Measurement Process in Impact Investing: State of Practice in Europe

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Measurement Process in Impact Investing:

State of Practice in Europe

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A Thesis in the Field of Sustainability and Environmental Management

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Abstract

This study addresses the state of impact investing practices and influence in selecting stock for an investment portfolio. It explores similarities between impact measurement practices currently used among impact investors in Europe. Impact investing is a fast developing investment strategy with a wide variety of measurement practices that set challenges for both investors and investees. Previous studies have indicated that the link between performance measurement practices of different impacts need to be further investigated. A quantitative study based on data gathered from a survey was sent to impact investors in Europe. The study was divided into two parts.

The first part tested the strength of impact measurement processes of different groups under the main hypothesis and two sub-hypotheses. The main hypothesis argues that among investors in Europe, those investing in both social and sustainability projects have stronger impact measurement processes than those investing only in either social or sustainability projects. Sub-hypothesis 1 argues that among investors in Europe, those who manage a portfolio of more than 100 million euros have stronger impact measurement processes than those who manage a portfolio of less than 100 million euros. Sub-hypothesis 2 argues that among investors in Europe, fund managers have stronger impact measurement processes than other impact investors. The second part of the study provided a more detailed analysis over impact investors’ impact measurements processes.

The results showed that the state of impact measurement practices in Europe is underdeveloped for three reasons. Firstly, hypotheses testing did not show statistically
significant variance between different impact investors. The main hypothesis ($t= 0.0009; p=0.9993$), sub-hypothesis 1 ($t=1.0224, p= 0.3182$) and sub-hypothesis 2 ($t= 0.5583, p= 0.5825$) were all rejected. However, according to the cumulative distribution function, investors investing in both social and sustainability projects, investors managing over 100 million euros, and fund managers performed better on the survey than others. Secondly, the average impact measurement process uses all six process steps and 18 themes but less than half (47.4 percent) of all process parts. Thirdly, none of the respondents are using a comprehensive impact measurement process. The average score for the total impact measurement process totaled 8.936, representing 49.6 percent from the total score. In addition, the scores for the individual impact measurement processes varied from the highest 12.050 (66.9 percent) to the lowest 2.000 (11.1 percent).

The study found four development themes that will increase transparency and trust in impact investment projects and thus accelerate growth for the whole impact investing field. These development themes are: decreasing the costs and resources required to measure impact, measuring additionality and attribution, increasing the level of communication between investors and investees and encouraging investors to use external auditors to verify impact data.
Dedication

This thesis is dedicated to the ones I love

- to my amazing family, my biggest cheerleaders.
Acknowledgements

There are many people I would like to thank for helping me along this path, including family, friends, faculty personnel and academia.

I am grateful to my family, including my wonderful husband, daughter, son and parents. They all were encouraging me along this process and never gave me an option to give up.

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I would also like to thank all the academics who were pushing me through this thesis. I could not have completed this study without my thesis director Carlos Vargas. I could not have been able to even start this writing process without a help of Dr. Ramon Sanchez and Piers MacNaughton who guided me through the thesis proposal process and statistical analysis. I would also like to thank my thesis advisor, Dr. Mark Leighton who gave me my thesis a final touch and approval. Finally, I would like to thank all the classmates of the Summer 2015 thesis course. They all were my inspiration to reach my best performance.

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Definition of Terms

Accountability: The obligation of an organization to account for or take responsibility for the effect of its activities such as measurement of social and environmental impacts (Hehenberger, Harling, & Scholten, 2014).

Additionality: An outcome delivered due to intervention that otherwise would not have occurred (JP Morgan & Global Impact Investing Network [The GIIN], 2015).

Aggregation: A sum of all investments’ impacts realized within the portfolio (JP Morgan, 2015).

Attribution: An understanding of what proportion of the impact that occurred was caused by investor’s investment (JP Morgan & The GIIN, 2015).


Due diligence: An objective and independent examination of the investment target. It focuses on financials, asset valuation, operations, in the valuation of a business, and provides assurances to the lenders, advisors and investor in the transaction (Angwin, 2001).

Impact: Change in social or environmental outcomes. For example improvement of resident families’ living conditions (Hehenberger et al., 2014).

Impact beneficiary: All actors that benefit from capital movement in the impact investing field (Reeder & Colantonio, 2013).
Impact investee: Organizations who deliver impact through their operations. Often this is same as impact creator (Reeder & Colantonio, 2013).

Impact investing: An investment strategy where the investor’s goal is to create positive social and environment impact alongside a financial return (Bugg-Levine & Emerson, 2011).

Impact investor: An investor that facilitates the impact process by investing in the impact creator (Reeder & Colantonio, 2013).

Impact measurement: Demonstrates the positive environmental and social impacts generated for all investment stakeholders, mobilizes greater capital, and increases the transparency and accountability for the impact delivered (Social Impact Investment Taskforce, 2014b).

Impact metric: A measurement designed to measure social, environmental or financial performance of an investment (Global Impact Investing Network [The GIIN]).

Impact risk: A measure of how likely it is that the intended social and environmental impact of the investment is not realized (Reeder, Rocyn Jones, Loder, & Colantonio, 2014).

Impact thesis: An impact investing mission which an investment organization wishes to support through their capital (Social Impact Investment Taskforce 2014b).

Intermediate: A service provider who consults and facilitates impact investing transactions (Reeder & Colantonio, 2013).

Key performance indicators (KPIs): Quantifiable measurements that reflect the critical success factors of an organization and help an organization evaluate progress toward organizational goals (Parmenter, 2007).
Outcome: Direct change in the beneficiary caused by an intervention. For example the number of new families living in affordable houses (Hehenberger et al., 2014).

Output: Relevant activities completed as part of the intervention. For example the number of affordable houses built (Hehenberger et al., 2014).

Scorecard: A modification of the balanced scorecard of Kaplan and Norton. The scorecard is a strategic management tool that supports implementation of corporate strategies by combining operational and non-financial activities. The scorecard can also include social and environmental aspects (Figge, Hahn, Schaltegger, & Wagner, 2002).

Social Return on Investment (SROI): Describes the social impact of a business or nonprofit operation in monetary terms. The term originated from Return on Investment (ROI), as used by traditional investors (Lingane & Olsen, 2004).

Stakeholder analysis: A tool for investors to gain understanding of stakeholders attitude toward some issue or theme. Modern analysis is concerned with all aspects of a business including social and environmental aspects (Baker & Nofsinger, 2012).

Theory of Change: A representation of the change process that describes all required elements to achieve long-term goal (Boiardi & Hehenberger, 2015).
Chapter I

Introduction

Impact investing is an innovative way to measure and assess the net effect of changes in living conditions generated by an investment. It is a fast developing investment strategy where capital investment is used to maximize the combined value of social and environmental impact alongside financial return. Due to the young age of this field, actors are using varying tools and guidelines to measure and manage investment value and evaluate investment decisions. This wide variety of measurement practices create challenges for both investors and finance seeking investees, especially when investors wish to evaluate social and environmental performance of their impact projects (Bugg-Levine & Emerson, 2011; Reeder & Colantonio, 2013).

The impact measurement process is both a technical tool and a standardized method that identifies and measures future consequences of current actions. Publicly available guidelines for the impact measurement process vary from five to seven step action lists to comprehensive methodologies. Common for all guidelines is that together with the traditional investment process, these create an organized impact measurement framework that can be used to make impact investment decisions and manage investments (Hehenberger et al., 2014; Reeder & Colantonio, 2013; So & Staskevicius, 2015; Social Impact Investment Taskforce, 2014b).
Research Significance and Objectives

This study addresses the state of European based impact investors’ practices related to impact measurement. This study also reflects on whether return on investment in social and sustainability projects is measured by a generic measurement process or with investor specific methods. The broad objective is to validate the assumption that capital investment will not proliferate into impact investment without a transparent and reliable impact measurement process.

There are very few academic studies focused on impact investing. Previous studies have concentrated on the impact investing field in general and only a few on the impact measurement process. Often, these studies have concentrated on one actor in the field, such as social enterprises or impact investors in one country or worldwide. Other studies have been conducted on traditional investment strategies or different impact measurement methods such as the SROI model. However, academic research that combines impact investing and traditional investment process in Europe is still rare.

This study combines three impact measurement methods and findings of previous studies as a single framework. It concentrates on the impact measurement process of impact investors for social and environmental impacts alongside financial returns. Differences arise from previous studies by surveying and analyzing data from impact investors. In the end, results of the study aims to reduce some of the barriers that prevent investments from reaching social and sustainability projects and thus preventing the impact investing sector’s contribution to mitigate climate change and enhance social well-being.
Background

Impact investing is a field of capital investment where capital is used to maximize the combined value of social, environmental and financial performance. In other words, it is an investment field where the investor’s goal is to create positive social and environment impact alongside financial return. It is a rapidly developing investment strategy that still lacks a standardized methodology to measure and manage investment value and evaluate investment decisions (Bugg-Levine & Emerson, 2011).

Impact, in the contexts of impact investing, can be seen as a net effect generated by activities that are funded by investments from individuals and communities. It can also be defined as the objective of generating value that mutually benefits external stakeholders and the investor in a specific geographical area. A convenient way of describing social impact is to see it as an opportunity to change people’s way of life, their culture, their community, their political systems, their environment, their health and wellbeing, their personal and property rights, and their fears and aspirations (Reeder & Colantonio, 2013; Vanclay, 2003).

Impact investing emphasizes an innovative way of measurement and assessment. It underlines the importance of venture philanthropy that uses strategic planning as part of wider efforts to promote more sustainable and socially aware forms of investment. Its relationship with Socially Responsible Investment (SRI) or Responsible Investment (RI) is that impact investing promotes systematic efforts to organize and develop effective practices within SRI or RI. However, it is important to make a distinction between impact investing and traditional SRI. Impact investing is an umbrella term that uses several asset classes such as fixed income and private equity to tackle specific social challenges
through market mechanisms. Although impact investing is seen as a new asset class, it is important to understand that it has its own ecosystem and unique challenges. There are two main characteristics that separate impact investing from other SRI strategies: an explicit expectation of measurable social impacts and active measurement of these impacts (E.T. Jackson, 2012; Eurosif, 2014; Reeder & Colantonio, 2013).

Roots of Impact Investing

The term impact investing was invented in 2007 in Italy when the Rockefeller Foundation convened a meeting with a group of investors, entrepreneurs, and philanthropists. The theme of the meeting was to define what would enable them and others to put more capital to work for social and environmental benefits. In 2008, the same group drew a blueprint: the Impact Investing Initiative. Although, the term impact investing is young, the roots of the investing strategy go back to 19th century when religious institutions started to avoid stocks linked to tobacco and alcohol companies. In the 20th century, SRI expanded into microfinance. In these types of investments, small loans are granted to the world’s poorest people in order to battle poverty (Rodin, 2014).

Impact investing markets in Europe are growing rapidly. According to a survey conducted by The European Sustainable Investment Forum (Eurosif), the size of the market in 2013 was approximately 20 billion euros with an annual growth of 52.3 percent between 2011 and 2013. European impact investing market varies among countries and is heavily influenced by local history and finance systems. Microfinance is the dominant type of impact investment with a 55 percent market share. The other 45 percent includes community investing, social business investing and thematic investments concentrating
on renewable energy and development finance. Countries that are the most active in accelerating impact in Europe are Austria, France, Germany, Italy, Netherlands, Spain, Sweden, Switzerland and the United Kingdom. The main investor group is High Net Worth Individuals (HNWI) with their private banks and family offices. The future of European impact investing markets is likely to remain prominent. However, there are several challenges ahead. The main challenges relate to scalability and availability of investment options, institutional investors’ lack of knowledge on the topic and financial risk and performance uncertainty (Eurosif, 2014).

Impact Investing Ecosystem

The impact investing and impact measurement ecosystem (Figure 1) can be divided into three types of actors: primary actors, measurement and data providers and ecosystem actors. Primary actors are involved in the movement of capital. They include impact investors, investees and intermediates. Measurement and data service providers provide measurement-related services to primary actors. Ecosystem actors seek to strengthen the broader impact measurement field. They are, for example, policy makers. In order to develop impact measurement models, it is important to understand these actors and their roles. Each plays a key role in the flow of assets and impact data available in an active impact investing ecosystem (Social Impact Investment Taskforce, 2014b).

In addition to the above mentioned actors, the impact investing ecosystem can be divided more broadly into the three key roles: impact investors, impact beneficiaries and impact creators. The common trait for all actors is that they are individuals or
organizations that want to be involved in creating new solutions to social and environmental problems by using the power of business models. Impact investors are capital providers and thus need measurement data for investment decisions. These investors include for example foundations, fund managers and social banks. Impact creators are enterprises and charities who deliver impact through their operations. They are the ones who are required to provide impact data for investors and thus are dependent on generalized metrics. Impact beneficiaries are all the actors that benefit from this capital movement. There is also a growing need for intermediaries and service providers to facilitate transactions (Reeder & Colantonio, 2013; Reeder, Colantonio, Loder, & Rocyn Jones, 2015; Rodin, 2014; Social Impact Investment Taskforce, 2014b).

Figure 1. Impact investing ecosystem and key roles of different actors. An active ecosystem includes impact investors, impact creators and impact beneficiaries. In addition, there are intermediates that catalyze impact creation and clients of the impact creator that benefits from impact created (altered from Reeder et al., 2015).
Definition of Impact Measurement

Impact measurement aims to demonstrate the positive social and environmental impacts generated for all impact investment stakeholders, mobilizes greater capital, and increases the transparency and accountability for the impact delivered. The purpose of the impact measurement is to manage and control activities which create and sustain the impact. This can be done throughout the impact value chain (Hehenberger et al., 2014; Social Impact Investment Taskforce, 2014b).

Impact measurement is the process of identifying and measuring future consequences of current actions as accurately as possible. It has a dual nature as a technical tool providing analysis for investors, investees and other stakeholders about future consequences and as a standardized procedure linked to the investment decision making process. Applying impact measurement in practice has three main steps. The first step is to decide when the assessment is carried out. The question is: should the assessment be done before, during or after the investment has been carried out? The second step is to identify the investment typology and measurement culture. The questions are: is the investor a system builder who produces a system for measurement, is the investment done case-by-case, or is the investor an evidence follower who measures reliability of the operations? The third step is to select tools and techniques to measure actual impacts. These are, for example, Social Return on Investment (SROI), Blended Value Accounting (BVA) and Theory of Change ratings systems. All these tools are presented more in depth below under Impact Measurement Frameworks (Manetti, 2014; Reeder & Colantonio, 2013; Reeder et al., 2014).
Measuring social and environmental impacts across organizations’ actions is challenging, especially in a systematic way. If a certain level of accuracy is not established across the industry, impact investing has the risk of becoming merely a marketing tool for commercial investors. In order to measure impacts, local conditions such as cultural, political or environmental infrastructure must be taken into account. Even companies of similar size in the same sector might have different impact objectives. The financial viewpoint must also be included into the analysis in order to measure investments’ impacts. Together these three impacts will create more value than would otherwise be created separately (Bugg-Levine & Emerson, 2011; Rodin, 2014; So & Staskevicius, 2015).

As stated earlier, impact measurement is central to the practice of impact investing because it demonstrates investors’ goals to create social, environmental and financial impact. When impact measurement is done correctly data is collected, examined and reported in an efficient way. In addition to the above mentioned criteria, an efficient impact measurement process faces challenges like the lack of supporting infrastructure. To guarantee long-term development, a standardized impact measurement and reporting system should be developed. This can be done by embracing impact accountability, applying measurement best practices and establishing a common impact language (Social Impact Investment Taskforce, 2014b).

Impact Value Chain

The impact value chain (Figure 2) is a tool to manage and control social and environmental impacts in order to optimize them. It is a natural progression of an
investment with growing insight into an impact. The impact value chain consist of inputs of resources, activities carried out to create impact, outputs of tangible assets from activities, outcomes that result from activities, and impacts attributed to those activities (Ebrahim & Rangan, 2014; Hehenberger et al., 2014; Social Impact Investment Taskforce, 2014b).

![Figure 2. The impact value chain. The impact value chain includes five steps that are defined and illustrated here examples. The examples combine both the quantitative results and related financial impacts (altered from Hehenberger et al., 2014; Social Impact Investment Taskforce, 2014b).](image)

The starting point for the impact value chain is the inputs level. This level includes all the resources invested in the activities of the impact creating organization. From the input level, the value chain progresses into the activities level. This level includes concrete actions that are performed to support specific impact objectives. These objectives can be for example buying land to build affordable houses for low-income
families. This level will also create a basis for the next levels of outputs and outcomes. After activities are performed, the impact value chain moves to outputs and outcomes levels. These levels include all the tangible products and services and changes on individuals or the environment that result from the previous level activities. These can be for example number of affordable houses built and number of new disadvantaged families reached by the impact creator. The final level in the impact value chain is the attributable impact. This level is an implication of all the long-term social or environment changes that follow from achieved outcomes. These can be for example improvement in new resident families’ living conditions resulting in less poverty and less crime (Hehenberger et al., 2014; Social Impact Investment Taskforce, 2014b).

The impact value chain also has a link to financial return through several financial indicators. The most commonly used are financial return divided by cost of capital, cost of existing activities, cost of social issues divided by loss of economic value at beneficiary and cost of social issues divided by loss of economic value to society. Some of the alternative indicators that are still under review are costs of activities delivered, cost of outcome and cost of impact (Social Impact Investment Taskforce, 2014b).

Impact Measurement Frameworks

As stated earlier, a transparent and organized impact measurement process is a key for measuring impact in an effective and successful way. The impact measurement process, together with the traditional investment process, creates an impact measurement framework. This study presents three impact measurement frameworks:

1) Hehenberger et al.’s (2014) “the five steps of social impact measurement framework”
2) The Social Impact Investment Taskforce’s (2014b) “the seven best practice guidelines for a good impact measurement process”

3) Ebrahim & Rangan’s (2014) and So & Staskevicius’s (2015) “the four impact measurement methods”

“The five steps of social impact measurement framework” identifies a five step process for impact measurement:

1. Set objectives to identify true goals of the investment decision.
2. Analyze stakeholders in order to understand their expectations and contribution to the investment.
3. Measure results to transform set objectives to understandable results.
4. Verify and valuate impact to allow investors to identify social impacts and evaluate set targets.
5. Monitor and report impact for continuing investment follow up.

All these steps are bind together with managing impact. Together these two form a general framework to measure impact (Figure 3) (Hehenberger et al., 2014).

The first step, setting objectives, is a vital step that includes activities for managing the scope of the impact measurement and objective setting. Since it is a starting point for the whole impact measurement, this step needs to be considered by both investors and investees. Often investors forget to consider their own impact objectives already beforehand. Thus, this step is often overridden by investors (Hehenberger et al., 2014).

The second step, analyzing stakeholders, emphasizes that investors need to understand that their investments create value for a variety of stakeholders. By
identifying and engaging stakeholders through stakeholder analysis, the investors will build an understanding of stakeholders’ expectations towards them, and what kind of contribution and potential impact they will offer (Hehenberger et al., 2014).

The third step, measuring results, occurs in two levels. The first level is measuring investor’s own outputs, outcomes, impacts and Key Performance Indicators (KPIs). The second level transforms investees’ objectives into measurable results. In this level, KPIs or metrics are used to show progress towards outputs and outcomes (Hehenberger et al., 2014).

In this context, impact metrics are used to assess the performance of the investment and should be selected based on the investor’s goals. Effective metrics should align with existing recognized standards like the Global Reporting Initiative (GRI) to
enable investment comparison. Impact metrics can be qualitative or quantitative. Qualitative metrics are based on individual perception, for example, responses to interview questions. Quantitative metrics are numerical, for example, greenhouse gas emissions decreased per action taken. There is a large number of metrics existing in databases like The Global Impact Investing Network’s (The GIIN) Impact Reporting and Investing Standards (IRIS). Thus, creation of new indicators is not always required. The main concern when selecting metrics is to understand that desired goals of the impact strategy need to be identified before metrics can be set (Hehenberger et al., 2014; Social Impact Investment Taskforce, 2014a; The GIIN).

The fourth step, verifying and valuing impact, includes the process of proving that claims made towards creation of positive impact are true. This step creates a positive feedback loop in the impact value chain by re-evaluating targets based on the outcomes achieved. In addition, by identifying specific impacts, this step can help organizations focus their resources for initiatives that create the most impact on society. Verifying the impacts can be done for example by analyzing external reports and databases (Hehenberger et al., 2014).

The fifth step, monitoring and reporting, includes checking the investments’ progress against earlier set targets. The actual deviations against targets can be measured, for example, through KPIs set in the third step. It is important to remember that monitoring and reporting are simultaneous processes and can be conducted by both investor and investee, although in different roles. In this step, monitoring is a process where impact data, usually in the form of KPIs, is collected and analyzed in a systematic way. After monitoring, the data is reported internally and externally. This step can be
costly and time consuming especially for investees as they might need to prepare several different reports with different KPIs for each of their investors (Hehenberger et al., 2014).

As earlier stated, the integration of the five step impact measurement process with the investment strategy creates a general impact measurement framework. The idea behind this combination is that an organized process to measure impact creates preconditions for investors to manage impact and finally the whole investment process (Figure 3). The integration starts from the deal screening. At this stage, the investor assess whether the investment opportunity fulfills the impact objectives set in step one. The next step in the investment process is due diligence where more detailed screening of the business operations, risks and opportunities is conducted. At this point, the impact investor will perform stakeholder analysis and verify the expected results. This action can be parallel to steps two and three. The third phase in the investment process is the deal structuring. During this phase the impact investor uses step three to map outputs, outcomes and impacts and determine KPIs to follow-up progress. The final phases for the investment process are the management of the investment and the exit. These phases use steps four and five to assess impact results against KPIs, verify and value reported results, revise relevance of the indicators and perform and report impact results analysis against set objectives (Hehenberger et al., 2014).

“The seven best practice guidelines for impact measurement” framework set the following guidelines for an impact measurement process (Figure 4):

1. Set goals
2. Develop framework and select metrics
3. Collect and store data
4. Validate data
5. Analyze data
6. Report data
7. Make data-driven investment decisions.

Investors can build up an efficient way to communicate and follow-up their investments by implementing these best practices into investment management at the portfolio or deal specific level. The seven guidelines create a strong impact measurement framework together with four phases: plan, do, asses and review (Social Impact Investment Taskforce, 2014b).

Figure 4. The seven best practice guidelines and four phases for impact measurement. Effective impact measurement process includes seven guidelines and four phases (altered from Social Impact Investment Taskforce, 2014a, 2014b).
The first best practice, goal setting, means that the investor clearly states a desired impact target for the investment. In this way, the investor can form the basis for strategic planning and continuous decision making and follow-up. This step includes several concrete actions which have similarities with Hehenberger et al.’s (2014) “the five steps of social impact measurement framework” steps one and two: define an impact investment thesis, identify key stakeholders and accountability across the value chain, identify changes that may result from the investment decision, define which changes will be material, define social, environmental and financial performance targets and in what level these should be achieved, and engage stakeholders to identify possible risks related to the investment (Social Impact Investment Taskforce, 2014a, 2014b).

The second best practice, framework development and indicator selection, includes determining the metrics that will be used to assess performance of the investment. Like the first best practice, this practice also includes several actions which are similar with Hehenberger et al.’s (2014) “the five steps of social impact measurement framework” step three: evaluate baseline impact for the investee business model, develop a framework for assessing both negative and positive impacts, recognize efficient metrics language to implement performance analysis, select metrics that align with earlier set goals and business models, and set baseline for the metrics (Social Impact Investment Taskforce, 2014a, 2014b).

The third best practice, data collection and storage, and the fourth best practice, data validation, include creation of organized data collection and storage practices and ensuring the quality of the collected data. These practices can also be achieved by several actions that are similar with Hehenberger et al.’s (2014) “the five steps of social impact
measurement framework” step four. The actions for data collection and storage are: collecting and storing data in a timely and systematic manner, ensuring that collected data is aligned with investee’s day-to-day operations and ensuring that data is accurate. The actions for data validation are: to check data completeness and quality together with stakeholders and engage peer reviews and assurance services if needed (Social Impact Investment Taskforce, 2014a, 2014b).

The fifth best practice, data analysis, and sixth best practice, data reporting, both include reviewing actual data towards earlier set targets and share progress with key stakeholders. These practices can be achieved by several actions that are similar with Hehenberger et al.’s (2014) “the five steps of social impact measurement framework” step five. The actions points for the data analyzing step are: using a systematic method for quantitative and qualitative analysis, ensuring that the analysis supports decisions making, excluding irrelevant data and comparing data against set investment goals and baseline. The action points for the data reporting step are: reporting data on a regular basis, being transparent in progress against set goals and baseline, citing common metrics language and frameworks, and clearly stating assumptions behind the analysis (Social Impact Investment Taskforce, 2014a, 2014b).

The final best practice, make data-drive investment management decision, includes implementation of methods that will strengthen investments and operations. This can be done with effective review of investment results. This practice can be achieved by several actions that are similar with Hehenberger et al.’s (2014) “theory behind the managing impact in the investment process”: integrate impact metrics into decision-making process and tools, create a data-driven decision-making process by linking impact
metrics and management decisions and review goals whenever needed (Social Impact Investment Taskforce, 2014a, 2014b).

The seven guidelines create an effective measurement process together with the four phases: plan, do, assess and review (Figure 4). In this process, the “plan” is linked to the guidelines of goal setting and framework development and indicator selection. This phase includes activities where the investor and investees agree on the impact they seek and the actions to be done in order to progress toward common goals. The “do” is linked to the guidelines of data collection, storage and validation. This phase includes activities where investors and investees collect, share, store, and validate data at an investment, fund or portfolio level. The “asses” is linked to the guideline of data analysis. This phase includes activities where investors analyze quality and efficiency of the impact that their work and the work of their investees has generated. The “review” is linked to the guidelines of data reporting and data driven management. This phase includes shared insights from impact measurement by investors and investees, strategic decisions based on these insight and development of impact measurement practices. Although, the measurement framework is comprehensive, three key considerations should be kept in mind when adopting the framework. Firstly, both investors and investees need to know what the level of readiness of both sides is. Secondly, stakeholder engagement should be done throughout the process. Lastly, impact measurement is a continuously developing process that needs to be reviewed whenever appropriate (Social Impact Investment Taskforce, 2014a, 2014b).

Both of the above described impact measurement processes identify framework development as an important step. This study concentrated on this because major capital
investments will not flow to the impact creators until performance data is transparent, reliable and available for benchmarking. In addition, the study took into account The Social Impact Investment Taskforce’s four priorities: embrace impact accountability as a common value, apply best practice guidelines, establish a common language and data infrastructure, and evolve the field through ongoing learning and adaptation (Bugg-Levine & Emerson, 2011; Social Impact Investment Taskforce, 2014b).

“The four impact measurement methods” is created by Ebrahim & Rangan (2014) and So & Staskevicius (2015). They have categorized four impact measurement methods that are focused on social sector organizations (Figure 5):

1. Expected return
2. Theory of change
3. Mission alignment methods

The first method, expected return, is about estimating expected social return in order to assess potential investments. It takes into account the anticipated social benefits of an investment against its costs. This will be done to monitor and evaluate the social performance of the project. Possible metrics that can be used are Social Return on Investment (SROI), Benefit Cost Ratio (BCR) and Economic Rate of Return (ERR). These can provide a structured approach for the decision making, offer opportunity for investees and investors to speak a common language and help gain private sector trust. However, this approach does not take into account the catalytic effects, does not suit interventions without quantifiable benefits, and may cause unnecessary interventions by
tempting to use expected return as the only metric for investment decisions (So & Staskevicius, 2015).

Figure 5. The four impact measurement methods and objectives. These four impact measurement methods are recommended to be used in different stages of investment process (altered from So & Staskevicius, 2015).

The second method, theory of change, explains the process of intended social impact as a part of due diligence. It will provide a framework for goal setting and reporting, monitor progress of investment and provide targets for incentive schemes. Specifically, this method links each part of the impact value chain and creates a tool to map the theory of change of the projects. Properly executed, this method provides an understandable framework for the social sector, emphasizes important dimensions for the
project and helps to identify important impact assumption for further review (So & Staskevicius, 2015).

The third method, mission alignment methods, measures the execution of strategy compared to mission over time. This is done by monitoring an impact investor’s portfolio against set goals and the investee’s impacts against its mission. Examples for monitoring and managing KPIs include social value criteria and scorecards. Advantages of this method are that surveys and screenings are inexpensive and straightforward ways to monitor investment progress and scorecards may be an easy way to convince investors as they resemble the balanced scorecard method which is commonly used as a strategic business management tool. However, it is important to remember that surveys are only as good as the data collection process behind the results and scorecards may lack the possibility to compare different projects (So & Staskevicius, 2015).

The fourth method, experimental and quasi-experimental methods, assesses outcomes of impact investment. In addition, it tests the hypothesis of an investor’s theory of change and assesses the impact risks of a potential investment. This method uses randomized control trial (RCT), historical baseline, pre- and post-investment tests, regression discontinuity design and difference in difference to determine the impact of the intervention. Both experimental and quasi-experimental methods can help to demonstrate additionality of the impact. For example, the experimental method allows cause-and-effect analysis and the quasi-experimental method provides some additional evidence with more flexibility and lower costs. However, these methods can be expensive and not suitable in all situations (So & Staskevicius, 2015).
All these methods can be linked to the traditional investment process with four measurement objectives (Figure 5): estimating, planning, monitoring and evaluating impact. Here “estimating” impact is part of the due diligence phase, “planning” impact is part of the pre-approval phase and “monitoring” and “evaluating” impact are part of the post-investment phase. These objectives have similarities with Hehenberger et al.’s (2014) “theory behind the managing impact in the investment process” and The Social Impact Investment Taskforce’s (2014b) “the four phases of impact measurement”. Like these two methodologies, the four impact measurement methods and objectives create an effective impact measurement framework when used within a traditional investment process (So & Staskevicius, 2015).

However, all the four methods are seldom suitable for each phase of the investment process (Figure 5). The best method depends on the investor’s state of maturity in the investment process. For example the best practice for a mature investor is an integrated model: SROI calculation to compare the impact of potential investment, logic model to map out the investees’ theory of change and experimental or quasi-experimental studies to test hypothesis in the pre-investment phase and impact scorecard and quasi-experimental methods to evaluate impact progress in the pre-approval and post-investment phases. On the contrary, a simpler model for investors that are starting impact investing includes first the development of a logic model with the investees and then the adaptation of social value criteria to rate and monitor investments (So & Staskevicius, 2015).

As previously indicated, measuring impact is important but challenging. In the above mentioned theory, the core to measure social performance is simple: clarify the
operational scope, specify the set of activities to address that scope, and identify the target size of the problem. The idea is that organizations should focus on delivering results according to their mission. As a minimum requirement, investors and investees should be able to measure outcomes. Major obstacles for developing impact assessment further are that it requires research, commitment and allocation of resources, which are typically beyond the capabilities of the investees. Investors are also unclear on how to measure their own performance. In addition, impact measurement can cause tensions between investees and investors if the investors expect accountability and impact measurement from the investees but are not willing to offer any support. Investors’ expectations about impacts can also be based on hypotheses only (Ebrahim & Rangan, 2014; So & Staskevicius, 2015).

Impact Investing Projects

Impact investing projects can be divided into two categories: social and sustainability. According to the Eurosif (2014) study, most of the time social issues are emphasized, although the sustainability category is important especially in Europe. According to J.P Morgan and the GIIN’s (2015) study “Eyes on the Horizon”, impact investors worldwide are planning to shift their asset allocations from microfinance to energy, food and agriculture, healthcare, and education in the near future. In addition, more than half of the investors reported primarily targeting social impact and less than half targeted both social and environmental impacts.

Social projects include microfinance, microinsurance, access to affordable housing, health, finance, education, personal care and employability. This category also
includes SIBs. From these sectors microfinance is still the most prominent one. However, interest towards SIBs is rising rapidly across Europe. Microfinance is a financial banking form where small-scale loans are offered to households and small enterprises in poor communities in order to reduce poverty, fight gender inequality, and strengthen communities. SIBs are a new type of financial product that represent an innovative way of transferring risk to a larger investment audience, while its primary mission is to promote social benefit programs along with economic growth. The central focus is to accelerate social well-being with strong co-operation between the public and private sectors (Armendaris & Morduch, 2010; Eurosif, 2014; Liang, Mansberger, & Spieler, 2014; The GIIN).

Sustainability projects are mostly concentrated on developing markets and include fields such as manufacturing, access to renewable energy, food, water, habitat conservation and sustainable agriculture. From these projects, the energy sector is currently the most important one. It is concentrated on renewable energy where global investments, including all investment categories to wind, solar, biomass, waste-to-power, geothermal, small hydro and marine power, totaled approximately 270.2 billion dollars in 2014. Altogether these power sources generated 9.1 percent of worldwide annual electricity in 2014. This is equivalent to saving 1.3 gigatonnes of carbon dioxide (CO2) annually. Thus, investments for renewable energy development will be a key factor in the battle against global warming. Investment risk and barriers of securing funding to this field need to be thereby reduced. Among the major barriers are risks related to government policies, the lack of information or information asymmetries, history of high profile failures and the lack of large scale investors. Investors in the impact investing
field, both return-driven and philanthropists, have identified that one of the key factors that will prevent impact investment in the energy sector is that impact metrics for energy opportunities are difficult to quantify before and after investment (Frankfurt School-UNEP Centre / BNEF, 2015; JP Morgan & Global Impact Investing Network, 2015; Kearney, Seiger, & Berliner, 2014; The GIIN).

Previous State of Art

Previous studies related to impact investing have concentrated on investment strategies, major challenges for impact investing or the impact investing field in general. Only a few studies have focused on analyzing the impact measurement framework as a whole process. In addition, previous studies have concentrated on either social enterprises’ or investors’ perspective. Only a few studies have looked into both sides of the impact investing ecosystem. One notable issue to point out is that there is little academic research on impact investing, especially from an impact measurement point of view (Ebrahim & Rangan, 2014; Glänzel & Scheuerle, 2015; JP Morgan, 2015; JP Morgan & The GIIN, 2015; Lall, 2015; So & Staskevicius, 2015; Ormiston, Charlton, Donald, & Seymour, 2015; Reeder & Colantonio, 2013; Reeder et al, 2014, 2015).

Studies that have concentrated on social enterprise’s side are Lall’s (2015) study on social enterprise’s investment strategies and Glänzel & Scheuerle’s (2015) study on the major challenges for social impact investing in Germany. Studies that have focused on investors’ side are J.P. Morgan’s (2015) in-depth research on the state of the impact investing markets, Ormiston et al.’s (2015) analysis on how leading institutional investors and charitable foundations have begun to develop impact investment strategies and So &
Staskevicius’s (2015) research on what impact measurement practices impact investors are using. Furthermore, Reeder & Colantonio’s (2013) and Reeder et al.’s (2014; 2015) studies have concentrated on how impact investors are approaching impact measurement. The study that combines both investees’ and investors’ view on impact measurement is Ebrahim & Rangan’s (2014) research on how both players are measuring their impacts.

According to Reeder et al. (2015), the state of the non-financial performance assessment is relatively weak, although many publicly available guidelines and frameworks exist. The main finding of J.P. Morgan’s (2015) impact assessment study was that the markets are moving towards creating value from impact assessment beyond simply reporting of outcomes. The study included five main and four sub steps which are in line with the previously mentioned three different impact assessment models.

The main findings for step one, set organizational goals, were that many investors articulate one impact investing thesis that they wish to support for the whole portfolio, or several theses within a portfolio, and the thesis is used in investment decision making. Moreover, the link from the theory of change to the metrics is preferred to do upfront, targets are set and changes are tracked either in specific metrics or ratios, and impact measurement process is evolved once the maturity of their portfolios grow (JP Morgan, 2015).

The main findings for step two, screen and due diligence opportunities, were that scorecards are widely used, peer data is used for impact measurement process development and impact risk is sometimes evaluated. Ormiston et al. (2015) had similar observations and pointed out that investors’ use the same level of due diligence practices with added social impact consideration in impact investing versus traditional investing.
He also added that investors who use impact risk assessment utilize multiple tactics to minimize uncertainty. Reeder et al. (2014) also found that investors often focus on a small number of broad reaching goals which are not linked to their own impact and that the impact risk assessment is emerging as a part of impact measurement process (JP Morgan, 2015).

The main findings for step three, confirm terms and invest, were that the most successful impact assessment revolves around impact goals that reflect business success, impact data is used as a management tool, impact assessment should focus on outputs and outcomes within investees control, and a combination of standard metrics across portfolios with additional sector specific metrics is used. These findings are in line with J.P. Morgan & The GIIN’s (2015) annual survey. Reeder et al.’s (2014) study supports the above findings with the addition that a common approach is to follow a single social metric separately from financial outcomes rather than to combine those two into a single metric. However, Ormiston et al.’s (2015) study revealed that for institutional investors, the main driver for impact investment decision making is still financial return. Ebrahim & Rangan (2014) also observed that metrics are developed together with investees and none of the investors measure impact because it is too resource consuming and costly (JP Morgan, 2015).

The main findings for step four, data driven investment management, were that many investors engage investees in the metric selection process and poor performance is often discussed with the investees. In addition, J.P. Morgan & The GIIN’s (2015) annual survey revealed that the business value of the impact performance is high. Lall (2015) also noticed that most of the time the social enterprises’ performance measurement
activities were due to investors’ reporting requirements. A similar remark was pointed out by Reeder et al. (2014). All investors expected their investees to submit an annual impact report outlining performance versus KPIs. The same study also noted that only some of the investors undertook the same level of impact assessment after funds had been invested as they did during the due diligence process (JP Morgan, 2015).

The main findings for step five, organizational-level assessment, were that only some of the investors assess additionality because of the associated high costs, in some cases investors calculate only the portion of impact that they are attributable to and that aggregating the impact of a portfolio is more than the total number of people affected. On the contrary, J.P. Morgan & The GIIN’s (2015) annual survey discovered that measuring additionality and attribution was often important and that the main performance management challenge was the investees’ ability to attribute impact. So & Staskevicius’s (2015) study also observed that additionality is an important consideration when thinking about impact. Thus, investors should encourage investees to articulate and measure it (JP Morgan, 2015).

In addition to above mentioned findings, J.P. Morgan & The GIIN (2015) and Lall (2015) found out in their studies that the majority of investors and social enterprises measure the social and environmental performance through a range of standardized metrics and frameworks, mainly aligned with IRIS. Reeder et al. (2014, 2015) also discovered that the impact measurement terminology of outputs, outcomes and impacts were used by all respondents. However, the range of outcomes covered and the attempts to assess impact varied substantially. Reeder et al. (2014) and Ebrahim & Rangan (2014)
also learned that the impact value chain or logic model were used to conceptualize impact.

Previous studies have also identified some future challenges that the field of impact investing will face in order to grow in the future: how to determine what should be measured and covered within impact and non-financial return, how to monitor and lower impact risks that can be realized during the investment processes, how to create an assessment framework that is suitable for both investors and investees across all sectors and how to find high quality investment opportunities. For example German based social enterprises noted that current impact measurement approaches presented in literature are too time and money consuming. One notable aspect from the previous studies was that inadequate impact measurement practices were not ranked as a critical challenge for the market development among impact investors (Glänzel & Scheuerle, 2015; JP Morgan, 2015; JP Morgan & The GIIN, 2015; Reeder & Colantonio, 2013; Reeder et al., 2014).

Research Questions, Hypotheses and Specific Aims

This study brings together impact measurement processes of impact investors in Europe and asks 1) what kind of impact measurement processes are currently used in Europe, and 2) are there differences between impact investors’ in their impact measurement processes?

To address these research questions, this study tests one main hypothesis and two sub-hypotheses:
Main Hypothesis: Among investors in Europe, those investing in both social and sustainability projects have stronger impact measurement processes than those investing only in either social or sustainability projects.

Sub-Hypothesis 1: Among investors in Europe, those who manage a portfolio of more than 100 million euros have stronger impact measurement processes than those who manage a portfolio of less than 100 million euros.

Sub-Hypothesis 2: Among investors in Europe, fund managers have stronger impact measurement processes than other impact investors.

Specific Aims

To understand the current state of the impact measurement process in Europe, the study conducted an online survey for impact investors based in Europe. Data gathered from the survey was used to address above mentioned hypotheses using t-test statistics and cumulative distribution functions. For the statistical analyses, total impact measurement process scores for each respondent were calculated and respondents were divided into groups reflecting the hypotheses.

In addition, the data gathered from the survey was used for the more-in-depth analysis of the impact measurement process. This part concentrated on comparing the average scores, actual scores and rankings of the impact measurement process. This was done to understand an impact measurement process commonly used in Europe.
Chapter II

Methods

In order to understand the current state of the impact measurement process in Europe, a quantitative analysis was conducted derived from a statistical analysis of a questionnaire sent to European impact investors.

Quantitative Analysis

The quantitative analysis of this study was conducted by sending a survey questionnaire (Appendix 1) to the target group and analyzing the answers by using a t-test, cumulative distribution function and basic statistical methods. The main goal was to test if strength of the impact measurement processes of impact investors in Europe varied among the following groups:

- Investors investing in both social and sustainability projects and those investing only in either social or sustainability projects
- Investors who manage a portfolio of more than 100 million euros and those who manage a portfolio of less than 100 million euros
- Fund managers and other impact investors.

In addition, a more detailed analysis about the results was analyzed to gain more in-depth understanding of investors’ impact measurement processes.
Impact Investing Survey

The survey was an online form that was sent to as many professionals as possible within the determined target group, totaling over 100 recipients. This poll was conducted using the Qualtrics survey tool.

Survey questions were based on the following frameworks:

- Hehenberger et al.’s (2014) “the five steps of social impact measurement framework”
- The Social Impact Investment Taskforce’s (2014b) “the seven best practice guidelines for a good impact measurement process”
- Ebrahim & Rangan (2014) and So & Staskevicius’s (2015) “the four impact measurement methods”
- Results from previous studies discussed in the Background section.

The number of questions was 26. The questions were divided into eight background information questions and 18 impact measurement process questions.

Background information questions included information about the country where the investor’s operations are based, investor type, size of impact investing portfolio in euros (€), sector where impact is aimed to occur, timespan that the investor has had an impact investing portfolio and the maturity level of the investor’s portfolio. In addition, background questions included two questions related to impact measurement process such as what kind of impact measurement process the investor is using and does the investor use single or multiple processes for their portfolio. No personal or enterprise information was enquired.

Impact measurement process questions were divided into six steps:

1. Setting organizational goals for impact investing
2. Impact investment opportunities screening and due diligence
3. Impact investment decisions
4. Data driven investment decisions – reporting
5. Data driven investment decisions – management
6. Organizational level assessment

Each question under each step included two to six claims that provide detailed description about impact measurement process. The six steps, with 18 more in-depth questions and 54 claims, create an impact measurement framework. The strength of this framework was tested using statistical analysis.

Both nominal and dichotomous scales were used to gather the background information. Nominal scale was used when the most suitable answer was selected. Dichotomous scale in this survey was yes or no. More precisely, questions were in the format “please select all that apply” where apply equals to yes and empty cell to no. This scale was used to gather more in-depth information about the impact measurement process (Boslaugh, 2008).

The scope of this study covered as many impact investors based in Europe as possible. The target group of this analysis was gathered from the GIIN list of members and organizations identified as impact investors. The target group represented impact investors and advisors such as fund managers, assets managers, development finance institutions, retail banks, investment banks, foundations, pension funds, insurance companies, family offices, government offices and impact advisors.
Data Analysis

The effect of impact type, investment size and investor type on the strength of the impact measurement process were tested using two sample t-tests with equal standard deviation. The two samples, listed above under the Quantitative Analysis section, were categorized based on information obtained from previous studies and industry publications.

The statistical software used for the analyses was R, available online. The t-test was used to test if the mean values of two groups differ significantly from each other.

Before running any statistical analysis, the quality of data was checked by ensuring that all the answers were within the research scope. For example, based on the background information, non-European based investors were excluded from the statistical analyses. In addition to that, answers from uncompleted surveys or fully empty answers were excluded. In the end, the sample size totaled 23.

An index of the strength of the measurement process was calculated from survey questions related to impact measurement process steps 1-6 (survey questions 9-26). Each question from 9-26 scored “1” if answers to all claims were yes. In other cases each question scored a number of yes answers to each claim under each question divided by total number of claims under each question. The total maximum score for each step was then “3” and for the whole impact measurement process 18. The total score was calculated for each of the respondents, and strength of them was ranked (Appendix 2).

After data was checked and the index was created, the actual statistical analysis was conducted. First, the t-test was done in order to explore whether the mean values of the two groups differ statistically significantly from each other. Statistically significant
means that probability value $p$ is less than 0.05, representing one in 20 chance of committing a Type I error. Secondly, the cumulative distribution function was created to study whether two different groups perform better in 60\textsuperscript{th} and 80\textsuperscript{th} percentiles. Finally, minimum, maximum, mean, 1\textsuperscript{st} and 3\textsuperscript{rd} quartiles were compared (Boslaugh, 2008; Gotelli, 2004).

In addition to the above mentioned statistical analyses, more in-depth analyses were done to fully understand the nature of the impact measurement process. The analyses were conducted in total process, step, question and claim level. The same scorings were used as in the statistical analyses, except for claims. The claim level analyses were conducted in two ways. Firstly, each respondent’s total process score was calculated so that each yes answers scored “1”, totaling 54. Secondly, each claim’s score was calculated so that each yes answer scored “1”, totaling 23. The scores were ranked and an average of each of the levels was calculated. All analyses were conducted in between average, top and bottom performers. In the results section, terminology for the survey parts was changed to reflect impact measurement process: theme equals to question and process part equals to claim.

Research Limitations

The scope of this study had both internal and external limitations which needed to be taken into account when analyzing the results:

1) The survey was sent out to a target group that included impact investors based in Europe. This means that the results of the study cannot be generalized globally.
2) Impact investing is a relatively new investment strategy and little academic research had been done before. Thus, the background section and data collection could have remained too general in some points.

3) The definition of the target group was challenging and some important players might have been left out. The survey was sent out to as many actors as possible, totaling over 100 organizations. However, covering all relevant actors was not possible.

4) The data might have lacked statistical significance as the total sample size was only 23.

In addition, the comprehensiveness of the survey and the accuracy of the replies can be questioned for two reasons. The first reason is that the questions in the survey were based on three impact measurement frameworks and the results from the previous studies presented in the background section. Only the most important steps of the different measurement processes were selected based on the researcher’s best understanding. Thus, the process covered in the survey might have lacked some minor measurement process steps. The second reason is that the terms used in the survey could have been understood differently by each respondent. The main terms used in the survey were defined but there is no guarantee that respondents perceived those words similarly. Even with all of the limitations mentioned above, this study provided an analysis that is as reliable as possible on the current state of impact measurement practices in Europe.
Chapter III

Results

The analysis was divided into two parts. First, a hypotheses testing studied the strength of impact measurement processes among groups defined under Methods section. Second, a more detailed analysis over impact measurement process concentrated on the results in impact measurement process steps, themes and parts level.

For statistical analysis, demography of the respondents were divided into type of impact investor, size of investors’ impact investing portfolio, maturity level of impact investors’ portfolios, impact type and maturity of the investment projects. Of all the respondents 39 percent were fund managers, 13 percent were foundations, 9 percent were family offices or asset managers, and the rest of the respondents were impact advisors, government offices, investment banks and insurance companies. In addition, 39 percent of all the respondents’ portfolio size was 10 to 100 million euros, 35 percent were over 100 million euros, and 26 percent were under 10 million euros. A majority of the respondents had both social and sustainability projects in their portfolio, and most of the respondents were investing in venture or growth stage projects (Appendix 3).

Hypotheses Testing

The strength of the main hypothesis and two sub-hypotheses were tested at the impact measurement process level by comparing the total scores of each group. In addition to a t-test, each hypotheses was analyzed using a cumulative distribution
function, minimum, maximum, mean, 1st quartile and 3rd quartile due to relatively small sample size (n=23).

Main Hypothesis: Among investors in Europe, those investing in both social and sustainability projects have stronger impact measurement processes than those investing only in either social or sustainability projects.

Table 1. Comparison of investment into social or sustainability projects and both.

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>Min</th>
<th>1st quartile</th>
<th>Median</th>
<th>Mean</th>
<th>3rd quartile</th>
<th>Max</th>
<th>Standard deviation</th>
<th>t-value</th>
<th>df</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mixed</td>
<td>16</td>
<td>2.000</td>
<td>7.917</td>
<td>9.392</td>
<td>8.9364</td>
<td>10.830</td>
<td>12.050</td>
<td>2.788</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social or sustainability</td>
<td>7</td>
<td>7.533</td>
<td>8.242</td>
<td>8.950</td>
<td>8.9357</td>
<td>9.175</td>
<td>11.230</td>
<td>1.154</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>23</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.0009</td>
<td>20.946</td>
<td>0.9993</td>
</tr>
</tbody>
</table>

Results of t-test and seven basic statistical values for the main hypothesis.

Figure 6. Comparison of investment into social or sustainability projects and both. Graphs are cumulative distribution functions for the main hypothesis.

The main hypothesis is rejected as investors investing in both social and sustainability projects had nearly identical impact measurement processes as those investors using only one of the criteria (Table 1, Figure 6; t=0.0009, p=0.9993). However, it can be argued that the t-test does not give a clear answer due to the small sample size (n=23). Therefore other statistical methods were applied. Based on a cumulative distribution function, investors investing in both social and sustainability
projects and those investing in either social or sustainability projects have practically identical mean (Table 1; mean “mixed”=8.9364, mean “social or sustainability”=8.9357) but at the 60th and 80th percentiles the mixed portfolios score better (Figure 6; 60th percentile “mixed”=10, 80th percentile “social or sustainability”=10). In addition, mixed portfolios perform stronger in the maximum and the 3rd quartile (Table 1; max “mixed”=12.050, max “social or sustainability”=11.230, 3rd quartile “mixed”=10.830, 3rd quartile “social or sustainability”=9.175).

Sub-Hypothesis 1: Among investors in Europe, those who manage a portfolio of more than 100 million euros have stronger impact measurement processes than those who manage a portfolio of less than 100 million euros.

Table 2. Comparison of investors with a portfolio of more and less than 100 million.

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>Min</th>
<th>1st quartile</th>
<th>Median</th>
<th>Mean</th>
<th>3rd quartile</th>
<th>Max</th>
<th>Standard deviation</th>
<th>t-value</th>
<th>df</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Others</td>
<td>15</td>
<td>2.600</td>
<td>7.742</td>
<td>9.033</td>
<td>8.564</td>
<td>9.375</td>
<td>12.050</td>
<td>2.324</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>23</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.0224</td>
<td></td>
<td></td>
<td>0.3182</td>
</tr>
</tbody>
</table>

Results of t-test and seven basic statistical values for sub-hypothesis 1.

Figure 7. Comparison of investors with a portfolio of more and less than 100 million. Graphs are cumulative distribution functions for sub-hypothesis 1.
Sub-hypothesis 1 is rejected as investors managing a portfolio over 100 million euros had nearly identical impact measurement processes as those investors managing minor portfolios (Table 2, Figure 7; t=1.0224, p=0.3182). However, it can be argued that the t-test does not give a clear answer due to the small sample size (n=23). Therefore other statistical methods were applied. Based on a cumulative distribution function, investors with over 100 million euro portfolios have a higher mean (Table 2; mean “over 100”=9.633, mean “others”=8.564) and they score better at the 60th and 80th percentile than investors managing less than 100 million euro portfolios (Figure 7; 40th percentile “over 100”=10, 80th percentile “others”=10). In addition, investors managing over 100 million euros perform stronger in the minimum, 1st and 3rd quartiles (Table 2; min “over 100”=4.283, min “others”=2.000, 1st quartile “over 100”=8.933, 1st quartile “others”=7.742, 3rd quartile “over 100”=11.060, 3rd quartile “others”=9.375).

Sub-Hypothesis 2: Among investors in Europe, fund managers have stronger impact measurement processes than other impact investors.

Table 3. Comparison of fund managers and other investors.

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>Min</th>
<th>1st quartile</th>
<th>Median</th>
<th>Mean</th>
<th>2nd quartile</th>
<th>Max</th>
<th>Standard deviation</th>
<th>t-value</th>
<th>df</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fund managers</td>
<td>9</td>
<td>4.283</td>
<td>9.033</td>
<td>9.150</td>
<td>9.289</td>
<td>11.230</td>
<td>12.050</td>
<td>2.471</td>
<td>0.5583</td>
<td>21</td>
<td>0.5825</td>
</tr>
<tr>
<td>Total</td>
<td>23</td>
<td>4.283</td>
<td>9.033</td>
<td>9.150</td>
<td>9.289</td>
<td>11.230</td>
<td>12.050</td>
<td>2.471</td>
<td>0.5583</td>
<td>21</td>
<td>0.5825</td>
</tr>
</tbody>
</table>

Results of t-test and seven basic statistical values for sub-hypothesis 2.
Sub-hypothesis 2 is rejected as fund managers had nearly identical impact measurement processes as the other investors (Table 3, Figure 8; t=0.5583, p=0.5825). However, it can be argued that the t-test does not give a clear answer due to the small sample size (n=23). Therefore other statistical methods were applied. Based on a cumulative distribution function, fund managers have a higher mean (Table 3; mean “fund managers”=9.289, mean “others”=8.710) other investors. In addition, fund managers perform stronger in the minimum, maximum, 1st and 3rd quartiles (Table 3; min “fund managers”=4.283, min “others”=2.000, max “fund managers”=12.050, max “others”=11.600, 1st quartile “fund managers”=9.033, 1st quartile “others”=7.883, 3rd quartile “fund managers”=11.230, 3rd quartile “others”=10.340).

In-depth Analysis of Impact Measurement Process

A more detailed analysis of the impact measurement process was conducted by analyzing average scores, actual scores and rankings of all the responses on the total process, process steps, process themes and process parts (Appendix 3, 4 and 5).
Total Impact Measurement Process

None of the respondents are using a comprehensive impact measurement process in their impact investment operations since average score for the total impact measurement process was only 49.6 percent of the maximum score of 18 (Appendix 3; average=8.936). In addition, the scores for the individual impact measurement processes varied from the highest 66.9 to lowest 11.1 percent (Appendix 3; max=12.050, min=2.000).

The average scores were found among fund managers, foundations and government offices that have less than five years or over 10 years of experience in impact investing and whose portfolios are under 100 million euros in value. They also concentrate mainly on creating social impacts in venture or growth stage projects and have created their own investment or sector level measurement process. The highest score was recorded among more experienced fund managers who have created their own portfolio level measurement processes and whose portfolio includes venture or growth stage social and sustainability projects. The lowest performer was found among foundations that are at an early stage of investing practices.

Step Level Analysis of Impact Measurement Process

The impact measurement process was divided into six steps. Again, the average usage of the steps was only 49.6 percent of the full score of 3 (Table 4, Appendix 3, 4; average score for all steps=1.489). From these steps, investors see more value in managing investments based on measured results (60.9 percent), basing investment decision on measured result (58.9 percent) and setting organizational impact investing
goals (56.8 percent) than in assessing impact activities in organizational level (42.0 percent), reporting impact data (41.5 percent) and screening of investment opportunities (37.7 percent) (Table 4, Appendix 4; average “step 1”=1.703, average “step 2”=1.130, average “step 3”=1.768, average “step 4”=1.246, average “step 5”=1.828, average “step 6”=1.261). The highest score was recorded in step three among fund managers with portfolio size over 10 million euros. The lowest scores were recorded in steps two and six among fund managers and foundations with both social and sustainability projects in their portfolio (Table 4, Appendix 3; max “step 3”=3.000, min “step 2”=0.000, min “step 6”=0.000).

Table 4. Ranking of impact measurement process steps 1-6 based on average score.

<table>
<thead>
<tr>
<th>Rank</th>
<th>Theme Level Analysis of Impact Measurement Process</th>
<th>Average score</th>
<th>% of total score</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>STEP 5. Data Driven Investment Decisions – Management</td>
<td>1.828</td>
<td>60.9 %</td>
<td>0.50</td>
<td>2.60</td>
</tr>
<tr>
<td>2</td>
<td>STEP 3. Impact Investment Decisions</td>
<td>1.768</td>
<td>58.9 %</td>
<td>0.33</td>
<td>3.00</td>
</tr>
<tr>
<td>3</td>
<td>STEP 1. Setting Organizational Goals for Impact Investing</td>
<td>1.703</td>
<td>56.8 %</td>
<td>0.50</td>
<td>2.50</td>
</tr>
<tr>
<td>4</td>
<td>STEP 6. Organizational Level Assessment</td>
<td>1.261</td>
<td>42.0 %</td>
<td>0.00</td>
<td>2.00</td>
</tr>
<tr>
<td>5</td>
<td>STEP 4. Data Driven Investment Decisions - Reporting</td>
<td>1.246</td>
<td>41.5 %</td>
<td>0.33</td>
<td>1.91</td>
</tr>
<tr>
<td>6</td>
<td>STEP 2. Impact Investing Opportunities and Due Diligence</td>
<td>1.130</td>
<td>37.7 %</td>
<td>0.00</td>
<td>1.83</td>
</tr>
<tr>
<td>All steps</td>
<td></td>
<td>1.489</td>
<td>49.6 %</td>
<td>0.00</td>
<td>3.00</td>
</tr>
</tbody>
</table>

Theme Level Analysis of Impact Measurement Process

The results suggest that all the 18 themes are generally being used by European investors in their impact measurement processes, although the average score for all themes was 49.6 percent of the total score of 1 (Table 5, Appendix 4; average=0.496). The most used themes’ average scores were over 0.600 representing over 60.0 percent of the total score. These top performers are related to steps one, three and five and include
the following themes: setting goals for social and environmental impacts along with financial return, measuring impact data that investees can control and using impact data for management of poor impact performance and decision making. The least used themes’ average scores were under 0.400 representing less than 40.0 percent of total score. This result is in line with the previously mentioned ranking of steps and includes the following themes: due diligence process, tools to evaluate impact investing opportunities, investees’ reporting period, assurance of data quality, use of additionality, aggregation and attribution while calculating the impact, and effect of maturity into investors measurement process.

Table 5. Ranking of impact measurement process themes 1-18 based on average score.

<table>
<thead>
<tr>
<th>Rank</th>
<th>Question</th>
<th>Average score</th>
<th>% of total score</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>How does your organization respond to poor impact performance?</td>
<td>0.761</td>
<td>76.1 %</td>
<td>0.500</td>
<td>1.000</td>
</tr>
<tr>
<td>2</td>
<td>Does your organization set social and environmental goals together with financial return goals?</td>
<td>0.725</td>
<td>72.5 %</td>
<td>0.000</td>
<td>1.000</td>
</tr>
<tr>
<td>3</td>
<td>How does your organization use impact data?</td>
<td>0.667</td>
<td>66.7 %</td>
<td>0.000</td>
<td>1.000</td>
</tr>
<tr>
<td>4</td>
<td>For an impact investor, it is important to understand the concrete outputs, outcomes and impacts that the investees really have control over.</td>
<td>0.667</td>
<td>66.7 %</td>
<td>0.000</td>
<td>1.000</td>
</tr>
<tr>
<td>5</td>
<td>What kind of impact data does your organization measure?</td>
<td>0.638</td>
<td>63.8 %</td>
<td>0.000</td>
<td>1.000</td>
</tr>
<tr>
<td>6</td>
<td>How does your organization respond to changes in your business environment?</td>
<td>0.565</td>
<td>56.5 %</td>
<td>0.000</td>
<td>1.000</td>
</tr>
<tr>
<td>7</td>
<td>What is the type of your set social, environmental and financial goals?</td>
<td>0.500</td>
<td>50.0 %</td>
<td>0.000</td>
<td>1.000</td>
</tr>
<tr>
<td>8</td>
<td>What are your organization’s impact reporting requirements?</td>
<td>0.478</td>
<td>47.8 %</td>
<td>0.000</td>
<td>0.500</td>
</tr>
<tr>
<td>9</td>
<td>Does your organization define the impact investment thesis that you aim to support?</td>
<td>0.478</td>
<td>47.8 %</td>
<td>0.000</td>
<td>0.500</td>
</tr>
<tr>
<td>10</td>
<td>How does your organization evaluate impact risk?</td>
<td>0.478</td>
<td>47.8 %</td>
<td>0.000</td>
<td>1.000</td>
</tr>
<tr>
<td>11</td>
<td>What kind of core metrics does your organization use?</td>
<td>0.464</td>
<td>46.4 %</td>
<td>0.000</td>
<td>1.000</td>
</tr>
<tr>
<td>12</td>
<td>How does your organization follow-up on impact performance?</td>
<td>0.400</td>
<td>40.0 %</td>
<td>0.000</td>
<td>0.800</td>
</tr>
<tr>
<td>13</td>
<td>How does your organization ensure impact data completeness, quality and integrity?</td>
<td>0.391</td>
<td>39.1 %</td>
<td>0.000</td>
<td>0.750</td>
</tr>
<tr>
<td>14</td>
<td>Does your organization conduct organizational level assessment for impact investment?</td>
<td>0.391</td>
<td>39.1 %</td>
<td>0.000</td>
<td>0.667</td>
</tr>
<tr>
<td>15</td>
<td>What is the investees’ reporting period for their impact data?</td>
<td>0.377</td>
<td>37.7 %</td>
<td>0.333</td>
<td>0.667</td>
</tr>
<tr>
<td>16</td>
<td>Is the level of due diligence conducted when your organization makes impact investment decisions?</td>
<td>0.362</td>
<td>36.2 %</td>
<td>0.000</td>
<td>0.667</td>
</tr>
<tr>
<td>17</td>
<td>How does the maturity of your investments affect your impact measurement process?</td>
<td>0.304</td>
<td>30.4 %</td>
<td>0.000</td>
<td>0.333</td>
</tr>
<tr>
<td>18</td>
<td>Does your organization use a scorecard or other tool to evaluate impact investing opportunities?</td>
<td>0.290</td>
<td>29.0 %</td>
<td>0.000</td>
<td>1.000</td>
</tr>
<tr>
<td>All questions</td>
<td>0.496</td>
<td>49.6 %</td>
<td>0.000</td>
<td>1.000</td>
<td></td>
</tr>
</tbody>
</table>

Process Part Level Analysis of Impact Measurement Process

The process part analysis was divided into two parts: 1) analysis based on each of the respondents’ individual impact measurement processes and 2) based on each process
part that was used by the respondents. The second part of the analysis ranked process parts for top, average and bottom ten categories.

The average impact measurement process, which is based on each respondents individual impact measurement, uses 47.4 percent of all the process parts from all step and theme levels (Appendix 3; average=25.609, max=37.000, min=5.000). The average process includes: several investment or sector specific theses, set goals for social impact and financial return, impact risk evaluation as a part of internal risk management, due diligence with additional social and environmental aspects, other tools to evaluate investment opportunities, measurement of outputs and outcomes that are in investees’ control, the use of sector or investment specific metrics, an annual or quarterly basis reporting with the same requirements for each investee, data checking by own employees and together with investees, impact performance analyzing against set baselines and impact goals, discussion over poor impact performance internally and together with investees, investment and management decisions based on impact data, assessment of aggregated impact of the portfolio, amendment of set metrics if impact thesis changes, and no changes in measurement process if the maturity of the investment changes.

According to the second part of the analysis, an average of 11 respondents are using one specific process part in their impact measurement process, representing 47.4 percent of all respondents of 23 (Appendix 4, 5). Process parts that fall within the average of ten are related to all steps except step two. This indicates that the average impact measurement process finds most of the steps important. The process parts that were included in the average ten are: investors’ set environmental goals and use specific metrics for investment decision making, reporting requirements are same for each
investees’ although maturity has some effect, reporting is done on a quarterly basis and it is checked by own employees, investors prepare management level analysis which is benchmarked, set metrics are revised if investees change their business model and the maturity of the investments does not have any effect on the impact measurement process.

The most commonly used process parts are used by almost all respondents, reaching maximum of 95.7 percent (Appendix 4, 5; max “top 10”= 22, min “top 10”=18). Thus, these are the most important parts of the impact measurement process for impact investors in Europe. This is in line with the results from the average process that was based on each respondents’ impact measurement process presented above. Process parts that fall within the top ten are related to steps one, two, three and five including the following parts: investors set metrics to follow social impact and financial return goals, impact risk assessment is part of risk management, due diligence includes social and environmental aspects, investors’ measure outputs and outcomes that are in investees’ control, investors’ discuss with investees about the poor impact performance, and reported impact data is used for investment and management decision making.

Some process parts were rarely used or not used at all, reaching a minimum of 0.0 percent usage (Appendix 4, 5; max “bottom 10”=5, min “bottom 10”=0). Process parts that fall within the bottom ten include: organization does not set ratios to follow impact investing goals, a stakeholder view is not taken into account in impact risk evaluation, due diligence process does not change if the maturity level of the investment increases, impact investing opportunities are not analyzed using stakeholder analysis, logic model or SROI methodology, impact data reporting is not done on a monthly basis and it is not verified by an external auditor, impact performance is not followed using KPIs and
assumptions based on investees’ impact data are not communicated to investees, organization does not take into account attribution aspect while calculating the impact, and maturity of the investment does not have an effect on investors impact measurement process.

In addition to the above listed findings, results of some of the other process parts are worth highlighting (Appendix 5). For example, only a few organizations measure the impact of their investments or impacts that are in the investees’ control, assess their own additionality or use set baseline targets or scorecards when screening investment opportunities. However, often organizations assess the aggregated impact of their whole portfolio, analyze impact performance against set internal baseline and impact goals and check data together with investees on a regular basis.
Chapter IV
Discussion

As the Results section indicated, the hypotheses testing did not find any statistically significant difference between impact types, investor types or the size of the portfolios. One reason for the practically equal strength of the impact measurement processes between different groups is the young age of the impact investing strategy in general. The strategy itself and impact measurement processes are relatively new and practices have yet to be developed among impact investors. This unity of practice can be seen as an asset for the whole impact investing field because it sets all investors equally in line when evaluating investment opportunities. It also supports continuous development of the measurement process frameworks and helps investees to communicate with different investors using the same approach. For the future development of the impact measurement process it is recommended to establish uniform impact measurement practices. This will respond to the future challenge on how to create an assessment framework that is suitable for both investors and investees.

As earlier suggested, the measurement processes were quite similar among respondents since there were no notable differences between them. In other words, most of the respondents’ processes fall within the average process (Figure 9). The average process uses all steps and themes. Although all steps and themes are used in the average process, only average of 47.4 percent of the process parts are used. These observations
suggest that most of the investors use a fairly straightforward process for measuring impact, as opposed to the standardized frameworks presented in the Background section.

Figure 9. Average impact measurement process for European based impact investor. The impact measurement process consists of six steps. Each step is divided into three themes and each theme included several process parts. The most preferred steps, themes and process parts are bolded implicating the most important parts of the measurement process for European based impact investors.

Some of the findings of this study are in line with previous studies. For example, the average impact measurement process sets several investment or sector specific theses within the portfolio. Similar finding were presented in J.P. Morgan’s (2015) study. The interesting finding of this study was that impact investors do not set targets on environmental impacts as often as on social impacts and financial return. This result is
similar to Ormiston et al.’s (2015), who observed the integration of additional social and environmental aspects into due diligence processes. A final example is that this study also observed that investors focus their impact assessment on outputs and outcomes that are in the investees’ control, as found in previous studies. In addition to similarities, some of the findings of this study present only a slight divergence from previous studies. For example, this study observed that the investees’ reporting period is both on an annual and quarterly basis while previous studies found it to be only on an annual basis. Previous studies also observed that the business value of the impact performance is high. This can be seen to be in line with the finding that investment and management decisions are done based on impact data and analysis.

In contrast, some of the findings had more clear deviation with the previous studies. For example, J.P. Morgan (2015) implicated that impact risk analysis is only occasionally used, whereas this study ranked risk evaluation as one the most highly used components of the impact measurement process. However, Reeder et al. (2015) pointed out that impact risk evaluation is emerging as a part of impact assessment process which is supported by the findings of this study. Another finding that was not in line with previous studies was that scorecards are widely used during screening of investment opportunities. Instead, this study found that other tools were used, suggesting that new screening tools have been developed. The final difference was that the maturity of investments rarely had an effect on the impact measurement process. This finding is inconsistent to the previous studies, which implicated that the measurement process evolves once the maturity of portfolios grows.
Other notable findings related to this study were that none of the respondents use the SROI methodology and only a few were using a standardized framework such as that suggested by the G8 Taskforce or IRIS. On the contrary, many previous studies have concentrated on SROI methodology and highlighted the importance of it. Some studies have even found that investors are using one of the standardized impact measurement frameworks. The above mentioned findings suggest that once the knowledge of the impact investors grows, they shift into using their own methods to measure impact. Nevertheless, standardized frameworks and measurement methodologies are a good starting point. However, in the long run investors need customized processes to support their own business operations and impact targets.

All in all, the state of the impact measurement process in Europe is still underdeveloped. This can be concluded from the results presented earlier in the Results section. None of the respondents got a full score for using all impact measurement process parts suggesting that none of them are using a comprehensive impact measurement process in their impact investment operations. In fact, the average respondent uses only about half of the process parts. These findings are in line with the previous studies. For example, Reeder et al. (2015) found that the state of the non-financial performance assessment is relatively weak, although many publicly available guidelines and frameworks exist. However, some observations related to an overall process are not in line with the previous studies. For example, J.P. Morgan’s (2015) impact assessment study stated that markets are moving towards creating value from impact assessment beyond simply reporting of outcomes. In some parts this is true. Nevertheless, this study implicated that the impacts are still seldom measured among
impact investors in Europe. This study also found out that additionality and attribution are rarely used among impact investors. However, for example, So & Staskevicius (2015) and J.P. Morgan & the GIIN’s (2015) annual survey observed the importance of the measurement of additionality.

For future studies, I propose the following recommendations:

- Concentrate on how to decrease the costs and resources required in order to measurement of the impacts, and not only outputs and outcomes. This way impact investing can truly move from measuring outcomes to measuring actual impacts.

- Focus on developing tools for investors for assessing additionality and attribution in addition to aggregation. This way, investors can create a deeper understanding about the impacts of their own investments and make more accurate investment and management decision.

- Concentrate on increasing communication between investors and investees. Findings of this and previous studies show that the communication is already on a good level. Investors are, for example, discussing their impact performance with investees, and reported impact data is analyzed together. However, to truly be able to develop an impact measurement process that supports both investors’ and investees’ operations, the level of communication should be developed further for more profound co-operation.

- Finally, encourage investors to conduct external assurance for investees’ reported impact data. This will increase the reliability of the reported impact data and encourage both investors and investees to work together to develop a
high quality reporting processes. This suggestion is one of the keys to responding to earlier mentioned challenges to decrease some of the barriers that prevent investments to the social and sustainability projects by increasing trust among actors in the impact investing field.

Conclusions

Evidence that investments in social and sustainable projects, such as healthcare and renewable energy, are needed for the battle over climate change and to enhance social well-being is undeniable. Impact investing is a relatively young and fast developing investing strategy that can provide important answers to financing challenges facing social and sustainability projects. Especially in Europe, the market is growing rapidly with an annual growth of 52.3 percent between 2011 and 2013.

An impact measurement framework combines the impact measurement process with a traditional investment process, creating an effective way to measure impact. There are several standardized frameworks publicly available. However, this study concentrated on three frameworks that together combine all major parts of the measurement process: Hehenberger et al.’s (2014) “the five steps of social impact measurement framework”, the Social Impact Investment Taskforce’s (2014b) “the seven best practice guidelines for a good impact measurement process” and Ebrahim & Rangan’s (2014) and So & Staskevicius’s (2015) “the four impact measurement methods”.

Previous studies have indicated that one of the barriers preventing investment into impact projects is the lack of established performance measurement practices and reporting frameworks that meet the needs of all actors in the impact investing field. This
study aimed to identify how some of those barriers could be decreased by finding a reliable and transparent impact measurement process which can be used in a wider context. In other words, the purpose of this study was to lower investment risks related to social and sustainability projects by finding some universal features of impact measurement processes. Through the survey directed towards impact investors, this study aimed to validate how these features are used as a tool for making impact investment decisions and monitoring performance in Europe.

The state of practice between investors was investigated by conducting quantitative analyses of the survey results. The quantitative analyses used statistical tools to test the strength of the impact measurement processes of the different investor groups and more in-depth analyses to understand the nature of the respondents’ impact measurement processes. The statistical analyses used t-test to test main and two sub-hypotheses. The more in-depth analyses concentrated on comparing the average scores, actual scores and rankings of the impact measurement process steps, themes and process parts.

All in all, the state of the impact measurement process in Europe appears to be in a relatively immature stage. The hypotheses testing found that investors investing in both social and sustainability projects, investors managing over 100 million euros and fund managers had nearly identical impact measurement processes as the other investors. The more in-depth analyses revealed that all steps and themes included in the survey are used by investors. However, none of the respondents use the complete process. The scores for the individual impact measurement processes varied from the highest 12.050 (66.9 percent) to lowest 2.000 (11.1 percent) and the average score for the total impact
measurement process totaled only 8.936 (49.6 percent). In addition, a single investor used only an average of 47.4 percent of the process parts. All of the above findings can be explained by the young age of the impact investing strategy in general, as well as the lack of standardized measurement methodologies.

The findings of the analyses suggested that most of the investors use a fairly straightforward process for measuring impact, as opposed to the standardized frameworks presented in the Background section. The results revealed that respondents prefer some of the steps, themes and process parts such as setting organizational goals for social impact and financial return, concentrating impact assessment on outputs and outcomes that are in investees’ control and making management and investment decision based on impact data. These findings were mostly in line with the previous studies. However, previous studies did not see for example impact risk analysis important, whereas this study ranked it as one of the most often used components of the impact measurement process.

There were also three additional findings worth highlighting. The first finding was that none of the respondents used SROI methodology and only a few used a standardized framework such as suggested by G8 Taskforce or IRIS. The second finding was that additionality and attributable part of the impact consideration were rarely assessed and the quality of the impact data was rarely externally verified. Finally, the most notable finding was that only a few respondents measured actual impact.

For future studies, it is highly recommended to concentrate on the four focus areas currently in the impact investors’ agenda. The first area is the need to decrease the costs and resources required for measuring impact. The second area is the development of tools and practices for measuring investors’ additionality and attribution. The third area is
developing further the communication between investors and investees. Finally, the fourth area is the need to encourage investors to use external auditors to verify impact data. Confronting these issues will raise the quality of impact data to the next level, support both investors’ and investees’ business operations and provide investors with a deeper understanding of their own impacts. All in all, this will increase transparency and trust over the impact investment projects, therefore enabling investments to flow to impact investing projects.
Appendix 1
Impact Investing Survey

EMAIL

TITLE: IMPACT INVESTING SURVEY – state of practice in Europe

Dear Recipient,

I hope this message finds you well.

My Name is Riina Alenius and I am conducting my master’s thesis research in Harvard University. The topic for my research is the **Impact Measurement Process** for impact investing. I am asking impact investors including assets managers and advisors in Europe to take part in this survey, which will only take 15 minutes of your time.

The survey is anonymous and your answers will be kept confidential.

Please forward this message in your organization if you feel there is another person interested in answering the questionnaire. I also appreciate if you can forward this questionnaire to other impact investing professionals in your network.

**You can participate in the study by following this link to the questionnaire:**

https://harvard.az1.qualtrics.com/SE/?SID=SV_2bZOfxVdtzGvnBb

If you wish to have more information about the study, please contact me by email **rio740@g.harvard.edu**

Your time and contribution is very much appreciated.

Thank you and Kind regards,
Riina Alenius
You are being asked to take part in a research study conducted by Riina Alenius from Harvard University.

If you choose to be in the study, you will complete a survey. This survey will help us to learn more about the state of the impact measurement practices in Europe and it is targeted for impact investors. The survey will take about 15 minutes and includes 26 questions related to your impact measurement process and some background information.

In this study we see impact investing as an investment field where the investor’s goal is to create positive social and environmental impact alongside a financial return.

You can skip questions that you do not want to answer or stop the survey at any time.

The survey is anonymous, and no one will be able to link your answers back to you. Your answers will be kept confidential. Please do not include your name or other information that could be used to identify you in the survey responses.

Participating in this study is voluntary. Please close the webpage if you do not want to participate.

Questions? Please contact Riina Alenius at rio740@g.harvard.edu

If you want to participate in this study, click the >> button to start the survey.
Q1. In which European country(ies) is your organization based and registered in?
(Select all that apply)

- Austria
- Belgium
- Bulgaria
- Croatia
- Cyprus
- Czech Republic
- Denmark
- Estonia
- Finland
- France
- Germany
- Greece
- Hungary
- Iceland
- Ireland
- Italy
- Latvia
- Lithuania
- Luxembourg
- Malta
- The Netherlands
- Norway
- Poland
- Portugal
- Romania
- Slovakia
- Slovenia
☐ Spain
☐ Sweden
☐ Switzerland
☐ United Kingdom
☐ Other European country
☐ We do not operate in Europe

Q2. What is the investor type that your organization represents?

☐ Development Finance Institution
☐ Family Office
☐ Foundation
☐ Fund Manager
☐ Government Office
☐ Insurance Company
☐ Investment Bank
☐ Pension Fund
☐ Retail Bank
☐ Impact Advisor or Intermediary
☐ Asset Manager

Q3. What is the size of your impact investing portfolio?

☐ Under 1 million euros
☐ 1 - 10 million euros
☐ 10 - 100 million euros
☐ Over 100 million euros
Q4. What are the primary sectors that you aim to create impact in through your investments?
(Select all that apply)

- Education
- Employment Generation
- Energy
- Financial Services (excluding Microfinance)
- Food & Agriculture
- Habitat Conservation
- Healthcare
- Housing
- Infrastructure
- Manufacturing
- Microfinance
- Microinsurance
- Social Impact Bonds (SiBs)
- Water & Sanitation
- Other Social Project
- Other Sustainability Project

Q5. Select the number of years that you have included impact investing in your portfolio.

- Under 5 years
- 5 - 10 years
- Over 10 years

Q6. Select the typical stage of your impact investment projects.
(Select all that apply)

- Seed or Start-up Stage
- Venture Stage
- Growth Stage
- Mature Stage, Private
- Mature Stage, Public Traded
Impact Measurement

FRAMEWORK FOR IMPACT MEASUREMENT

The following questions are related to the type of impact measurement process you use to evaluate social and environmental impacts alongside with financial return of your impact investments. In this survey the framework for impact measurement is divided into 6 steps.

First there will be 2 background questions and then 18 specific impact measurement process questions related to 6 impact measurement steps.

Select all that apply for each question listed under 6 steps. Please answer based on your current processes related to impact investing and impact measurement.

Background

BACKGROUND QUESTIONS

Q7. Is your organization using an impact measurement process in your investment decision making and follow-up?

- Our organization is using a standardized framework such as suggested by G8 Taskforce or IRIS.
- Our organization is using another framework that is developed for our own need and use.
- Our organization is not using any impact measurement framework.

Q8. Does your organization have a single impact measurement process for the whole portfolio?

- Our organization has one process for our whole portfolio.
- Our organization has separate processes for each sector within our portfolio.
- Our organization has separate processes for each single investment.
STEP 1 - Setting Organizational Goals for Impact Investing

Q9. Does your organization define the impact investment thesis that you aim to support?

(Impact Thesis = an articulated impact investing mission your organization wishes to support through capital)

☐ Our organization has defined one thesis for the whole portfolio.
☐ Our organization has defined several theses for each investment or sector within our portfolio.

Q10. Does your organization set social and environmental goals together with financial return goals?

☐ Our organization sets social goals.
☐ Our organization sets environmental goals.
☐ Our organization sets financial return goals.

Q11. What is the type of your set social, environmental and financial goals?

☐ Our organization sets and follows specific metrics (for example number of affordable housing units financed).
☐ Our organization sets and follows specific ratios (for example grant funding required per affordable housing unit).

STEP 2 - Impact Investing Opportunities and Due Diligence

Q12. How does your organization evaluate impact risk?

(Impact Risk = a measure of how likely it is that the intended social and environmental impact of the investment is not realized)

☐ Impact risk evaluation is part of our internal investment risk management process.
☐ Frequent studies of stakeholders’ views are part of our impact risk evaluation.
Q13. What is the level of due diligence conducted when your organization makes impact investment decisions?

- Our organization’s impact investment due diligence is similar to our traditional investment due diligence.
- Our organization’s impact investment due diligence includes additional social and environmental considerations.
- Our organization’s impact investment due diligence is more comprehensive for seed stage investments than more mature investments.

Q14. Does your organization use a scorecard or other tool to evaluate impact investing opportunities?

- Our organization uses a scorecard.
- Our organization performs stakeholder analysis.
- Our organization uses SROI methodology.
- Our organization uses a logic model.
- Our organization uses set baseline targets.
- Our organization uses other tools.

STEP 3 - Impact Investment Decisions

Q15. For an impact investor, it is important to understand the concrete outputs, outcomes and impacts that the investees really have control over.

(Output = relevant activities completed as part of the intervention. For example number of affordable houses build)
(Outcome = direct change in the beneficiary caused by intervention. For example number of new disadvantaged families living in affordable houses)
(Impact = change in outcomes. For example improvement in new resident families’ living conditions resulting in less poverty and less crime)

- We typically assess the outputs that are in our investees’ control.
- We typically assess the outcomes that are in our investees’ control.
- We typically assess the impacts that are in our investees’ control.
Q16. What kind of impact data does your organization measure?

☐ Our organization measures outputs of our investments.
☐ Our organization measures outcomes of our investments.
☐ Our organization measures impacts of our investments.

Q17. What kind of core metrics does your organization use?

☐ Our organization uses a set of internally defined metrics across the whole portfolio.
☐ Our organization uses sector or investment specific metrics.
☐ Our organization has set Key Performance Indicators (KPIs).

STEP 4 - Data Driven Investment Decisions - Reporting

Q18. What is the investees’ reporting period for their impact data?

☐ Investee reporting is required on an annual basis.
☐ Investee reporting is required on a quarterly basis.
☐ Investee reporting is required on a monthly basis.

Q19. What are your organization’s impact reporting requirements?

☐ Our organization has the same reporting requirements for each investee.
☐ Our organization has different reporting requirements for investments in different maturity stages (for example seed, venture, growth stages etc.).

Q20. How does your organization ensure impact data completeness, quality and integrity?

☐ Data is checked by our own employees in every reporting period.
☐ Data is checked together with our investees on a regular basis.
☐ Data is checked and verified by external auditors or specialist on a regular basis.
☐ Data is compared and checked against peer group data on a regular basis.
STEP 5 - Data Driven Investment Decisions - Management

Q21. How does your organization follow-up on impact performance?
- Our organization prepares management level analysis.
- Impact performance is analyzed against set internal baseline and impact goals.
- Impact performance is analyzed against external benchmarks.
- Impact data is analyzed with KPIs.
- Assumptions which are done based on the impact data are communicated to investees.

Q22. How does your organization respond to poor impact performance?
- We discuss with our investees to find out reasons for poor performance and plans for improvement.
- We discuss internally to find out reasons for poor performance and plans for improvement.

Q23. How does your organization use impact data?
- Our organization makes investment decisions based on impact data and analysis.
- Our organization makes management decisions based on impact data and analysis.
- Our organization makes investment exit decisions based on impact data and analysis.

STEP 6 - Organizational level Assessment

Q24. How does your organization assess organizational level impacts?
- Our organization assesses organizational level impacts to identify areas for improvement.
- Our organization assesses organizational level impacts to ensure alignment with strategic goals.
- Our organization assesses organizational level impacts to evaluate resource allocation effectively.

STEP 6 - Organizational level Assessment

(Select all that apply for each of the questions)
Q24. Does your organization conduct organizational level assessment for impact investment?

(Additionality = an outcome delivered due to intervention that otherwise would not have occurred)
(Aggregation = a sum of all investments’ impacts realized within the portfolio)

☐ Our organization assesses the additionality of our investments.
☐ Our organization calculates only the portion of impact that we are attributable to based on our portion of the total investment.
☐ Our organization assesses the aggregated impact of our whole portfolio.

Q25. How does your organization respond to changes in your business environment?

☐ Our organization revises set metrics and KPIs if changes are made in our impact thesis and goals.
☐ Our organization revises set metrics and KPIs if changes are made in our investees’ business model.

Q26. How does the maturity of your investments affect your impact measurement process?

☐ Maturity of our investments does not have any effect on our impact measurement process.
☐ We review and change our process if necessary once the maturity grows.
☐ A more detailed process is used for more mature investments.

Thank you for your time spent taking this survey.
Your response has been recorded.
If you wish to have more information about the study, please contact me by email rio740@g.harvard.edu
Appendix 2

Logic Flowchart for Variable Construction

Statistical Analysis: Use Step 1 for Impact Measurement Process
– Calculated also for Steps 2 - 6 (Questions 9 - 26)
## Survey Summary – Demography and Total Process Scores

<table>
<thead>
<tr>
<th>n</th>
<th>Type of impact investor</th>
<th>Size of impact investing portfolio (in EUR)</th>
<th>Primary impact type</th>
<th>Maturity of portfolio (years)</th>
<th>Stage of impact investing projects</th>
<th>Kind of impact measurement process used</th>
<th>Scope of impact measurement process</th>
<th>Process parts</th>
<th>Scores for impact investing process</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Score (max 4)</td>
<td>% of total score</td>
</tr>
<tr>
<td>1</td>
<td>Fund Manager</td>
<td>&gt; 100</td>
<td>Both</td>
<td>&gt; 10</td>
<td>Seed, Venture, Mature</td>
<td>Own</td>
<td>Sector</td>
<td>36</td>
<td>66.7%</td>
</tr>
<tr>
<td>2</td>
<td>Impact Advisor</td>
<td>10-100</td>
<td>Both</td>
<td>&gt; 10</td>
<td>Seed, Growth, Mature</td>
<td>Own</td>
<td>Investment</td>
<td>18</td>
<td>33.3%</td>
</tr>
<tr>
<td>3</td>
<td>Family Office</td>
<td>&gt; 100</td>
<td>Both</td>
<td>&lt; 5</td>
<td>Seed, Venture, Growth</td>
<td>Own</td>
<td>Investment</td>
<td>33</td>
<td>61.1%</td>
</tr>
<tr>
<td>4</td>
<td>Insurance Company</td>
<td>&gt; 100</td>
<td>Both</td>
<td>&lt; 5</td>
<td>Venture, Growth, Mature</td>
<td>Own</td>
<td>Portfolio</td>
<td>31</td>
<td>57.4%</td>
</tr>
<tr>
<td>5</td>
<td>Impact Advisor</td>
<td>&gt; 100</td>
<td>Both</td>
<td>&lt; 5</td>
<td>Venture, Growth</td>
<td>Own</td>
<td>Sector</td>
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<td>42.6%</td>
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<tr>
<td>6</td>
<td>Fund Manager</td>
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<td>Sustainability</td>
<td>&lt; 5</td>
<td>Growth</td>
<td>GS or similar</td>
<td>Investment</td>
<td>21</td>
<td>38.9%</td>
</tr>
<tr>
<td>7</td>
<td>Impact Advisor</td>
<td>&gt; 100</td>
<td>Both</td>
<td>&gt; 100</td>
<td>Mature</td>
<td>Own</td>
<td>Portfolio</td>
<td>30</td>
<td>55.6%</td>
</tr>
<tr>
<td>8</td>
<td>Fund Manager</td>
<td>10-100</td>
<td>Both</td>
<td>&lt; 5</td>
<td>Seed, Venture, Growth</td>
<td>Own</td>
<td>Portfolio</td>
<td>27</td>
<td>50.0%</td>
</tr>
<tr>
<td>9</td>
<td>Foundation</td>
<td>10-100</td>
<td>Social</td>
<td>&gt; 10</td>
<td>Seed, Venture, Growth</td>
<td>Own</td>
<td>Portfolio</td>
<td>25</td>
<td>40.7%</td>
</tr>
<tr>
<td>10</td>
<td>Fund Manager</td>
<td>&gt; 100</td>
<td>Both</td>
<td>&lt; 5</td>
<td>Venture, Growth</td>
<td>GS or similar</td>
<td>Sector</td>
<td>12</td>
<td>22.2%</td>
</tr>
<tr>
<td>11</td>
<td>Fund Manager</td>
<td>10-100</td>
<td>Both</td>
<td>&lt; 5</td>
<td>Seed, Venture, Growth</td>
<td>GS or similar</td>
<td>Sector</td>
<td>25</td>
<td>46.3%</td>
</tr>
<tr>
<td>12</td>
<td>Investment Bank</td>
<td>&gt; 100</td>
<td>Both</td>
<td>&lt; 5</td>
<td>Venture, Growth, Mature</td>
<td>Own</td>
<td>Sector</td>
<td>33</td>
<td>61.1%</td>
</tr>
<tr>
<td>13</td>
<td>Fund Manager</td>
<td>10-100</td>
<td>Both</td>
<td>&lt; 5</td>
<td>Seed, Venture, Growth</td>
<td>GS or similar</td>
<td>Sector</td>
<td>37</td>
<td>68.5%</td>
</tr>
<tr>
<td>14</td>
<td>Government Office</td>
<td>10-100</td>
<td>Social</td>
<td>&lt; 5</td>
<td>Venture</td>
<td>Own</td>
<td>Sector</td>
<td>23</td>
<td>46.3%</td>
</tr>
<tr>
<td>15</td>
<td>Fund Manager</td>
<td>10-100</td>
<td>Both</td>
<td>&lt; 5</td>
<td>Venture, Growth</td>
<td>GS or similar</td>
<td>Sector</td>
<td>23</td>
<td>46.3%</td>
</tr>
<tr>
<td>16</td>
<td>Asset Manager</td>
<td>&gt; 100</td>
<td>Both</td>
<td>&gt; 10</td>
<td>Growth</td>
<td>Own</td>
<td>Sector</td>
<td>26</td>
<td>48.1%</td>
</tr>
<tr>
<td>17</td>
<td>Family Office</td>
<td>1-10</td>
<td>Sustainability</td>
<td>&lt; 5</td>
<td>Growth</td>
<td>Own</td>
<td>Portfolio</td>
<td>21</td>
<td>38.9%</td>
</tr>
<tr>
<td>18</td>
<td>Fund Manager</td>
<td>&lt; 100</td>
<td>Social</td>
<td>&lt; 5</td>
<td>Seed, Growth, Mature</td>
<td>None</td>
<td>Sector</td>
<td>26</td>
<td>48.1%</td>
</tr>
<tr>
<td>19</td>
<td>Impact Advisor</td>
<td>10-100</td>
<td>Both</td>
<td>&lt; 5</td>
<td>Seed, Venture, Growth</td>
<td>GS or similar</td>
<td>Sector</td>
<td>28</td>
<td>51.9%</td>
</tr>
<tr>
<td>20</td>
<td>Fund Manager</td>
<td>10-100</td>
<td>Social</td>
<td>&lt; 5</td>
<td>Venture, Growth</td>
<td>GS or similar</td>
<td>Sector</td>
<td>32</td>
<td>59.3%</td>
</tr>
<tr>
<td>21</td>
<td>Foundation</td>
<td>1-10</td>
<td>Both</td>
<td>&lt; 5</td>
<td>Seed</td>
<td>Own</td>
<td>Sector</td>
<td>5</td>
<td>9.3%</td>
</tr>
<tr>
<td>22</td>
<td>Asset Manager</td>
<td>1-10</td>
<td>Both</td>
<td>&gt; 10</td>
<td>Venture, Growth</td>
<td>Own</td>
<td>Sector</td>
<td>29</td>
<td>53.7%</td>
</tr>
<tr>
<td>23</td>
<td>Foundation</td>
<td>10-100</td>
<td>Social</td>
<td>&gt; 10</td>
<td>Venture, Growth</td>
<td>GS or similar</td>
<td>Sector</td>
<td>24</td>
<td>44.4%</td>
</tr>
</tbody>
</table>

### Average for all steps

- Average: 25.609 (47.4%)
- Min: 5.000 (9.3%)
- Max: 37.000 (65.5%)
- Average % of total score: 49.6%
# Appendix 4

## Survey Results Summary

<table>
<thead>
<tr>
<th>Impact Measurement Process Summary</th>
<th>Step</th>
<th>Average Score</th>
<th>Theme</th>
<th>Average Score</th>
<th>Process Part</th>
<th>Number of Investors who use this part of the impact measurement process (max 23)</th>
<th>Percentage of Investors who use this part of the impact measurement process</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Q9. Does your organization define the impact investment thesis that you aim to support?</td>
<td>0.478</td>
<td>1. Our organization has defined our thesis for the whole portfolio</td>
<td>9</td>
<td>39.1%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2. Our organization has defined several theses for each investment or sector within our portfolio</td>
<td>13</td>
<td>56.5%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Q10. Does your organization set social and environmental goals together with financial return goals?</td>
<td>0.725</td>
<td>1. Our organization sets social goals</td>
<td>21</td>
<td>91.3%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2. Our organization sets environmental goals</td>
<td>10</td>
<td>43.5%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3. Our organization sets financial return goals</td>
<td>19</td>
<td>82.6%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Q11. What is the type of your social, environmental and financial goals?</td>
<td>0.500</td>
<td>1. Our organization sets and follows specific metrics</td>
<td>18</td>
<td>78.3%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2. Our organization sets and follows specific ratios</td>
<td>5</td>
<td>21.7%</td>
</tr>
<tr>
<td></td>
<td>STEP 1. Setting Organizational Goals for Impact Investing</td>
<td>1.703</td>
<td></td>
<td>Q12. How does your organization evaluate impact risk?</td>
<td>0.478</td>
<td>1. Impact risk evaluation is part of our internal investment risk management process</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2. Frequent studies of stakeholders’ views are part of our impact risk evaluation</td>
<td>4</td>
<td>17.4%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Q13. What is the level of due diligence conducted when your organization makes impact investment decisions?</td>
<td>0.362</td>
<td>1. Our organization’s impact investment due diligence is similar to our traditional investment due diligence</td>
<td>1</td>
<td>4.3%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2. Our organization’s impact investment due diligence includes additional social or environmental considerations</td>
<td>21</td>
<td>91.3%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3. Our organization’s impact investment due diligence is more comprehensive for seed stage investments than more mature investments</td>
<td>3</td>
<td>13.0%</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Q14. Does your organization use a screened or other tool to evaluate impact investing opportunities?</td>
<td>0.290</td>
<td>1. Our organization uses a screened list of stocks</td>
<td>7</td>
<td>30.4%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2. Our organization performs stakeholder analysis</td>
<td>5</td>
<td>21.7%</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3. Our organization uses ESGI methodology</td>
<td>0</td>
<td>0.0%</td>
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<tr>
<td></td>
<td></td>
<td></td>
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<td>4. Our organization uses a logic model</td>
<td>4</td>
<td>17.4%</td>
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<tr>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>5. Our organization uses set benchmark targets</td>
<td>8</td>
<td>34.8%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6. Our organization uses other tools</td>
<td>16</td>
<td>69.6%</td>
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<tr>
<td></td>
<td>STEP 2. Impact Investing Opportunities and Due Diligence</td>
<td>1.130</td>
<td></td>
<td>Q15. As an impact investor, it is important to understand the concrete outputs, outcomes and impacts that the investments yield and control over.</td>
<td>0.667</td>
<td>1. We typically assess the outputs that are in our investors control</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2. We typically assess the outcomes that are in our investors control</td>
<td>19</td>
<td>82.6%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3. We typically assess the impacts that are in our investors control</td>
<td>18</td>
<td>73.8%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Q16. What kind of impact data does your organization measure?</td>
<td>0.638</td>
<td>1. Our organization measures outputs of our investments</td>
<td>19</td>
<td>82.6%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2. Our organization measures outcomes of our investments</td>
<td>18</td>
<td>78.3%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3. Our organization measures impact of our investments</td>
<td>7</td>
<td>30.4%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Q17. What kind of core metrics does your organization use?</td>
<td>0.464</td>
<td>1. Our organization uses a set of internally defined metrics across the whole portfolio</td>
<td>7</td>
<td>30.4%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2. Our organization uses sector or investment specific metrics</td>
<td>12</td>
<td>52.2%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3. Our organization has set Key Performance Indicators</td>
<td>13</td>
<td>56.5%</td>
</tr>
<tr>
<td></td>
<td>STEP 3. Impact Investment Decisions</td>
<td>1.768</td>
<td></td>
<td>Q18. What is the investors’ reporting period for their impact data?</td>
<td>0.377</td>
<td>1. Investors reporting is required on an annual basis</td>
<td>14</td>
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<tr>
<td></td>
<td></td>
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<td></td>
<td>2. Investors reporting is required on a quarterly basis</td>
<td>11</td>
<td>47.8%</td>
</tr>
<tr>
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<td></td>
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<td>3. Investors reporting is required on a monthly basis</td>
<td>1</td>
<td>4.3%</td>
</tr>
<tr>
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<td></td>
<td>Q19. What are your organization’s impact reporting requirements?</td>
<td>0.478</td>
<td>1. Our organization has the same reporting requirements for each investment</td>
<td>12</td>
<td>52.2%</td>
</tr>
<tr>
<td></td>
<td></td>
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<td></td>
<td></td>
<td>2. Our organization has different reporting requirements for investments in different maturity stages</td>
<td>10</td>
<td>43.5%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Q20. How does your organization measure impact data completeness, quality and integrity?</td>
<td>0.391</td>
<td>1. Data is checked by our own employees in every reporting period</td>
<td>12</td>
<td>52.2%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2. Data is checked together with our investors on a regular basis</td>
<td>16</td>
<td>69.6%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3. Data is checked and verified by external auditors or operators on a regular basis</td>
<td>2</td>
<td>8.7%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4. Data is compared and checked against peer group data on a regular basis</td>
<td>6</td>
<td>26.1%</td>
</tr>
</tbody>
</table>
### STEP 5: Data Driven Investment Decisions – Management

<table>
<thead>
<tr>
<th>Question</th>
<th>Weight</th>
<th>Score</th>
<th>Score Rank</th>
<th>% Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q21. How does your organization follow up on impact performance?</td>
<td>0.400</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Our organization prepares management level analysis</td>
<td>0.12</td>
<td></td>
<td></td>
<td>52.2 %</td>
</tr>
<tr>
<td>2. Impact performance is analyzed against set internal baseline and impact goals</td>
<td>0.16</td>
<td></td>
<td></td>
<td>69.6 %</td>
</tr>
<tr>
<td>3. Impact performance is analyzed against external benchmarks</td>
<td>0.10</td>
<td></td>
<td></td>
<td>43.5 %</td>
</tr>
<tr>
<td>4. Impact data is analyzed with KPIs</td>
<td>0.05</td>
<td></td>
<td></td>
<td>21.7 %</td>
</tr>
<tr>
<td>5. Assumptions which are drawn based on the impact data are communicated to investors</td>
<td>0.03</td>
<td></td>
<td></td>
<td>13.0 %</td>
</tr>
<tr>
<td>Q22. How does your organization respond to poor impact performance?</td>
<td>0.761</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. We discuss with our investors to find out reasons for poor performance and plan for improvement</td>
<td>0.22</td>
<td></td>
<td></td>
<td>95.7 %</td>
</tr>
<tr>
<td>2. We discuss internally to find out reasons for poor performance and plan for improvement</td>
<td>0.13</td>
<td></td>
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</tr>
<tr>
<td>Q23. How does your organization use impact data?</td>
<td>0.667</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Our organization makes investment decisions based on impact data and analysis</td>
<td>0.18</td>
<td></td>
<td></td>
<td>78.3 %</td>
</tr>
<tr>
<td>2. Our organization makes management decisions based on impact data and analysis</td>
<td>0.19</td>
<td></td>
<td></td>
<td>82.6 %</td>
</tr>
<tr>
<td>3. Our organization makes investment exit decisions based on impact data and analysis</td>
<td>0.09</td>
<td></td>
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### STEP 6: Organizational Level Assessment

<table>
<thead>
<tr>
<th>Question</th>
<th>Weight</th>
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<tbody>
<tr>
<td>Q24. Does your organization conduct organizational level assessment for impact investment?</td>
<td>0.391</td>
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<tr>
<td>1. Our organization assesses the additivity of our investments</td>
<td>0.08</td>
<td></td>
<td></td>
<td>34.8 %</td>
</tr>
<tr>
<td>2. Our organization calculates only the portion of impact that we are attributable to base on our portion of the total investment</td>
<td>0.05</td>
<td></td>
<td></td>
<td>21.7 %</td>
</tr>
<tr>
<td>3. Our organization assesses the aggregated impact of our whole portfolio</td>
<td>0.14</td>
<td></td>
<td></td>
<td>60.9 %</td>
</tr>
<tr>
<td>Q25. How does your organization respond to changes in your business environment?</td>
<td>0.565</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Our organization reviews set metrics and KPIs if changes are made in our impact thesis and goals</td>
<td>0.16</td>
<td></td>
<td></td>
<td>69.6 %</td>
</tr>
<tr>
<td>2. Our organization reviews set metrics and KPIs if changes are made in our investors' business model</td>
<td>0.10</td>
<td></td>
<td></td>
<td>43.5 %</td>
</tr>
<tr>
<td>Q26. How does the maturity of your investments affect your impact measurement process?</td>
<td>0.304</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Maturity of our investments does not have any effect on our impact measurement process</td>
<td>0.10</td>
<td></td>
<td></td>
<td>43.5 %</td>
</tr>
<tr>
<td>2. We review and change our process if necessary once the maturity grows</td>
<td>0.08</td>
<td></td>
<td></td>
<td>34.8 %</td>
</tr>
<tr>
<td>3. A more detailed process is used for more mature investments</td>
<td>0.03</td>
<td></td>
<td></td>
<td>13.0 %</td>
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**TOTAL AVERAGE % from total process** 88.96 %

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<th>Score Rank</th>
<th>% Score</th>
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<td>16</td>
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<tr>
<td>10</td>
<td></td>
<td>43.5 %</td>
</tr>
<tr>
<td>5</td>
<td></td>
<td>21.7 %</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>13.0 %</td>
</tr>
<tr>
<td>22</td>
<td></td>
<td>95.7 %</td>
</tr>
<tr>
<td>13</td>
<td></td>
<td>56.5 %</td>
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<tr>
<td>18</td>
<td></td>
<td>78.3 %</td>
</tr>
<tr>
<td>19</td>
<td></td>
<td>82.6 %</td>
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<tr>
<td>9</td>
<td></td>
<td>39.1 %</td>
</tr>
<tr>
<td>8</td>
<td></td>
<td>34.8 %</td>
</tr>
<tr>
<td>5</td>
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<td>21.7 %</td>
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<td>14</td>
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<td>60.9 %</td>
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<td>16</td>
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<td>10</td>
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<td>43.5 %</td>
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<tr>
<td>10</td>
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<tr>
<td>8</td>
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<td>34.8 %</td>
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<tr>
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<tr>
<td>11</td>
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<td>47.4 %</td>
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# Appendix 5

## Ranking of Impact Measurement Process Parts 1-54

<table>
<thead>
<tr>
<th>Rank</th>
<th>Theme number</th>
<th>Impact measurement process part</th>
<th>Number of investors who use this part</th>
<th>% of investors who use this part</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>22</td>
<td>1. We discuss with our investors to find out reasons for poor performance and plans for improvement</td>
<td>22</td>
<td>95.7%</td>
</tr>
<tr>
<td>2</td>
<td>10</td>
<td>1. Our organization sets social goals</td>
<td>21</td>
<td>91.3%</td>
</tr>
<tr>
<td>3</td>
<td>13</td>
<td>1. Our organization’s impact investment due diligence includes additional social or environmental considerations</td>
<td>21</td>
<td>91.3%</td>
</tr>
<tr>
<td>4</td>
<td>10</td>
<td>3. Our organization’s social goals</td>
<td>19</td>
<td>82.6%</td>
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<tr>
<td>5</td>
<td>13</td>
<td>1. We typically assess the outputs that are in our investors’ control</td>
<td>19</td>
<td>82.6%</td>
</tr>
<tr>
<td>6</td>
<td>13</td>
<td>2. We typically assess the outcomes that are in our investors’ control</td>
<td>19</td>
<td>82.6%</td>
</tr>
<tr>
<td>7</td>
<td>15</td>
<td>1. Our organization measures outputs of our investments</td>
<td>19</td>
<td>82.6%</td>
</tr>
<tr>
<td>8</td>
<td>23</td>
<td>2. Our organization makes management decisions based on impact data and analysis</td>
<td>19</td>
<td>82.6%</td>
</tr>
<tr>
<td>9</td>
<td>11</td>
<td>1. Our organization sets and follows specific metrics</td>
<td>18</td>
<td>78.3%</td>
</tr>
<tr>
<td>10</td>
<td>12</td>
<td>1. Impact risk evaluation is part of our internal investment risk management process</td>
<td>18</td>
<td>78.3%</td>
</tr>
<tr>
<td>11</td>
<td>16</td>
<td>2. Our organization measures outcomes of our investments</td>
<td>18</td>
<td>78.3%</td>
</tr>
<tr>
<td>12</td>
<td>23</td>
<td>3. Our organization makes investment decisions based on impact data and analysis</td>
<td>18</td>
<td>78.3%</td>
</tr>
<tr>
<td>13</td>
<td>15</td>
<td>6. Our organization uses other tools</td>
<td>16</td>
<td>69.6%</td>
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<tr>
<td>14</td>
<td>20</td>
<td>2. Data is checked together with our investors on a regular basis</td>
<td>16</td>
<td>69.6%</td>
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<tr>
<td>15</td>
<td>21</td>
<td>2. Impact performance is analyzed against set internal benchmarks and impact goals</td>
<td>16</td>
<td>69.6%</td>
</tr>
<tr>
<td>16</td>
<td>23</td>
<td>1. Our organization reviews set metrics and KPIs if changes are made in our impact thesis and goals</td>
<td>16</td>
<td>69.6%</td>
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<tr>
<td>17</td>
<td>18</td>
<td>1. Investors reporting is required on an annual basis</td>
<td>14</td>
<td>60.9%</td>
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<tr>
<td>18</td>
<td>19</td>
<td>3. Our organization assesses the aggregated impact of our whole portfolio</td>
<td>14</td>
<td>60.9%</td>
</tr>
<tr>
<td>19</td>
<td>9</td>
<td>2. Our organization has defined several stages for each investment or sector within our portfolio</td>
<td>13</td>
<td>56.5%</td>
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<tr>
<td>20</td>
<td>15</td>
<td>3. Our organization has set Key Performance Indicators</td>
<td>13</td>
<td>56.5%</td>
</tr>
<tr>
<td>21</td>
<td>19</td>
<td>2. Our organization uses sector or investment specific metrics</td>
<td>12</td>
<td>52.2%</td>
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<tr>
<td>22</td>
<td>20</td>
<td>1. Our organization has the same reporting requirements for each investor</td>
<td>12</td>
<td>52.2%</td>
</tr>
<tr>
<td>23</td>
<td>21</td>
<td>1. Data is checked by our own employees in every reporting period</td>
<td>12</td>
<td>52.2%</td>
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<tr>
<td>24</td>
<td>23</td>
<td>1. Our organization prepares management level analysis</td>
<td>12</td>
<td>52.2%</td>
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<tr>
<td>25</td>
<td>24</td>
<td>2. Investors reporting is required on a quarterly basis</td>
<td>11</td>
<td>47.8%</td>
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<tr>
<td>26</td>
<td>27</td>
<td>1. Our organization sets environmental goals</td>
<td>10</td>
<td>43.5%</td>
</tr>
<tr>
<td>27</td>
<td>19</td>
<td>1. Our organization sets and follows specific metrics</td>
<td>10</td>
<td>43.5%</td>
</tr>
<tr>
<td>28</td>
<td>23</td>
<td>3. Impact performance is analyzed against external benchmarks</td>
<td>10</td>
<td>43.5%</td>
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<tr>
<td>29</td>
<td>23</td>
<td>2. Our organization sets and follows specific metrics</td>
<td>10</td>
<td>43.5%</td>
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<tr>
<td>30</td>
<td>23</td>
<td>1. Our organization’s impact investment does not have any effect on our impact measurement process</td>
<td>10</td>
<td>43.5%</td>
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<tr>
<td>31</td>
<td>9</td>
<td>1. Our organization has defined our thesis for the whole portfolio</td>
<td>9</td>
<td>39.1%</td>
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<tr>
<td>32</td>
<td>23</td>
<td>3. Our organization makes investment exit decisions based on impact data and analysis</td>
<td>9</td>
<td>39.1%</td>
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<tr>
<td>33</td>
<td>14</td>
<td>6. Our organization uses set baseline targets</td>
<td>8</td>
<td>34.8%</td>
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<tr>
<td>34</td>
<td>13</td>
<td>3. We typically assess the impacts that are in our investors’ control</td>
<td>8</td>
<td>34.8%</td>
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<tr>
<td>35</td>
<td>21</td>
<td>1. Our organization assesses the additionality of our investments</td>
<td>8</td>
<td>34.8%</td>
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<tr>
<td>36</td>
<td>26</td>
<td>2. We review and change our process if necessary once the maturity grows</td>
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<td>37</td>
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<td>1. Our organization uses a scorecard</td>
<td>7</td>
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<td>38</td>
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<td>3. Our organization measures impact of our investments</td>
<td>7</td>
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<td>39</td>
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<td>1. Our organization uses a set of internally defined metrics across the whole portfolio</td>
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<td>40</td>
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<td>4. Data is compared and checked against peer group data on a regular basis</td>
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<td>28.1%</td>
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<td>41</td>
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<td>2. Our organization’s impact investment due diligence is more comprehensive for seed stage investments than more mature investments</td>
<td>5</td>
<td>21.7%</td>
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<tr>
<td>42</td>
<td>14</td>
<td>4. Our organization performs stakeholder analysis</td>
<td>5</td>
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<tr>
<td>43</td>
<td>23</td>
<td>2. Impact data is analyzed with KPIs</td>
<td>5</td>
<td>21.7%</td>
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<tr>
<td>44</td>
<td>24</td>
<td>1. Our organization calculates only the portion of impact that we are attributable to based on our portion of the total investment</td>
<td>5</td>
<td>21.7%</td>
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<tr>
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<td>6. Regular surveys of stakeholders’ views are part of our impact risk evaluation</td>
<td>4</td>
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<td>4. Our organization uses a logic model</td>
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<td>1. Our organization’s impact investment due diligence is more comprehensive for seed stage investments than more mature investments</td>
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<tr>
<td>48</td>
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<td>3. A more detailed process is used for more mature investments</td>
<td>3</td>
<td>13.0%</td>
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<td>49</td>
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<td>3. Data is checked and verified by external auditors or specialists on a regular basis</td>
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<td>1. Our organization’s impact investment due diligence is similar to our traditional investment due diligence</td>
<td>1</td>
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<td>3. Reverse reporting is required on a monthly basis</td>
<td>1</td>
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<td>52</td>
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<td>2. Our organization uses IRO methodology</td>
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Average: 11

47.4%
References


