogram of Target fund product of Group DORKY WIMP

9) Committed Capital

In the graph below, the committed capital used by 40 funds (the majority) is included in the range 5-50 million, while 24 funds are contained in the range of 50-300 million. Notice that in the ranges 50-100 K and 500 million and 1 billion are not present any funds.
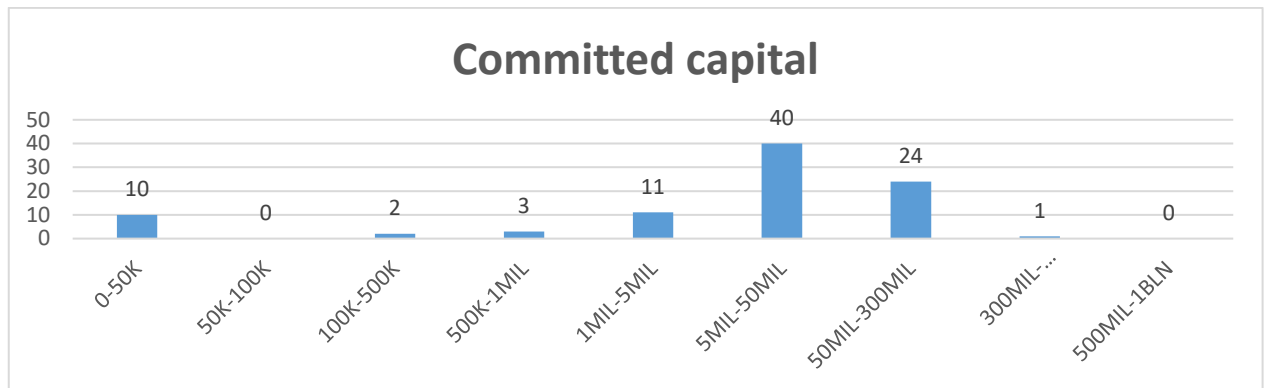
Figure 4-9: Histogram of Committed capital of Group DORKY WIMP

10) Average investment size

One important point is the individuation of the average investment size to better understand what is, in term of million, the average of investment that are used in this group.

Looking at the graph in Figure 4.10, it is clear that 37 out of 118 funds are between the ranges 1 to 5 million, while in the other ranges we can observe a distribution of about 10-15 for parameter. Notice that only 2 out of 118 funds are included between the ranges 0-50 K.
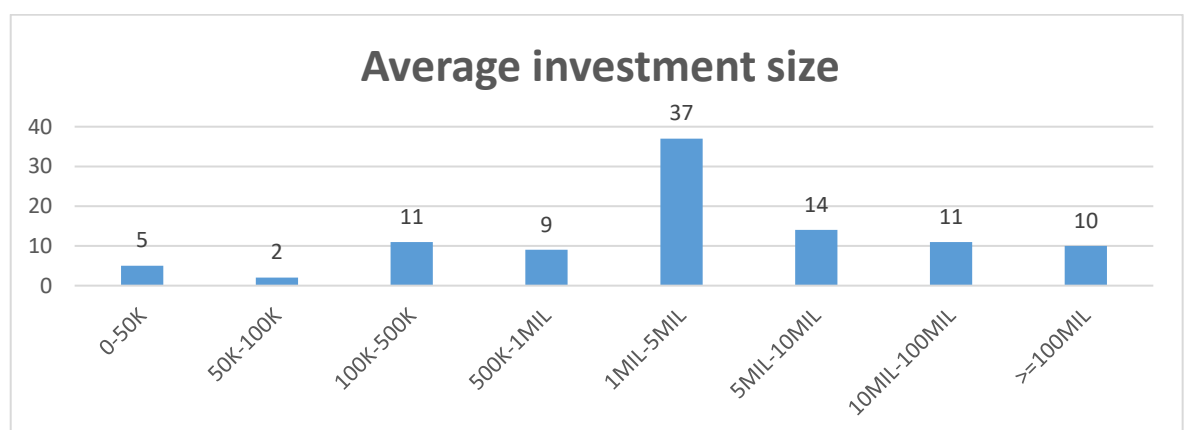
Figure 4-10: Histogram of Average investment size of Group DORKY WIMP

11) Maturity

The maturity is not mostly dealt in the funds, in fact we could argue that the majority presents a term of 10 years, 5 and 12 years. Notice that in 96 out of 118 funds the maturity is not specified.
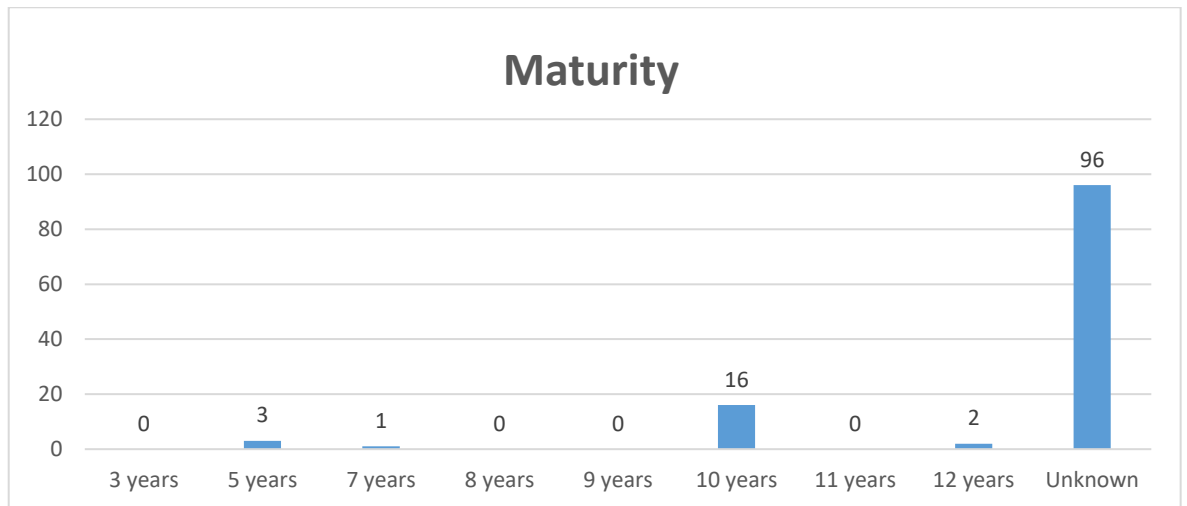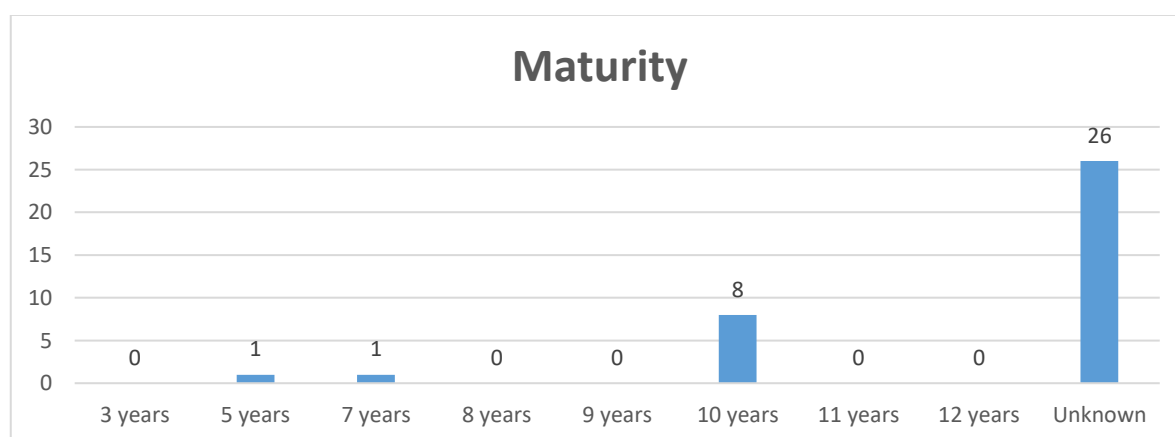

Figure 4-11: Histogram of Maturity of Group DORKY WIMP

4.2.2   Characteristics of the Group ''Smart Wimp''

In this group the main characteristics that could be relevant are the following:

1) Limited partner type

As we can see in the graph below (Figure 4-12), 20 out of 35 funds of this particular group have the feature to invest in DFI and others, while 6 use both endowment and family office. The conclusion of this should highlight that, hence, the potential investors of funds prefer to invest in DFI rather than family office or endowment.
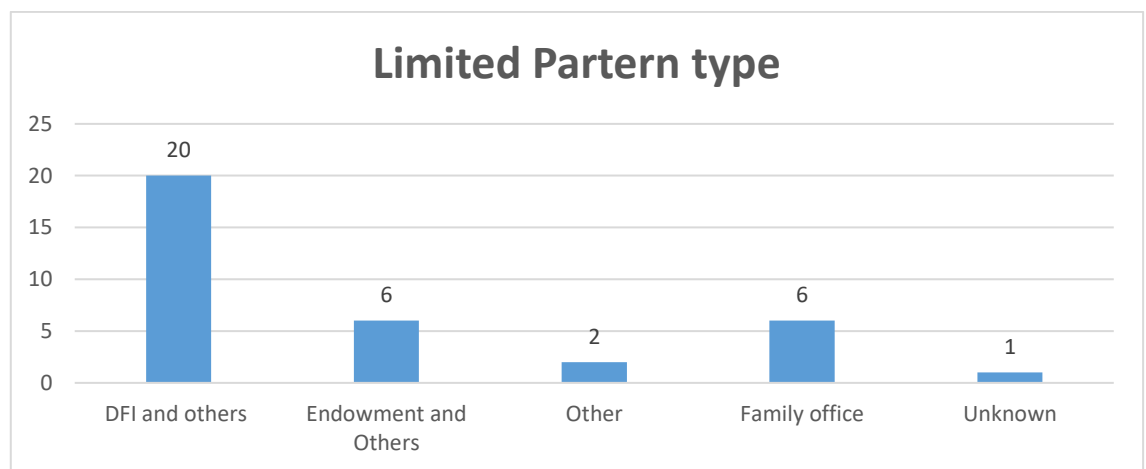
Figure 4-12: Histogram of Limited Partner type of Group SMART WIMP

2) Geography

In this case we can observe that the two main percentages of the fund (among all) are concentrated both in North America and Africa with a number of 25%. Therefore, 50 % of the 35 funds present in the group smart wimp is located in North America and Africa. Only 19% is located in Latin America, while 3% is in Europe. This could mean that in 35 out of 195 funds the potential entrepreneurs give a particular relevance only at high level distinctiveness in the usage of the language to induce potential investors in social funds' investments.
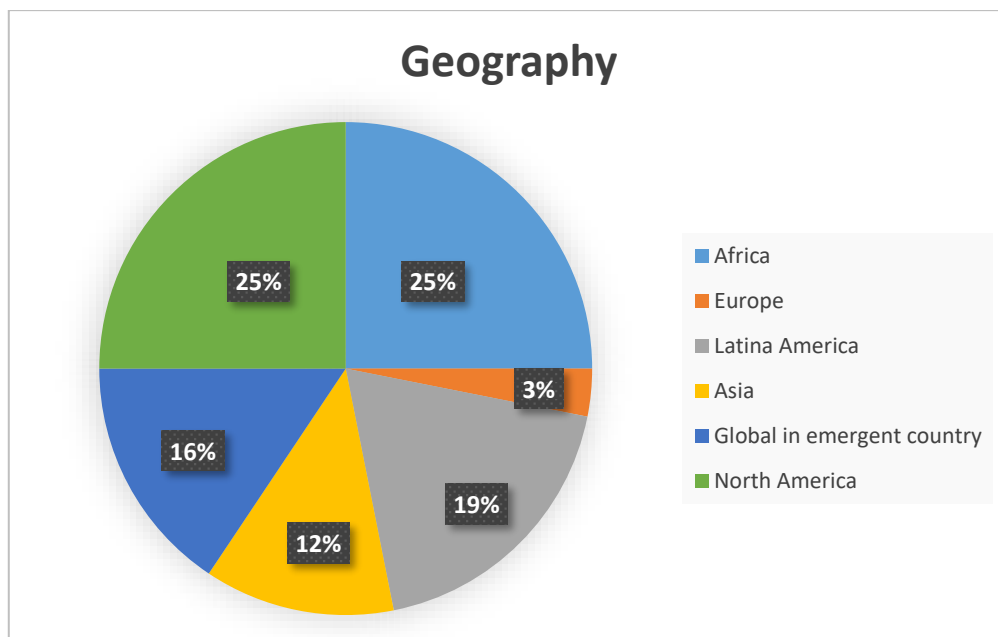
Figure 4-13: Pie chart of Geography of Group SMART WIMP

3) Themes

As we can observe from the graph in Figure 4-14, the prevalent theme that is dealt is Food and agriculture, than we have Microfinance and with a same number of 4 out of 35 funds we find clean energy and technology with healthcare.

Despite the group dorky wimp, here is clearly visible that the theme of healthcare is widely dealt, while the topic of food and agriculture in this group keeps the first position compared to the previous group.
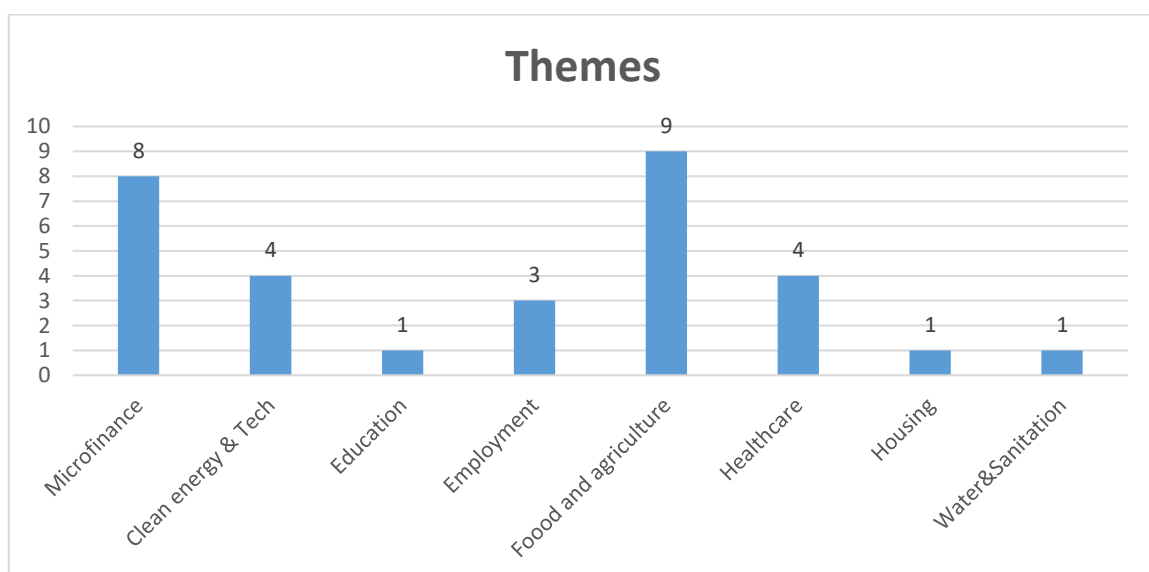
Figure 4-14: Histogram of Themes of Group SMART WIMP

4) Type of metric

The most frequently used type of metric, even in this case, is IRIS, which is used in 18 out of 35 funds. The remaining 16 funds use other metric.
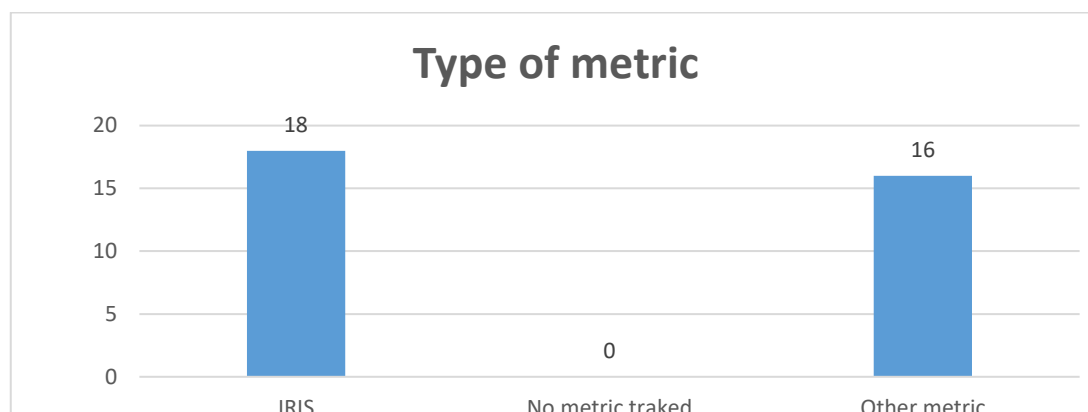
Figure 4-15: Histogram of Type of metric of group SMART WIMP

5) Asset class

Even in this group the asset class analysis is important to have in order to know where funds are invested.

As we can observe in Figure 4.16, 30 funds out of 35 use Private equity / Venture capital, like the group dorky wimp, while the minority use real estate and real asset. We decided to show this result because, even in this case, we think it is important and particularly relevant that 30 out of 35 funds have this kind of asset class.
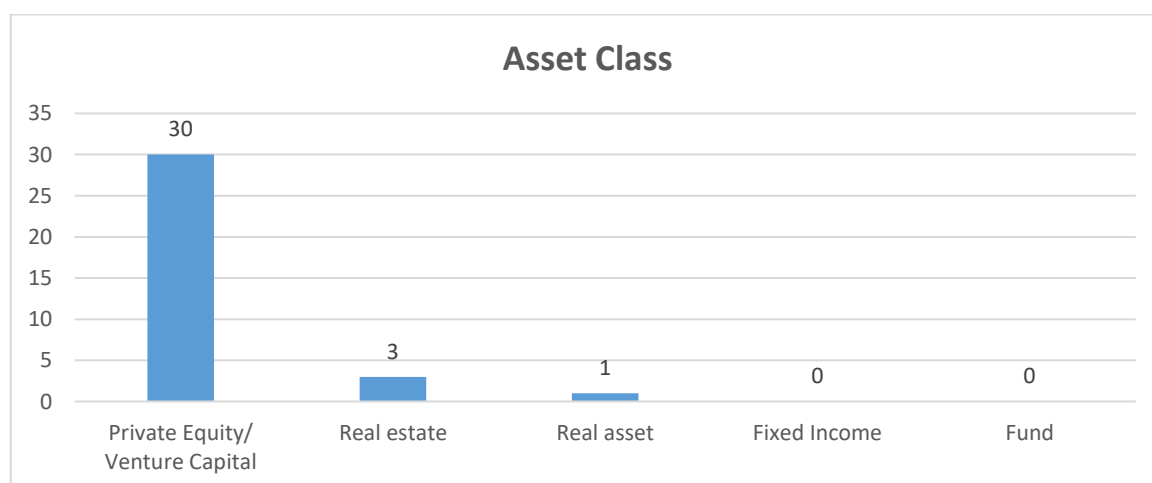
Figure 4-16: Histogram of Asset class of group SMART WIMP

6) Target IRR

A particular importance is even given at IRR that includes value between minus of 0.09 and 0.39.

It is clear that 10 funds out of 35 show an IRR included in the range 0.1- 0.19. Only 3 funds are included in the range 0.3-0.39, while for the 9 funds we have an IRR included in the range 0.2-0.29. Notice that, differently from group DORKY WIMP which have the majority of funds between the ranges 0.3-0.39, here the majority are in the range 0.1-0.19.

The main consequence is, with no doubt, that a high level of distinctiveness may conduce in an IRR between the values of 0.1 and 0.19.
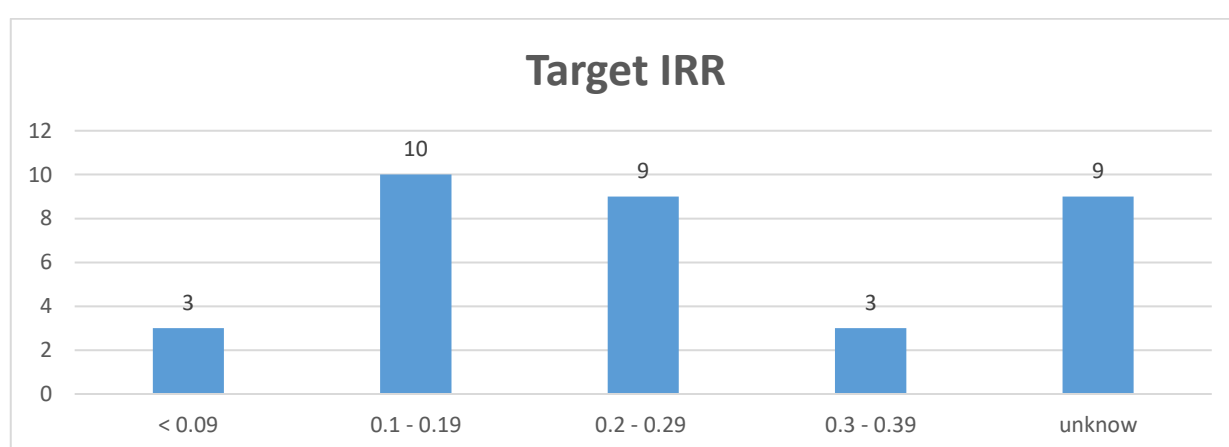
Figure 4-17: Histogram of Target IRR of Group SMART WIMP

7) Maturity

The maturity is not mostly dealt in the funds, in fact we could argue that the majority presents a term of 10 years, 7 and 5 years. Notice that in 26 out of 35 funds the maturity is not specified.

Figure 4-18: Histogram of Maturity of Group SMART WIMP

8) Number of Investment

In this graph the majority of investments that are done by 31 funds is included in the range 0-20 investments. This means that the main part of funds of the 35 use less than 20 investments for each fund. This aspect is in common with group dorky wimp, hence it is clear that the strong or poor use of distinctiveness does not influence the investment size.
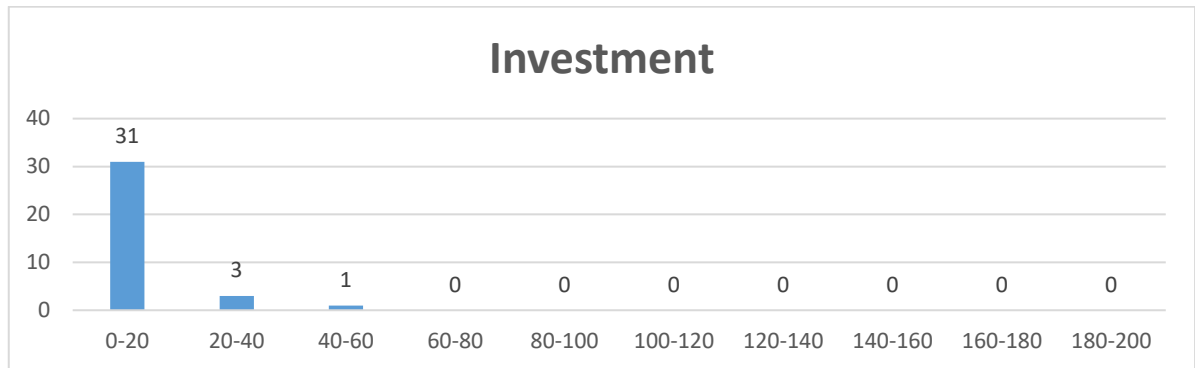
Figure 4-19: Histogram of Investment size of Group SMART WIMP

9) Target fund product

The majority target fund product is between the range of 50 and 300 million, like in group dorky wimp, in fact 13 out of 35 funds are included in this range. Other 10 out of 35 funds are, instead, contained in the range 5 - 50 million, while the remaining is present in the other ranges with a small number.

Notice that the trend results similar to the group dorky wimp, hence the results, even in this case, highlight that both for a high or low level of distinctiveness the influence in target fund product is influent.
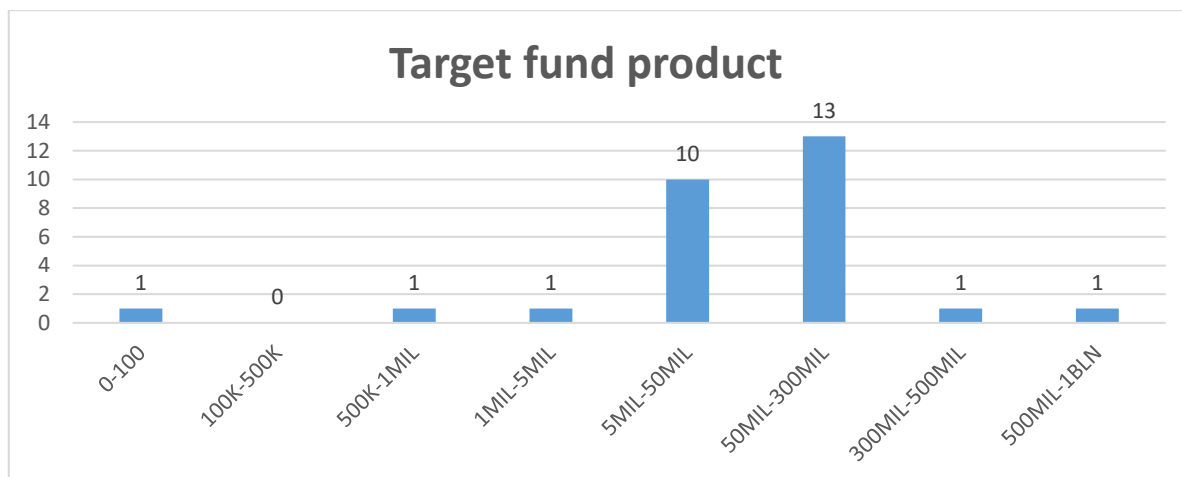
Figure 4-20: Histogram of Target fund product of Group SMART WIMP

10) Committed capital

In Figure 4-21 the committed capital used by 11 funds (the majority) is included in the range 50-300 million, different compared to group dorky wimp. Nevertheless, there are 10 out of 35 funds that are contained in the range of 50-300 million.

Notice that in the ranges 50-100 K, 500K -1MIL and 500MIL-1BLN are not present any funds.
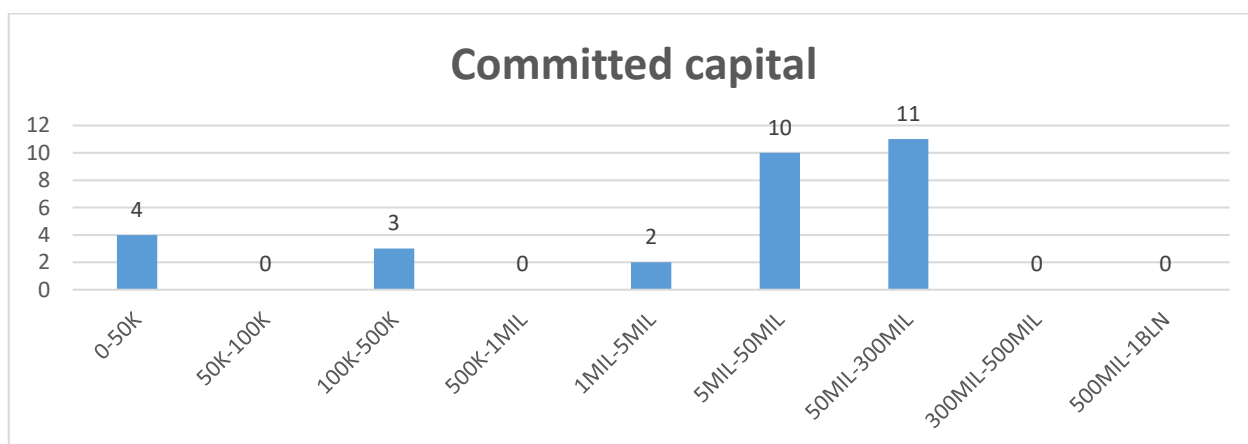
Figure 4-21: Histogram of Committed Capital of Group SMART WIMP

11) Average Investment size

One additional point is the individuation of the average investment size to better understand what is, in term of million, the average of investment that are used in this group.

Looking at graph in Figure 4.22, it is clear that 12 over 35 funds are between the ranges 1 to 5 million of USD, such as group dorky wimp, while in the other ranges we can observe an

important presence of 6 out of 35 fund in the range 10-100 million. Notice that no funds are included in the range 500K – 1 MIL.
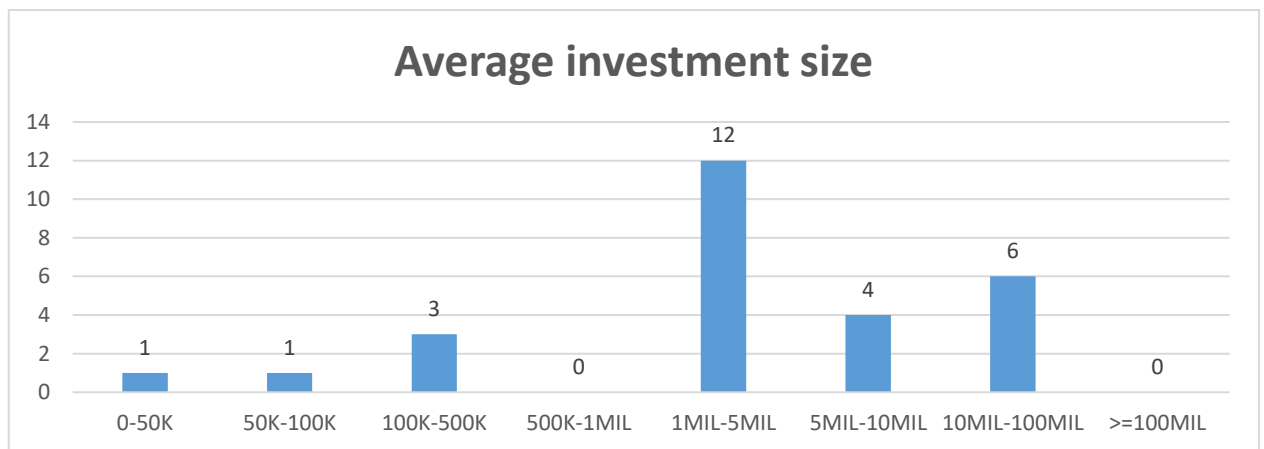
Figure 4-22: Histogram of Average investment size of Group SMART WIMP

4.2.3 Characteristics of the ''Dorky Hero''

In this group the main characteristics that could be relevant are the following:

1) Limited partner type

In the third group analysed the most relevant limited partner type is DFI that represents more or less 50% of the total as it possible to see in Figure 4.23.

The other limited partner types do not have interesting relevance because they represent less than 2% of the entire amount. So also in this case the investors prefer to invest in development financial institutions than in the others limited partner types.
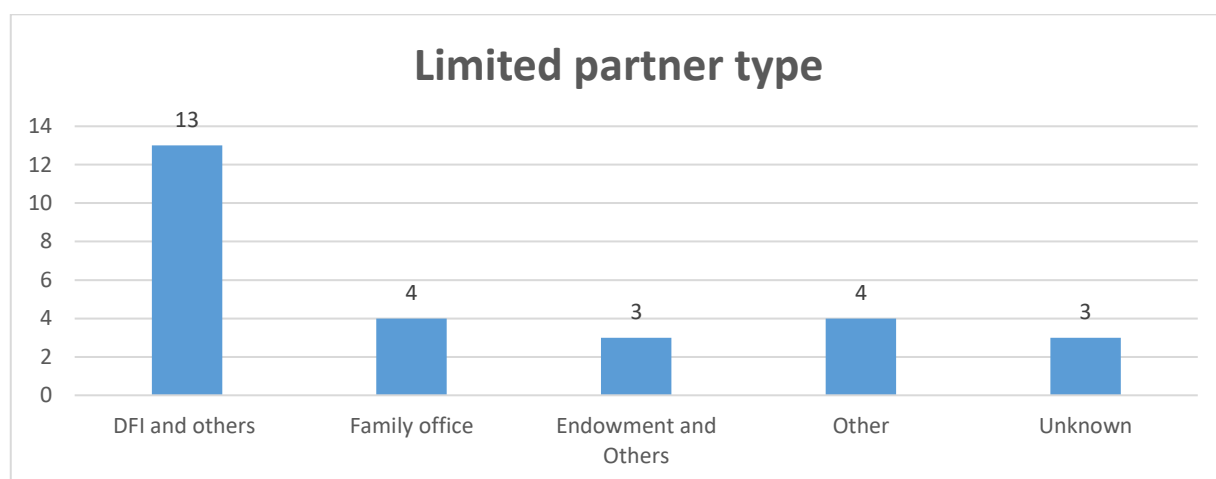
Figure 4-23: Histogram of Limited Partner type of Group DORKY HERO

2) Geography

The group dorky hero is concentred for 45% in Africa and for 30% in Asia as it emerged in Figure 4.24. The investments in the other countries taken into account are equally distributed within a range between 7% and 11%. In this case the North America component is not significant like in the other two cases. So this group invests mostly in countries of the Second and Third World rather than of First.
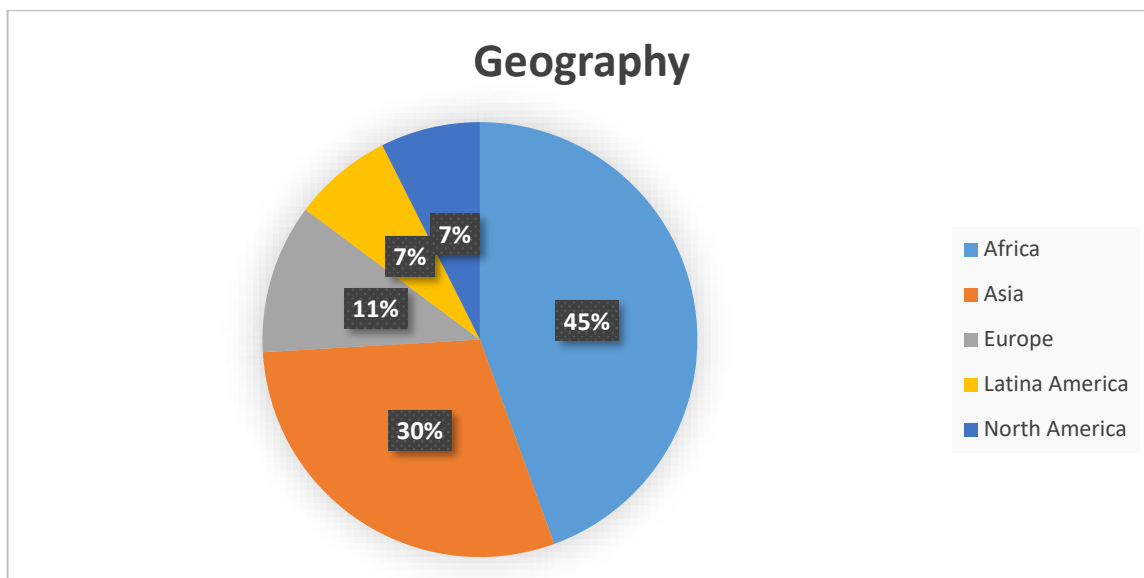
Figure 4-24: Pie chart of Geography of Group DORKY HERO

3) Themes

Also in this case one of main themes is Microfinance, but what changes is the second main group that concerned the employment. The investments focused on the employment are 8 out of the 31 funds analysed. This result can be attributed to the fact that these funds as already said take place in areas not still fully developed. The third relevant theme is the food and agriculture with 5 funds and also in this case the result is in line with the type of countries involved. As it possible to see in Figure 4.25 the other themes do not have a significant role.
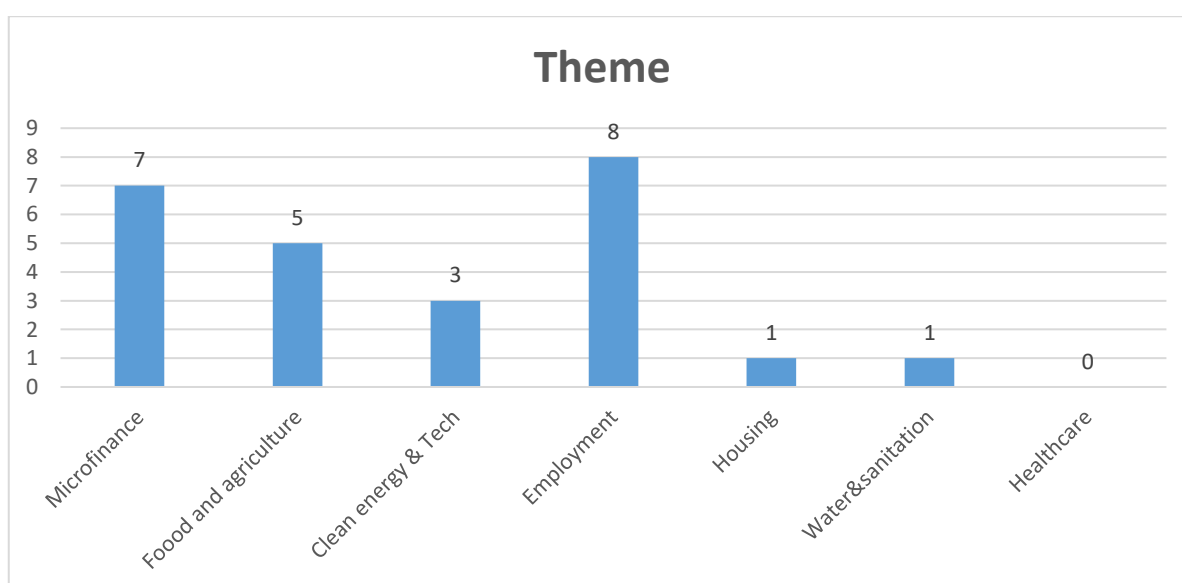
Figure 4-25: Histogram of Theme of Group DORKY HERO

4) Type of metric

In Figure 4.26 it is showed that more or less the entire total of the funds uses some type of metrics, but only 1 of these ones is not tracked. The funds that use IRIS metric are 14, while the funds that use other metrics are 12 out of 37 of the total.
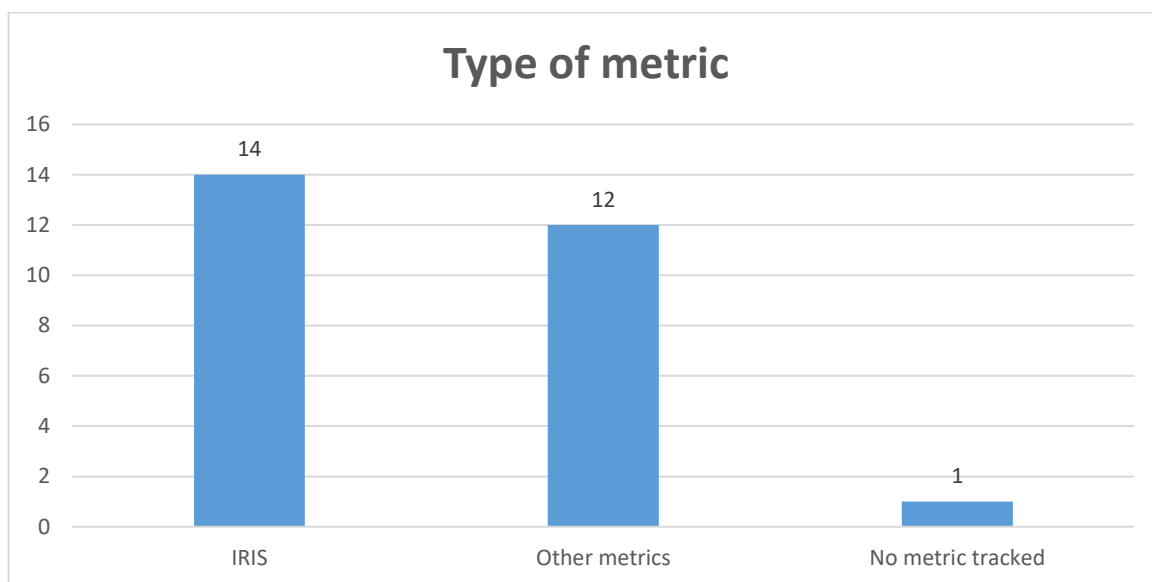
Figure 4-26: Histogram of Type of metric of Group DORKY HERO

5) Asset Class

The third group follows the trend of the previous two groups as we observe in Figure 4.27. So the predominant asset class also in this case is the private equity or venture capital, this due to the fact that this latter is the most frequent and easy asset class used.
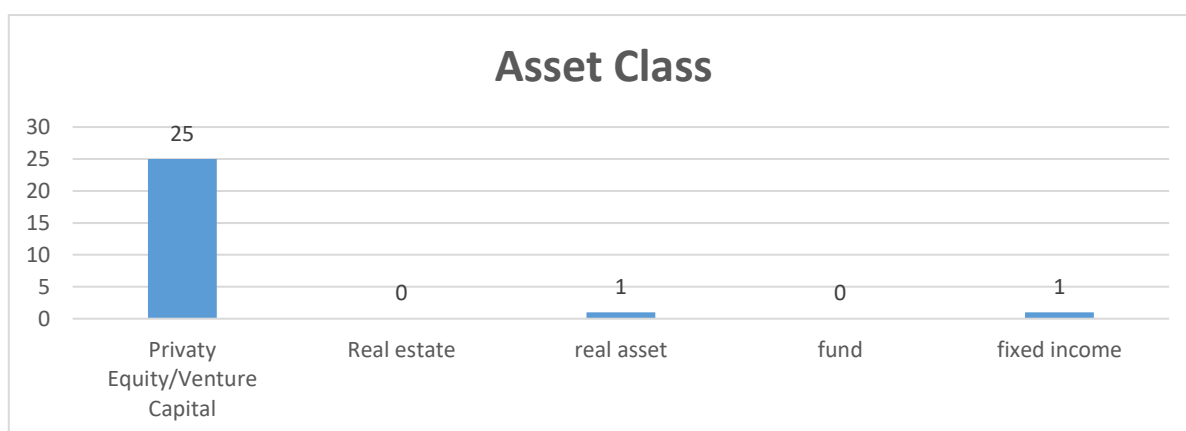
Figure 4-27: Histogram of Asset class of Group DORKY HERO

6) Target IRR

Figure 4.28 shows the results about the range of target IRR of group dorky hero. Each range apart from the range 0.3 – 0.39 has more or less the same amount of funds. So there are 7 funds for the range 0 – 0.09, 7 funds for the range 0.1 – 0.19 and 5 for the range 0.2 – 0.29. But it is important to point out that the predominant column remains that in which there are the funds without a target IRR known.
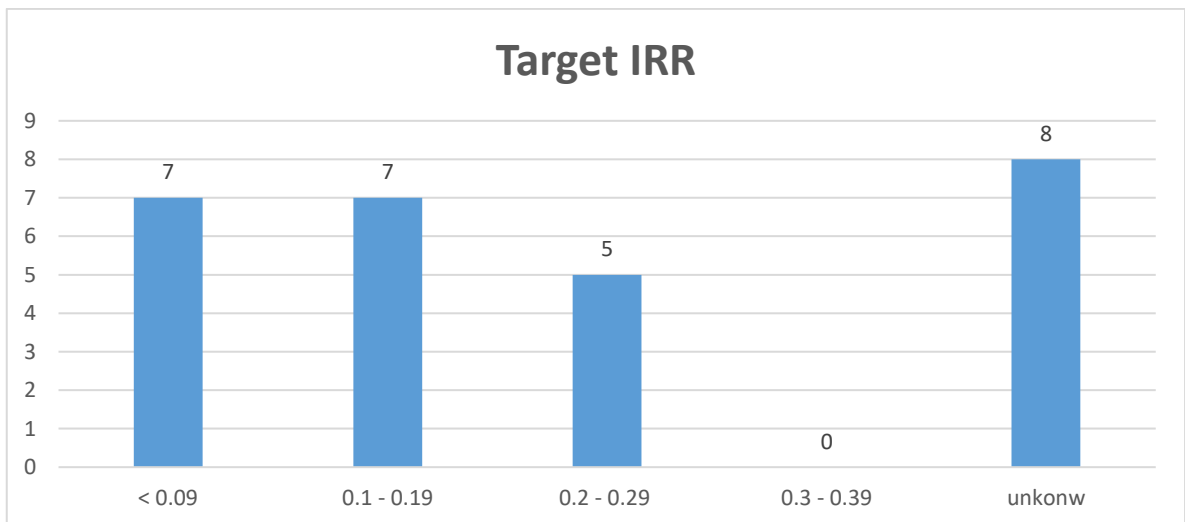
Figure 4-28: Histogram of Target IRR of Group DORKY HERO

7) Target fund product

The majority target fund product range for the third group is between 50MIL-300MIL that collects 13 funds while the second largest range is between 5MIL-50MIL with 10 funds. The remaining ranges, as it is possible to observe in figure 4.29, are not significant.
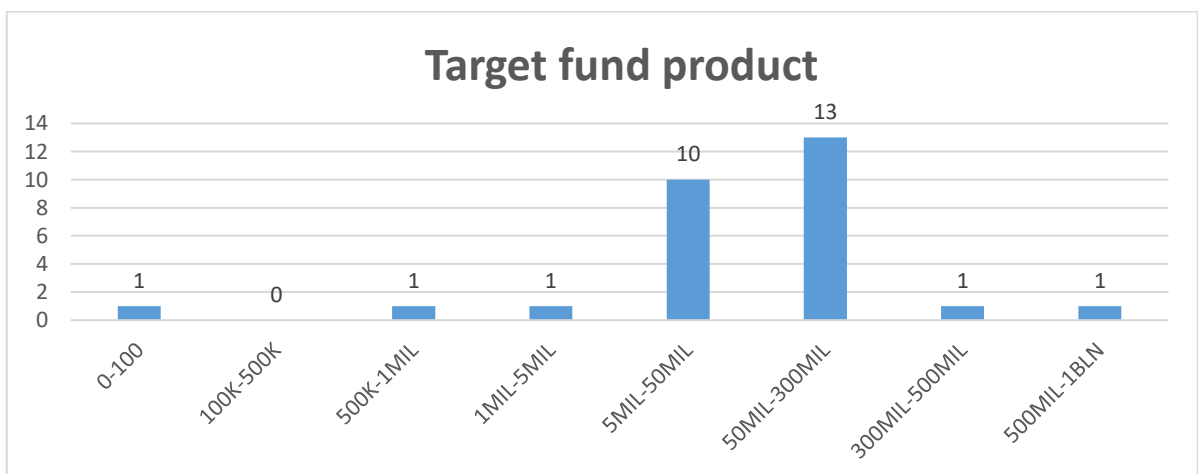
Figure 4-29: Histogram of Target fund product of Group DORKY HERO

8) Committed capital

The results showed in Figure 4.20 mirror more or less the same results obtained in the previous group smart wimp. So the dominant ranges of committed capital also in this case are those between 5MIL-50MIL and 50MIL-300MIL. In the first one there are 11 funds while in the second 7. The other ranges do not have particular interest.
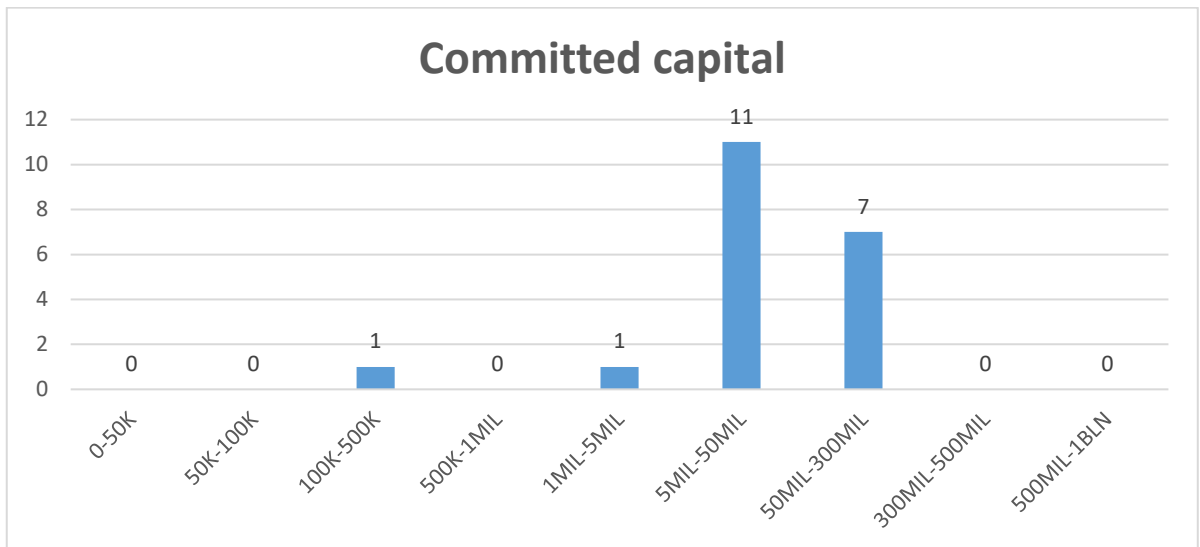

Figure 4-30: Histogram of Committed capital of Group DORKY HERO

9) Number of investment

The third group makes a number of investments that are included in a range between 0 and 20. In this group the total amount of funds are equal to 21. About the others 2 funds have a total amount of investments around 20-40, other 2 funds have a number of investments between 100 -120 and only 1 fund has more than 40-60 investments.
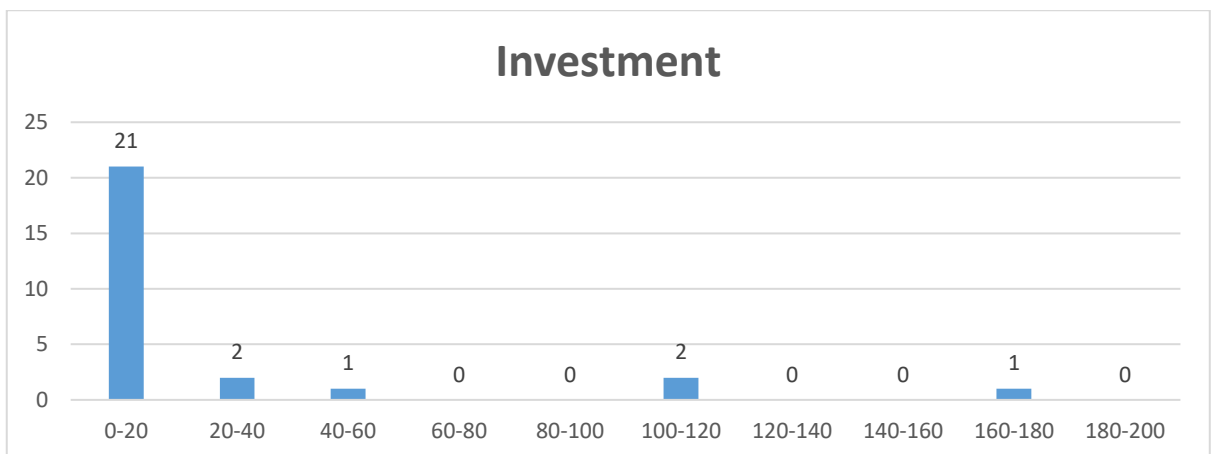
Figure 4-31: Histogram of Investment of Group DORKY HERO

10)   Investment size

Observing the graph in Figure 4.22, it is evident that the majority investment size is around 1MIL-5MIL and collects 14 funds out of 27. In the other ranges we can see that there are not other important trends of investment size.
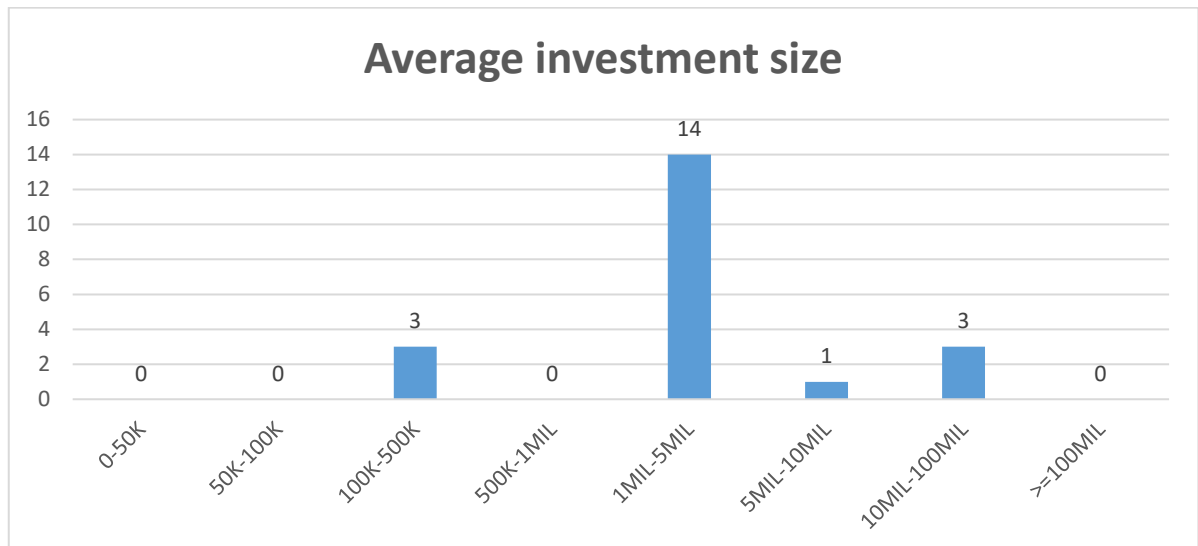

Figure 4-32: Histogram of Average investment size of Group DORKY HERO

11)   Maturity

The latter characteristic analyzed of this group is maturity. Even if in general it is a significant datum, in this case we do not have much to talk about. This is due to the fact that in 21 funds out of 27 the maturity is not tracked. The few funds in which the maturity is tracked include 4 with a maturity of 10 years, 1 with a maturity of 8 years and another one with a maturity of 12 years.
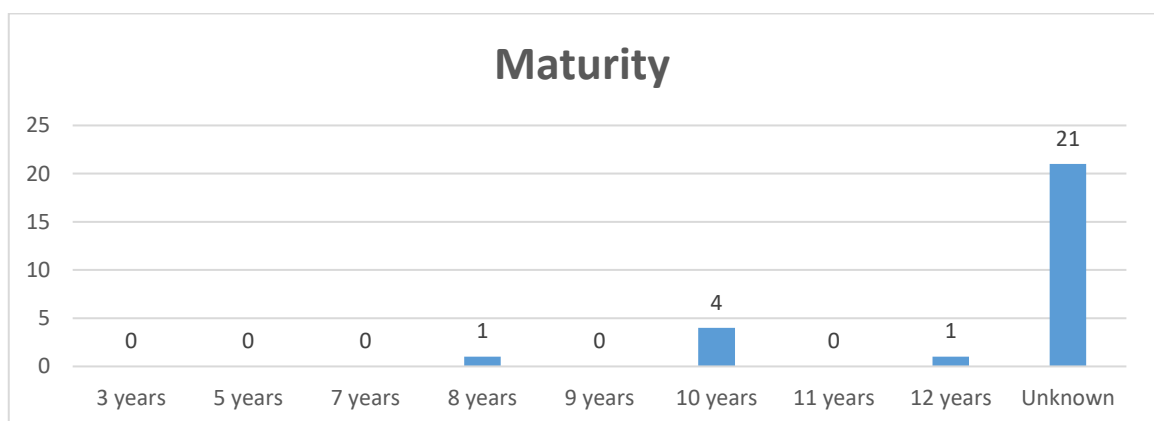
Figure 4-33: Histogram of Maturity of Group DORKY HERO

4.2.4 Characteristics of the '' Smart Hero''

The main characteristics that could be relevant are the following:

1) Limited partner type

The fourth group smart hero follows the same trend of the previous three groups regarding the limited partner type. So also in this case the main limited partner type is DFI with an amount of 9 funds out of the 15 of the total. In Figure 4.34 we can observe also the presence of one fund with a family office partner type and another one with endowment partner type.
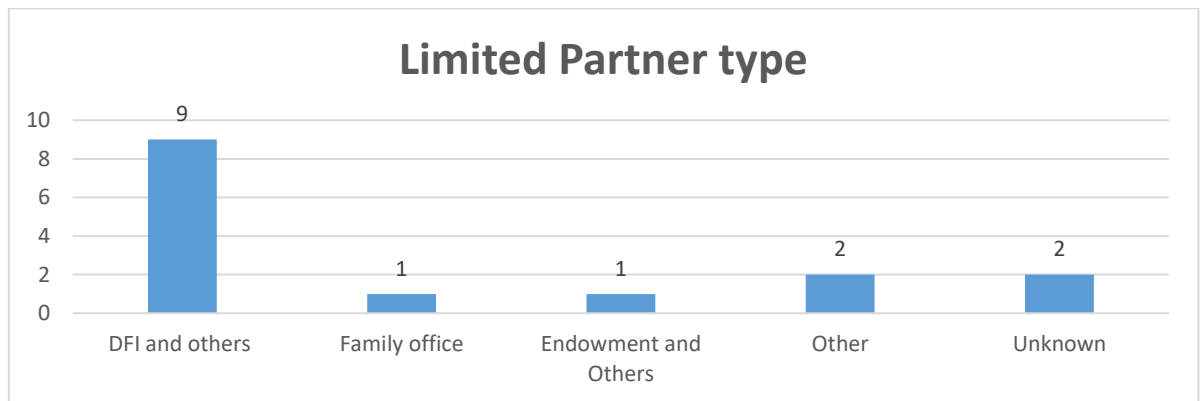
Figure 4-34: Histogram of Limited Partner type of Group SMART HERO

2) Geography

In the geography distribution of the group smart hero we can see again the strong presence of the North America part with a percentage of 40%.

Also Asia and Europe have a significant role with respectively 27% and 20%, while there is the total absence of Latin America. So we can observe the prevalence of developed and developing countries than the emerged ones.
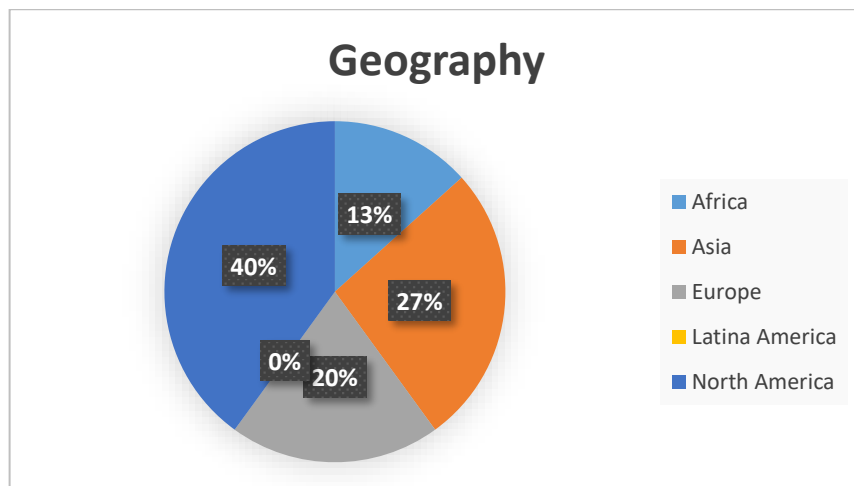

Figure 4-35: Pie chart of Geography of Group SMART HERO

3) Theme

The predominant theme in this case is food and agriculture with 6 funds followed by microfinance with 5 funds. Surprising there are only 2 funds dedicated to clean energy & tech and only one to employment.
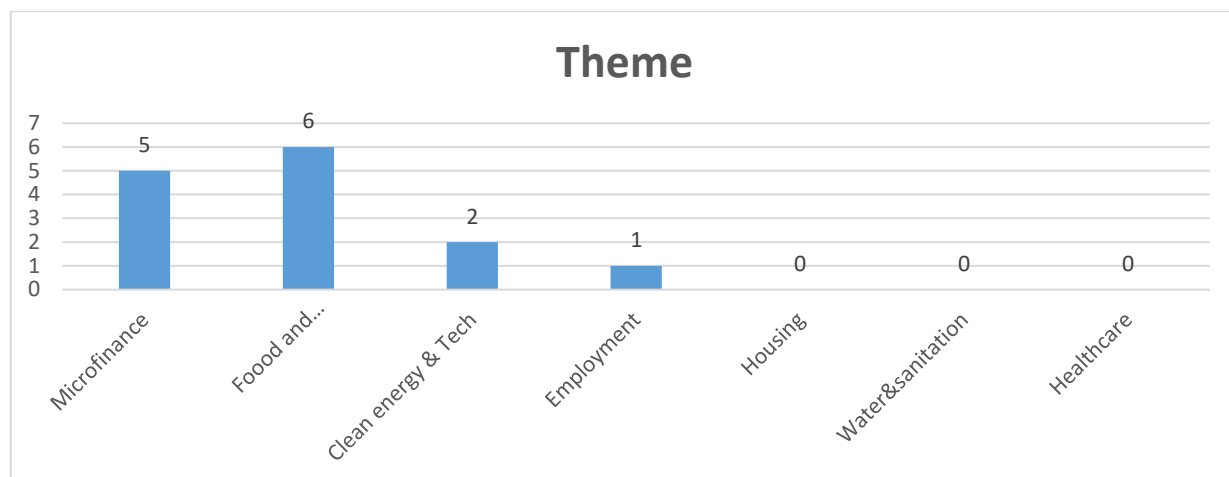

Figure 4-36: Histogram of Theme of Group SMART HERO

4) Type of metric

As it is possible to observe in Figure 4.37 all the funds taken into account are tracked and are more or less equally distributed in those that use IRIS and those that use other metrics. In particular 8 funds use IRIS metric while 8 use other types of metrics.
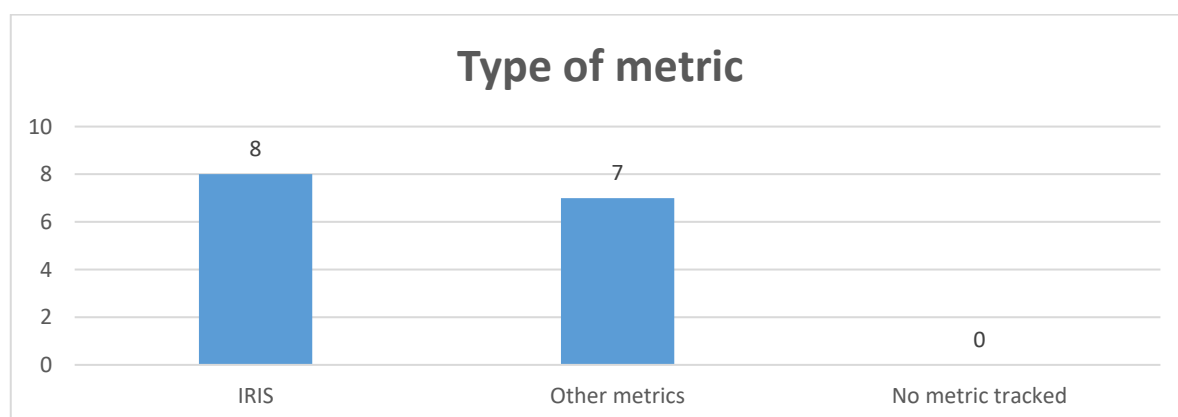

Figure 4-37: Histogram of Type of metric of Group SMART HERO

5) Asset class

The main asset classes like in the other previous cases are the private equity or venture capital with 13 funds out of 15 of the total. There is only one real estate asset class and only one real asset.
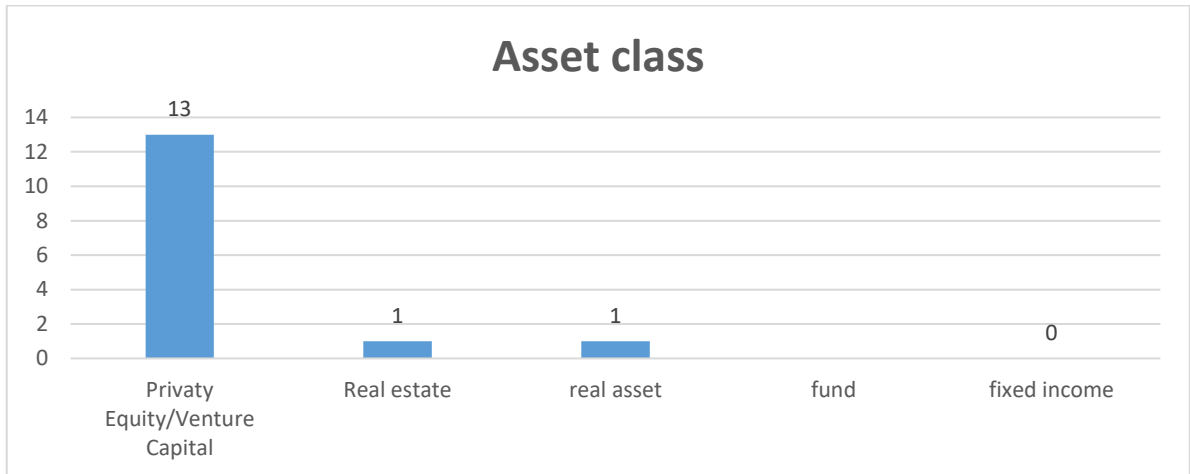

Figure 4-38: Histogram of Asset Class of Group SMART HERO

6) Target IRR

Looking at figure 4.39 the main range of target IRR is between 0.2 – 0.29 where there are 5 funds while for other 5 funds there is not the target IRR tracked.
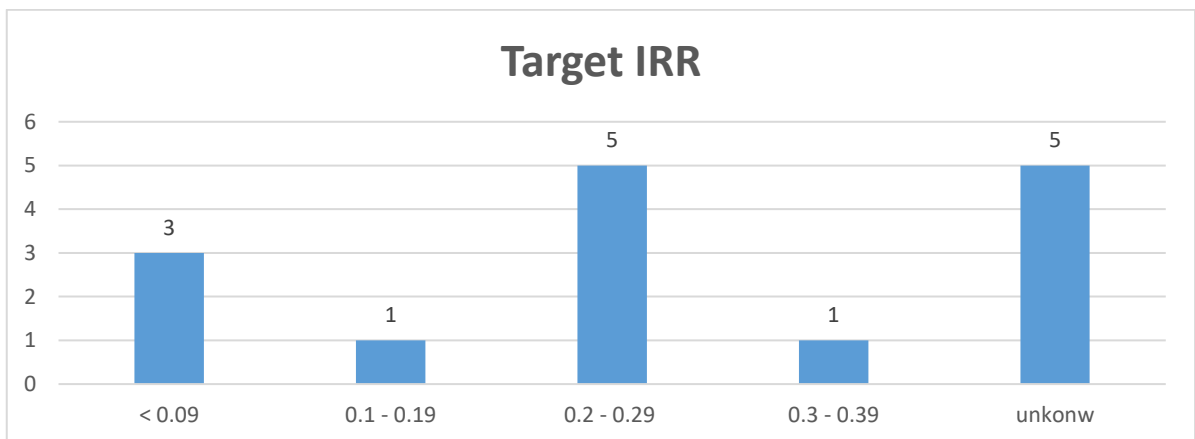

Figure 4-39: Histogram of Target IRR of Group SMART HERO

7) Number of investment

All the 15 funds in the group smart hero make a number of investment between a range of 1 and 20. So there is not the trend for these types of funds to make a lot of investments maybe because they prefer to focus on the investments already existing.
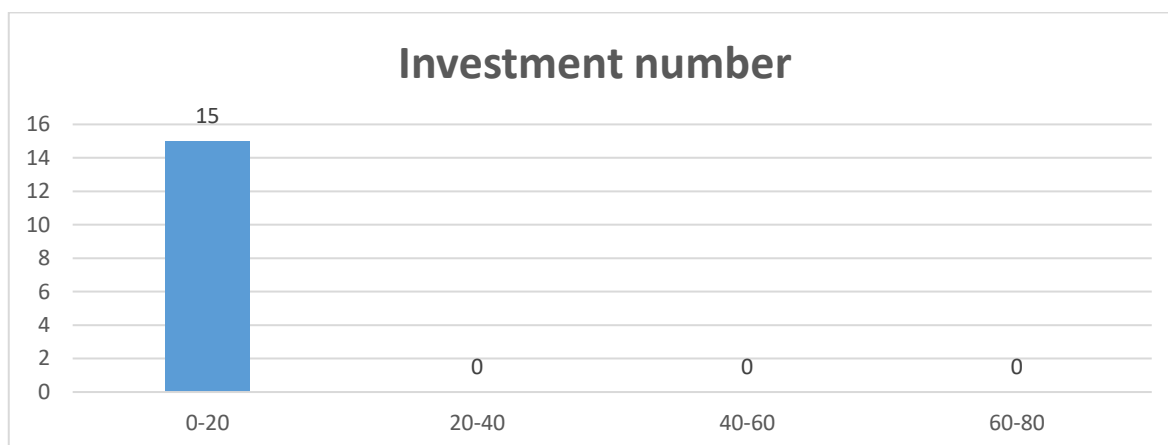

Figure 4-40: Histogram of Investment number of Group SMART HERO

8) Target fund product

The majority target fund product range is between 50 and 300 million, like the other three previous groups. In this case 6 funds are collected in this range while 4 funds are allocated in the range 5MIL-50MIL. No other ranges are present in Figure 4.41.
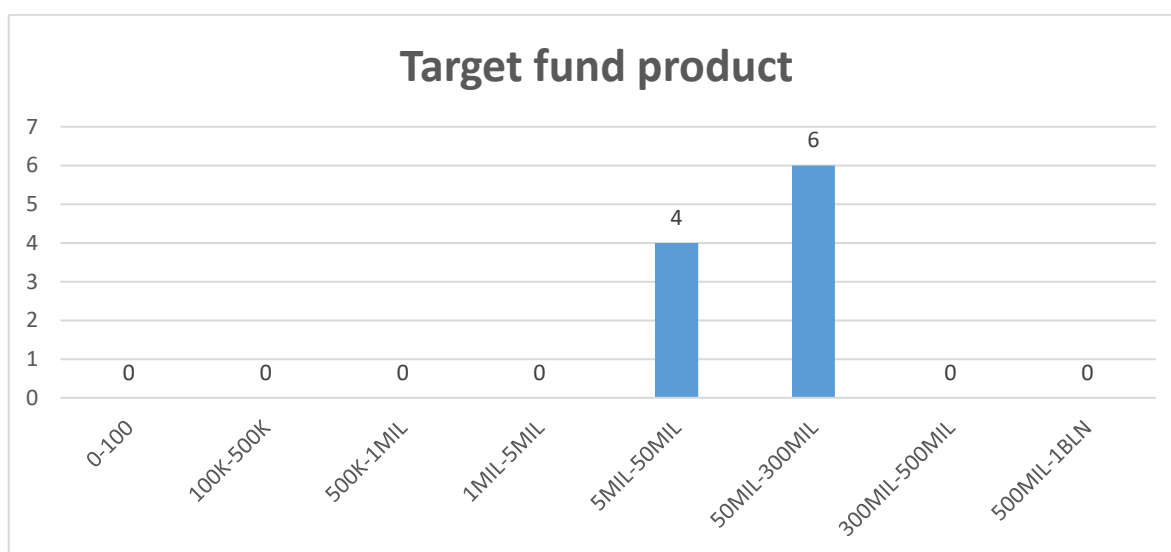

Figure 4-41: Histogram of Target fund product of Group SMART HERO

9) Committed capital

The most relevant committed capital range is the one between 5MIL-50MIL with 6 funds out of 15 of the total. The other funds are more or less distributed in the other ranges even if there are not relevant trends.
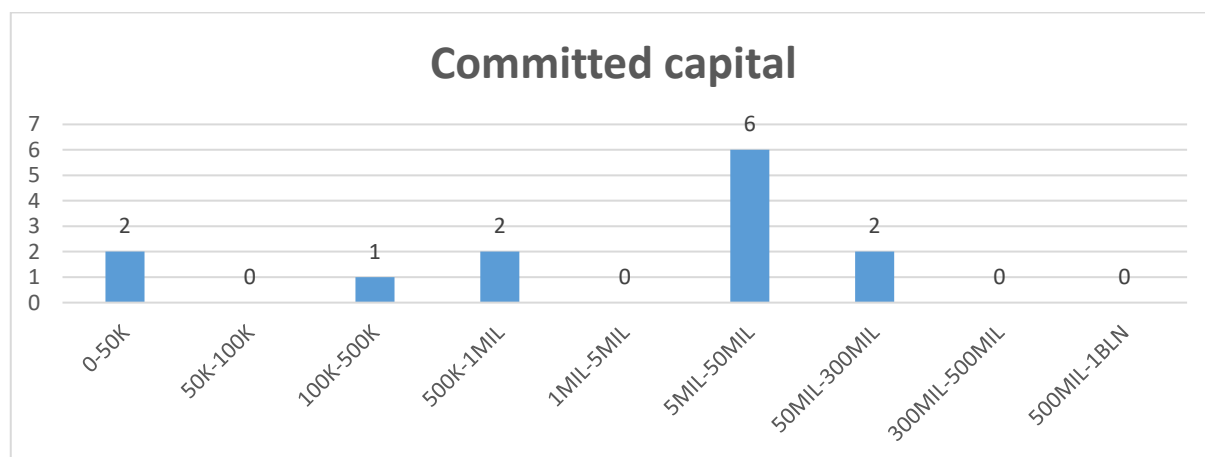

Figure 4-42: Histogram of Committed capital of Group SMART HERO

10) Investment size

More than 30% of the funds has an investment size between 1MIL-5MIL, while the other funds have a great variety of investment size so also in this case there is not another important trend apart from the main one.
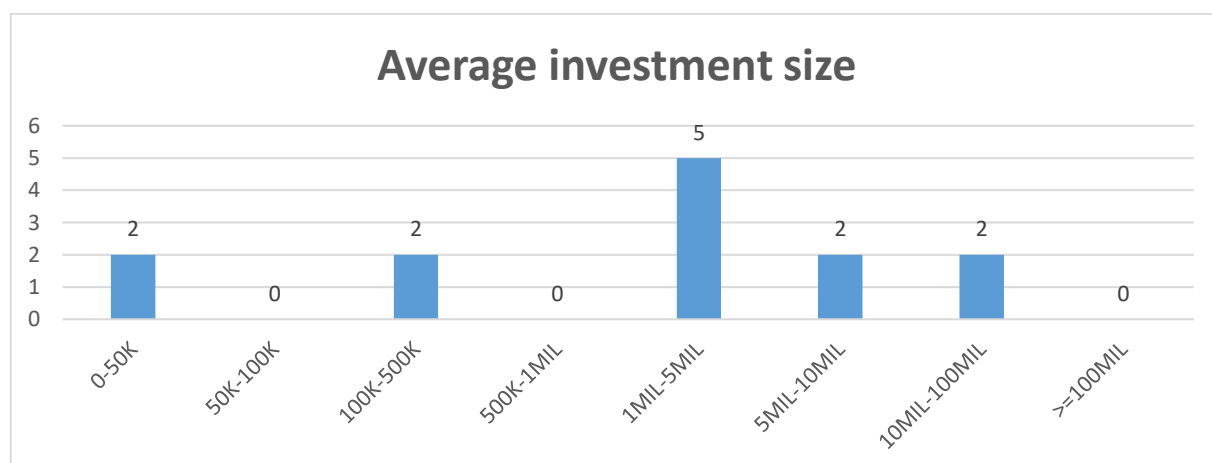

Figure 4-43: Histogram of Average investment size of Group SMART HERO

11) Maturity

For the majority funds of the group smart hero there is not a maturity tracked. In fact in this case only for three funds it is possible to observe the maturity that is equal to 10 years. So this datum it not so relevant for our analysis.
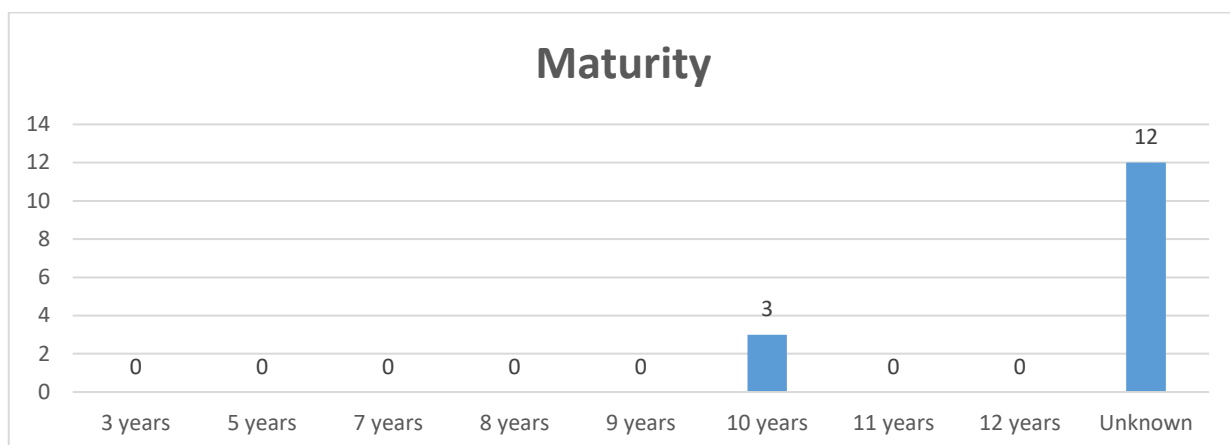

Figure 4-44: Histogram of Maturity of Group SMART HERO

4.3   Final Conclusions

After the deep statistical description of the four groups it is important to draw conclusions about our analysis highlighting the main relevant aspects. The comparison between the groups should help to discover and understand which trend really exists between the use of language and the funds. We take into account the same characteristics just described for the single groups again and we expand the discussion to the whole four different groups. As it will be possible to understand reading the text below not all the eleven characteristics taken into account are really important for our analysis but surely there are those that will describe better the behavior of these groups and those that are less relevant. The starting point of our study is the limited partner type. For example it is not a significant datum useful to make a comparison because more or less all the four groups have the same trends. DFI is always the predominant limited partner type and this can be attributed to the fact that gives the possibility to the client to have support in the decision making. As already said they are specialised development banks of which the majority are owned by the national governments. So it is not surprising that the governments play a fundamental role in all the four groups without a distinction between those with a high or low level of SBS and distinctiveness.

The discussion regarding the geography of the funds is more interesting. Apart from the group *dorky wimp* and the group *smart wimp* that do not have significant trends because in this case the funds are more or less equally distributed in all countries, it is useful to spend some words about the remaining two groups. The group *dorky hero* has a predominance presence of funds in Africa and in Asia rather than in North America or anyway in the developed countries. So maybe the choice of this group to use a high level of "social word" (SBS=1) can be referred to a strategy to attract investors in less known areas and so less safe from a financial point of view. It can be seen as a way to capture the attention of investors and so to convince them to invest in these particular areas. On the contrary the group *smart hero* that emerges as the best one has a strong presence in the developed countries such as Europe and North America. These can be led back to the fact that in these areas the financial condition is more thriving and stable. So it is not surprising the absence of investment in Latin America where the financial conditions are unforeseen and unstable.

Strictly correlated to the geography there is the theme of funds that are significantly influenced by this one. The group dorky wimp that represents the less relevant case study has as predominant theme the microfinance that is also the most generic one. This reflects

perfectly the behaviour of this group that does not differ from level of SBS and distinctiveness. The second group smart wimp that has a presence in more or less all the countries tries to differ in the theme having at last one fund in each different theme. So its high level of distinctiveness (distinctiveness=1) can be also correlated to the variety of the themes. For each theme in fact it is necessary a different language that permits to the fund to be distinguished. Also the themes of group dorky hero mirror perfectly the countries in which it invests. In fact the themes interested are agriculture and employment so those themes really relevant in countries not yet developed. What is unforeseen is the main theme of the group smart hero.   Even if in this case we speak about funds in developed countries, the main themes are not clean energy & tech but rather food and agriculture, and this is very strange for areas in which the agriculture sector is not yet the predominant one.

Looking at the different ranges of target IRR we can observe that the only group that estimates the highest level of potential profitability is group dorky wimp. This can be a strategy to attract potential clients to invest in these funds that are also the most general ones. Since they do not differ from the others in any way, maybe this is the only solution to have the attention of the future investors.

Lastly, regarding the type of metric all the four groups use mainly IRIS metric and only secondly other types of metrics. What is really important to point out is the fact that the top performance funds of the group smart hero are all tracked. This datum confirms another time the optimal position of this group giving a superior credibility compared to the others.

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