

# **Analysis of Impact performance measurement tools/methods in impacting investing to address Agency Theory**

---

Master Thesis

The MSc Programme in Economics and Business Administration / Cand.merc -  
Copenhagen Business School (CBS)

April 2017

Author: Daniel Balla Halalla

Supervisor: Kai Hockerts

# TABLE OF CONTENT

---

Acknowledgement	2
Abstract	3
INTRODUCTION AND PROBLEM IDENTIFICATION	
Background for the thesis	5
Objectives of the Thesis	8
Scope and Limitations of the study	8
Overview of the Thesis	9
Operational Definitions of key terms	10
LITERATURE REVIEW	
Literature Review on Agency Theory	12
Literature Review on Impact Investing	15
Literature review on Performance Measurement	23
METHODOLOGY	
Role of Theory in Analysis	37
Method of developing of the question-sheet	38
Identifying the parameters of measurements tools and development of the questionnaire	38
Data Collection Method	48
ANALYSIS AND DISCUSSION	
Introduction	50
Analysis of Data from the survey	51
CONCLUSION	
Summary	74
Further research	75
References	76

# Acknowledgement

I would like to express my special thanks to my advisor, Kai Hockerts, for guiding me through the writing of this thesis and for introducing me to different literature on my project topic throughout the project. I would like also to extend my heartfelt gratitude to my wife, who has always been such a great help until I finalize this project. I would also like to thank Impact Investment Forum, 2017, the Netherlands for giving me the list of companies involved in impact investing. Without, their cooperation, I could not have found the companies needed for the project. My appreciation also goes to Social Return on Investment (SROI)-UK for giving and allowing me to use their case studies of six companies for this project.

Thank you.

---

Daniel Balla Halalla

Copenhagen, April 2017

# Abstract

This study focuses on analyzing the various impact measurement tools/methods used by impact investing companies. As measuring impact investing is a new phenomenon, there is no agreed impact measurement tool used as a standard one. Various bodies such as Global Impact Investing Network (GIIN) and the Social Return on Investment (SROI) network invest their resources in identifying the best measurement tool that can be applied for measuring impact creating values. Most of these bodies are at the enfant stage and do not have a well-established system in place. Because of this, there is a lot of confusion in choosing the right measurement.

The intention of performance measurement tools is to facilitate coordination and motivation. In another words, imperfections should be minimized to increase coordination and motivation so that there is minimum Agency Problem. Thus this paper tries to analyze various performance measurement tools/methods in impacting investing to address the agency problem, i.e. the problem arising between the principal (impact investor) and the agent (the investee) due to coordination and motivation problems.

Various literatures published on impact investing are used to provide a preliminary overview of characteristics of performance measurements. This paper points out that, performance measurement tools are meant to solve any possible dispute between the principal and the agent. But Marshal Meyer (2002) points out that performance measurement proved to be so challenging because of the gap between what we want to measure and what we could measure. The paper also discusses the general attributes of performance measurement from various literatures and what qualities should be met to make a performance measurement tool an effective tool to solve the agency problem.

Based on the description of the problem the questionnaire-sheet is developed and sent out to impact investing companies. After collecting data on various performance measurement tools in impact investing, the thesis focuses on whether those measurement tools fulfil the criteria of an effective measurement tool to address the concern of impact investors (principals) and the investee (the agent).

But in practice, performance measurement tools are found to be imperfect because of **Distortion, Risk, Manipulation** and **Measurement Cost** found in them. The more the measurement in impact investing is subject to those measurement imperfections the less likely it solves the Agency Problem. The result of the study shows that the existing impact investment measurement tools need more development and involvement of stakeholders to minimize the measurement imperfections.

# INTRODUCTION AND PROBLEM IDENTIFICATION

---

In this chapter the introduction about the background for the thesis, the problem identification, the objectives of the study, and its scope and limitations are included.

---

## Background for the thesis

In recent years, an investment form called impact investing has become more and more popular. Impact investors are investing in both financial and non-financial benefits (such as social and environmental benefits). In comparison to other forms of socially responsible investment, impact investing is faced with so many problems due to its effort to measure its financial, social and environmental returns. Dozens of impact investing companies are currently trying to effectively measure their intended returns but there remain a lot of issues that the measurement tools/methods need to address. On the other hand, the investors, in this paper called Principals, involved in impact investing activities want to know what impact their money is creating.

One of the most important aspects of impact investing is its measurement, which focuses on quantification of performance on financial, social and environmental results during and after investment. In this case, impact investing needs a standardized measurement metric which can be accepted by the stakeholders.

# Problem Identification

Like any other investors impact investors (**principals**), assign investees (**agents**) to carry out an investment activity and bring back a return: financial and non-financial gains, meaning that the investor demands the investee to use the economic resources at his/her disposal and bring about certain values.

Impact investors want to measure the performance of their investment while the investees want to be compensated or incentivized for carrying out the task. However, impact measurement tools are far from satisfactory (Saltuk et al. 2013, Grabenwarter and Liechstenstein 2010). The reason is not only due to the nature of impact investing but also the concept of measuring non-financial values is at its infant stage.

There are dozens of companies including Global Impact Investing Network (GIIN) and Social Return on Investment Network (SROI Network) trying to identify various standardized terminologies and metrics to measure all the financial, social and environmental gains. However, the fundamental questions such as what to measure, how to measure, when to measure, by whom to be measured are widely debated. These differences have made performance measurement tools so complicated leading to various meaning to their stakeholders.

The following questions arise:

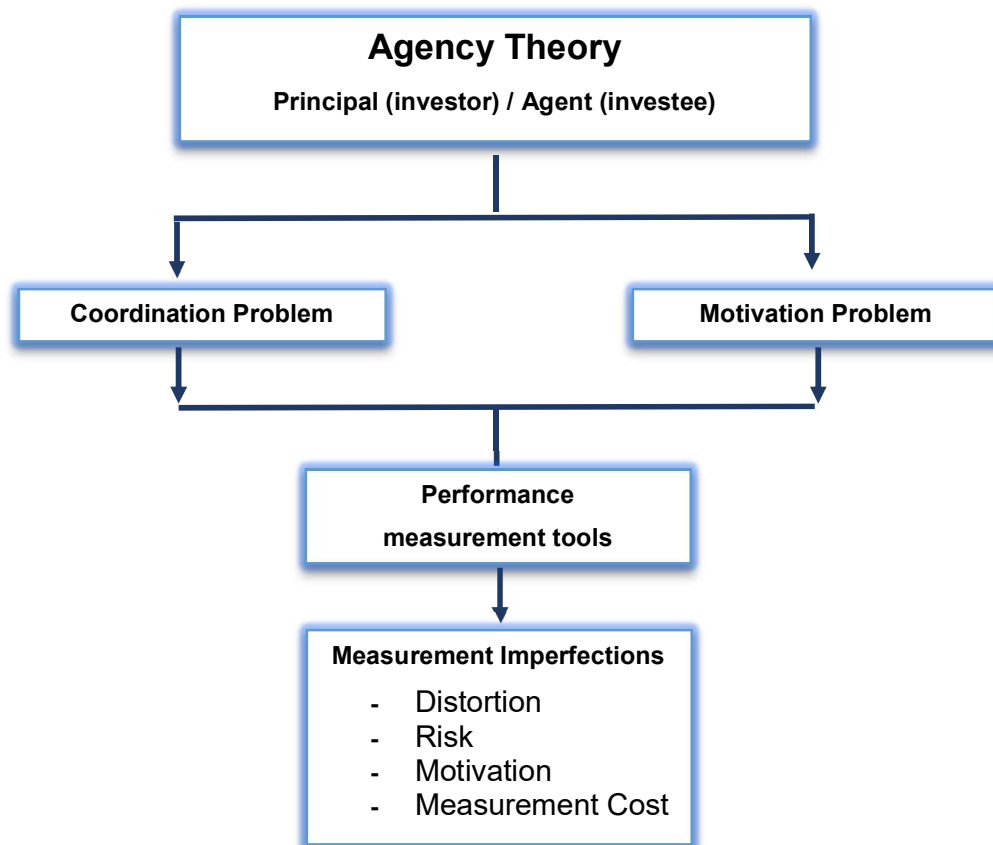
- Are the existing measurement tools qualified to be used as measurement methods in impact investing?
- What are the imperfections of those measurements?
- Can all stakeholders, investor (**principal**) and investee (**agent**) trust the measurement tools?

The intention of performance measurement tools is to address differences in goals or desires of the principal and the agent.

This conflict of interest is called **Agency Theory**. The two main causes of this Agency Theory are **coordination** and **motivation problem**. According to Milgrom and Roberts(1992), the coordination problem arises due to non-synchronization of the goals/interests between the agent and the principal whereas motivation problems arise due to the incomplete information and asymmetries. To do deal with these problems, **performance measurement tool** is believed to be a means to reconcile them. However, the performance measurement tools themselves have a problem called measurement imperfections called **Distortion, Risk, Manipulation** and **Measurement Cost** (This is explained in literature reviews in detail.)

To deal with the Agency Theory, the performance measurement must be able to deal with those imperfections. The more the imperfect the measurement tool is, the worse the problem with the Agency Theory, meaning that the **coordination** and **motivation** problems will get worse and worse.

The figure below shows the graphical presentation of the interconnection between Agency Theory and performance measurement tools.





# Objectives of the Thesis

The goal of this paper is:

- to have an insight into impact investing environment and what types of measurements tools/methods are commonly used
- to analyze the performance measurement tools in impact investing in light of measurement qualities: Distortion, Risk, Motivation and Cost of Measurement to address the Agency Theory
- to evaluate quality of the existing measurement tools in the world of impact investing
- to suggest ways of dealing with imperfections if there are any
- to contribute for further studies in formulating impact investing measurement tools

## Scope and Limitations of the study

In this study, I try to analyze some of the most commonly used measurement tools used by impact creating organizations. The focus area of the study is to test the measurement tools using the measurement imperfection which include: Distortion, Risk, Manipulation and Measurement costs (Milgrom and Roberts, 1992; Allen Hansen, 2013). According to Allen Hansen, understanding the transaction costs in performance measurement helps deal with Agency Theory.

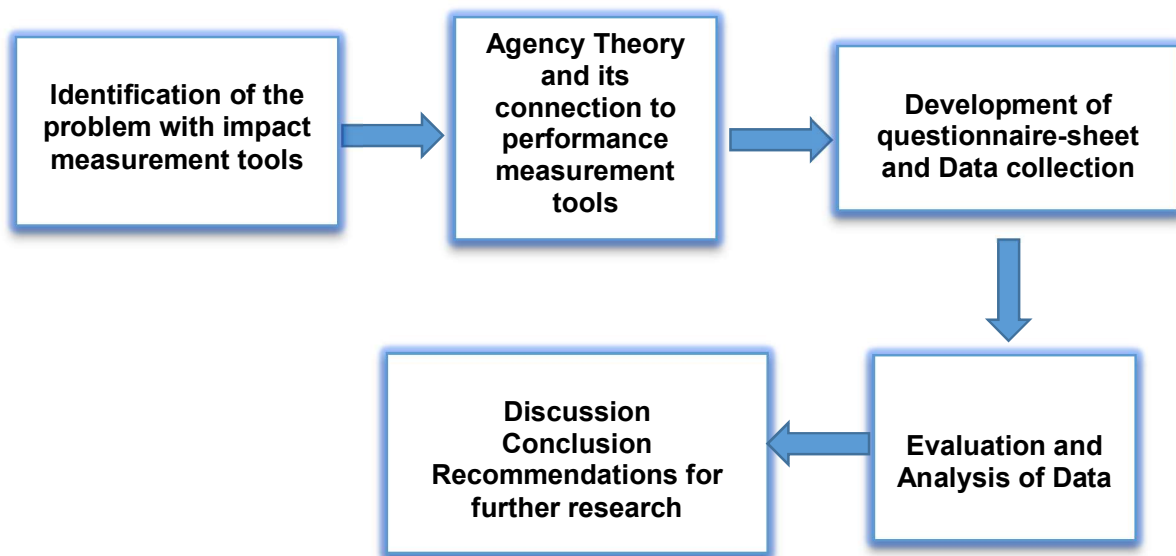
Due to the difficulty in measuring the social and environmental values created by impact investing companies, many are in doubt of the values measured by impact measurement tools. Presently, there are not so many companies which are using impact measurement tools. This makes availability of data very limited.

The scope of this paper is limited to analyzing the performance measurement tools in impact investing in light of measurement qualities: Distortion, Risk, Motivation and Cost of Measurement so as to address the Agency Theory.

This is done by describing the problem behind the Agency Theory and the performance measurement tools/methods in impact investing. Based on the description of the problem the questionnaire-sheet is developed and sent out to impact investing companies. About 80 impact investing companies are identified as potential respondents and 20 companies participated in the survey, from which data was collected, evaluated and the qualities of measurement are identified. The issues of performance measurement tools is discussed and conclusion of the research findings are presented as well as recommendations for further research.

## Overview of the Thesis

The graphical presentation of the thesis is presented in the figure below:



1. The identification of the problem with impact measurement tools is formulated in this, 1th chapter: INTRODUCTION AND PROBLEM IDENTIFICATION

2. The problem is then addressed by describing the theory behind the Agency Theory and the performance measurement tools/methods in impact investing in 2<sup>nd</sup> chapter: LITERATURE REVIEW
3. The method behind the research and the development of the questionnaire-sheet is described in 3<sup>rd</sup> chapter: METHODOLOGY
4. In the 4<sup>th</sup> chapter: ANALYSIS and DISCUSSION, the evaluation and analyses of the collected data was carried out and the issues of performance measurement tools are discussed.
5. Summary and conclusion of the research findings are presented as well as recommendations for further research in the 5<sup>th</sup> and last chapter: CONCLUSION.

## Operational Definitions of key terms

**Impact Investing** – refers to investments made into companies, organizations and funds with the intention to generate a measurable, beneficial social or environmental impact alongside a financial return.

**Social Value** - refers to wider financial and non-financial impacts of programs, organizations and interventions, including the wellbeing of individuals and communities, social capital and the environment

**Economic Value** - is a measure of the benefit provided by a good or service to an economic agent.

**Performance Measurement** - is the ongoing monitoring and reporting of program/project accomplishments, particularly progress towards pre-established goals.

**Agency Theory** - A theory explaining the relationship between principals, such as a shareholders, and agents, such as a company's executives. In this relationship the principal delegates or hires an agent to perform work.

**Distortion** - is related to the incompleteness of performance measurement systems when it comes to communicating what should be done in order to create value for the company

**Risk** - refers to the risk that the agent runs of his or her real effort not being reflected in the performance measure

**Manipulation** - is defined as behavior where the agent exploits the asymmetric information relationship between agent and principal for his or her own gain

**Measurement cost** - The measurement cost refers to a transaction cost of using performance measures to coordinate and motivate in companies.

**Global Impact Investing Network (IRIS)** - is a catalogue or taxonomy of commonly accepted impact measurements. It draws on over 40 different commonly used social, environmental, and financial performance metrics with standard definitions that help organizations refine their performance measurement.

**Social Return on Investment (SROI)** - is a principles-based framework for measuring the environmental and social value of an organization's mission relative to resources invested.

**Balanced Scorecard (BSC)** - is a strategy performance management tool – a semi-standard structured report, supported by design methods and automation tools that can be used by managers to keep track of the execution of activities by the staff within their control and to monitor the consequences arising from these actions.

# LITERATURE REVIEW

---

In this chapter, the reader will be introduced to the various concepts, meanings, and the work of other authors from various books, reports, findings and papers, which include the current knowledge including substantive findings on Agency Theory, Performance Measurement and Impact Investing. This section divided in to three:

1. Literature review on Agency Theory
  2. Literature review on Impact Investing
  3. Literature review on Performance Measurement
- 

## Literature Review on Agency Theory

This section deals with a various literatures taken from Agency Theory and what it means in relation to economic organizations. The principal and the agent have been believed to have a self-driven interests according to this theory and many academicians and practitioners have written much regarding this theory.

### Agency Theory

Organizational economics such as Agency Theory is grounded on economic model of human behaviour which assumes that individual's behaviour is opportunistic, self-serving and motivated by satisfying personal goals (Jensen and Meckling, 1976). Because of this self-interest, individuals would use various methods to attain their personal gain. Agency Theory is developed as framework for analysing conflicting

interests between key stakeholders, in addition to the development of mechanisms for resolving conflicts (Tipuric, 2008).

Agency theory is developed as framework for analysing conflicting interests between key stakeholders, in addition to the development of mechanisms for resolving conflicts (Tipuric, 2008). Besides prevalent contribution within discipline of corporate governance, agency theory application is extensive: agency theory may be applied in every situation in which one party (the principal) delegates work to another (the agent), who performs that work. Agency theory attempts to describe the relationship in terms of behavioural characteristics and provides necessary instrument for evaluating situations between parties who lack mutual trust.

Pioneers, Jensen and Meckling, tried to verify that organizations do not operate according to the maximization principle, mainly because of the conflicting interests of major governing parties (Jensen & Meckling, 1976). Agency theory describes economic exchange relation between principal and agent. Principal-agent relation, in which principal delegates work to the agent, is described using the metaphor of a contract (Jensen & Meckling, 1976). Agency theory objective is to determine optimal contract between principal and agent. Agent (manager or employee) tries to maximize personal gains by satisfying principal's economic objectives and agent's commitment level is function of perceived reward value for satisfying principal's objectives.

According to Eisenhardt (1989), the principal delegates to the agent. The agent takes the responsibility of carrying out the work on behalf of the principal. This relationship between the principal and the agent creates Agency theory. This time the principal promises the agent to incentivize for carrying out the task of the principal. This incentive is a cost for the principal but it is a benefit for the agent. The incentive can take different forms of reward, either financial or non-financial depending on their agreement. Here the agent's reward is proportional to the risk he/she takes for accomplishing the principal's work. This reward is a means to motivate the agent so that the intended objective is met for the principal.

Tipuric (2008) points out that Agency Theory focuses on giving solution to the

Agency Problem through performance measurement tools. Agency Theory entails that it can be applied in every situation where a principal appoints an agent to carry out a specific task. In most cases, the principal does that either because he/she does not have the knowledge to do it, or does not have the resources such as time to carry out that task. Agency Theory tries to explain the relationship in terms of behavioural characteristics and provides measurement and evaluation tools.

According to this theory, the principal is interested in maximizing his own gains while maximizing the benefit for the agent. On the other hand, the agent is also interested in maximizing his/her own benefit. However, in reality, both the principal and the agent have their own goals. Those goals may not align to each other. This difference in their goals makes both the principal and the agent focus on their own interest, instead of the other party. The other issue is that they both have different access to information. The principal may not be willing to expose his/her information to the agent and the agent may not be interested in sharing his/her information to the principal if revealing the information would be against their benefits. In this case, the performance measurement is used to align their interest as both parties want to maximize the gains.

According to Allen Hansen (2013), performance measurement tools are used to deal with this conflicting interest of the two parties in the relation (Allen Hansen, 2013). According to him, the causes for this conflict are **Co-ordination** and **Motivation** problem. Milgrom and Roberts (1992) definition of coordination problem is to determine what things should be done, how they should be accomplished, and who should do what. At the organizational level, the problem is also to determine who makes decisions and with what information, and how to arrange communications systems to ensure that the needed information is available. On another hand, motivation problem is to ensure that the various individuals involved in this processes willingly do their parts in the whole undertaking, both reporting information accurately to allow the right plan to be devised and acting as they are supposed to act to carry out the plan.

# Literature Review on Impact Investing

## Impact investing history and current status

While impact investing may be a new terminology for many investors, the practice of investing in companies or initiatives addressing social and environmental challenges is centuries old (Kevin McCulley, 2014). According to Kevin some argue that it grew out of the Quakers in the 17<sup>th</sup> century England to incorporate their religious values into day to day commercial activities. On the other hand, according to Jeff Finkleman and Kate Huntington (2017) “many of the early ideas about the moral responsibilities of commercial enterprises in the United States came from Christian ministers preaching in the 1700s against participation in the slave trade and other industries deemed immoral, such as alcohol and tobacco. In an oft-quoted sermon titled “The Use of Money” delivered in the mid-1700s, John Wesley, the founder of Methodism, advised his followers that evil could not be found in money itself, but rather in how it was used. “Gain all you can,” he quoted, “without hurting either yourself or your neighbor, in soul or body...” Eventually, these ideas made their way into finance with the launch in 1928 of what is now called the Pioneer Fund, the first mutual fund to avoid certain types of investments on the basis of religious criteria”.

Later in the 1960s, politically-motivated investors joined faith-based investors in using their investments to draw attention to social and environmental issues (Jeff Finkleman and Kate Huntington, 2017). They quoted “there was a growing opposition both in the Western World and other countries regarding the war in Vietnam and companies involved in economic activities decided to launch funds which create the awareness for social and environmental consequences of their activities. These companies decided to withdraw their investments from alcohol, tobacco and weapons production”.

In the 1970 and 1980, South Africa was gripped with the issue of apartheid. Activists from various social segments including students started a massive movement asking investors and financial sectors to divest from companies and universities related to



the apartheid activities. Socially responsible investors and companies from western countries decided to divest from South Africa. This movement gave rise to discussion on impact of company's activities on the society.

Through the 1990s up to the present day, the field has grown substantially and has begun to coalesce around industry standards and best practices (Jeff Finkelman and Kate Hunington, 2017). It is from this time on that companies which were willing to engage in creating social values were more focused on their activities towards creating impacts. Until the late 1990s and early 2000s, investors typically drew a clear distinction between their investments and their philanthropic giving. To extent, the personal values, social concerns or environmental considerations were used to inform investment decisions, they typically led to binary outcomes. Investors simply avoided companies with attributes they considered undesirable (Jeff and Kate, 2017).

The term Impact Investing was coined in 2007, when the Rockefeller Foundation invited leaders in finance, philanthropy, and development to its Bellagio Center in Italy to discuss the need for and means of building a global industry striving for investments with a positive social and environmental impact (Harji and Jackson 2012). In traditional investing, investors expect financial returns. Likewise, in impact investing, impact investors expect financial returns since they provide economic resources for projects of investment (Global Impact Investing Network, GIIN, 2013a; Louche et al. 2012). The financial return in impact investing is the most debated aspect in impact investing. Some academic and practitioners (Ashta 2012; Freireich and Fulton 2009) consider that the return on the invested initial capital is the minimum requirement to qualify the investment as impact investing whereas some others such as (Chua et al, 2011; Niggemann and Brågger 2011) connect impact investing to adequate, competitive and reasonable economic return on their initial investments. On the other hand, some practitioners go as far as comparing the financial return on impact investment to the prevailing market rate of return. Evenett and Richter (2011) state that the financial return can be below the market return since it is balanced by the non-financial returns such as social and economic return. This statement can be more practical and acceptable by impact 'first' investors since their primary goal is creating impacts (Freireich and Fulton, 2009). On the other

hand, Best and Harji (2013) assume above market rate return on investment. This could be high risk investment with high financial and non-financial returns (social and environmental).

This kind of impact investments are acceptable by financial 'first' impact investors since their primary goal is generating as much financial return as possible (Freireich and Fulton, 2009). However, there are many academic who do not specify the level of financial return on impact investing based on market rate of return on investment (Louche et al. 2012). This lack of common consensus on the level of financial return on impact investment leaves a room for disagreement between various stakeholders of impact investment environment.

Impact investing is not only about financial returns whether below, or above the current market rate of return, but it also primarily about generating social and environmental benefits (non-financial values) which are important in defining its core values (Ashta 2012; Louche et al. 2013). The impact investing phenomena incorporates varying degrees of social and environmental considerations in the investment process. At one end of the spectrum, we have traditional investing, where investors place financial resources in order to get risk-adjusted, competitive financial returns.

At the other end of the spectrum, we have philanthropic investment, where the investors place human and financial resources in to creating social and environmental values. Because of the dual nature of impact investing (financial and non-financial), it is placed between traditional investment and philanthropic investments (Addis et al, 2013). In short, the traditional investments focus primarily on financial gains whereas philanthropic investments primarily engaged in non-financial values.

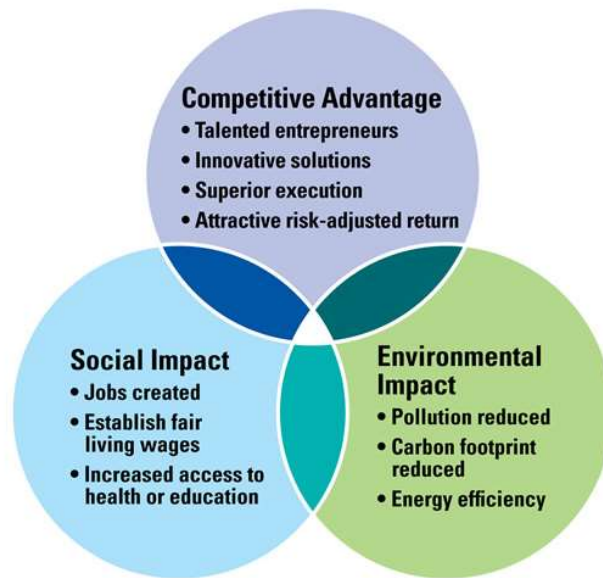
The following figure illustrates it this way:

IMPACT INVESTMENT					
Traditional	Responsible Investing (RI)	Socially Responsible Investing (SRI)	Thematic	Impact-first	Venture Philanthropy
Competitive Returns					
	ESG Risk Management				
		High Impact Solutions			
Limited or no focus on ESG factors of underlying investment analysis and execution.	ESG risks integrated into analysis of all holdings, as a component of financial risk management. Shareholder engagement is used to influence behaviour of holdings.	Negative and positive screening of ESG risks is used to align a portfolio to specific values. Shareholder engagement is used to influence behaviour of holdings.	Focus on one or more issue areas where social or environmental need creates commercial growth opportunity for market-rate returns.	Focus on one or more issue areas where social or environmental need may require some financial trade-off.	Social enterprise funding in a variety of forms, with a range of return possibilities. Investor involvement/support is common.

Source: Purpose Capital adaptation of Bridges Venture Research (2012). The Power of Advice in the UK Sustainable Impact Investment Market. Available at: <http://www.bridgesventures.com/links-research>

According to Global Impact Investing Network (GIIN, 2014), there are other aspects of impact investing besides the above two core elements (financial and non-financial values). The first one is the intentionality of creating non-financial impact (Boerner 2012). It can be said that every commercial investment can have a potential of creating social and environmental impacts. The question then is “is it intentional or accidental?” Grabenwarter and Liechtenstein (2011) state it saying that “impact investing should be intentional, predetermined social and environmental gains.

The second aspect is the measurability of non-financial values. This is one of the most important qualities of impact investing as impact investors are interested in measuring the values they create (be it financial, social or environmental). This paper focuses on assessing the measurement tools currently in use by impact investing companies.



*Adopted from Brightpath Capital Partners.*

## Why Impact measurement

There are many stake holders in impact investing environment with their own interests. The reason why impact values should be measured could be different from one stakeholder to the other (Chan et al, 2015). Impact investing is made in a complex and multi-stakeholder environment and, therefore, need to engage a deliberative dialogue with their stakeholders (Christensen and Ibrahim, 2006; Williams and Taylor, 2013). However, the following reasons can be considered for measuring impact investing.

1. Impact investors (principals) may want to know the effect of their investment on the social and environmental gain/loss and understand the level of risk they are taking in investing in a certain impact creating project
2. Investees (agents) may want to use metrics to find out whether they are achieving the organizational objectives through performance measurement tools and what measures should be taken if not

3. Beneficiaries may want to involve themselves in being part of impact measurement activities so that they could help in achieving social and environmental values
4. Fund managers may want to compare and contrast various impact investment projects to find out their financial, social and environmental benefits. They may also use to evaluate past endeavors and assess how well the organization is achieving its objectives. It may also be used for future planning and decision making
5. Impact measurement helps create trust between all the stakeholders and channel accountability regarding the use of economic resources in the process of value creation.

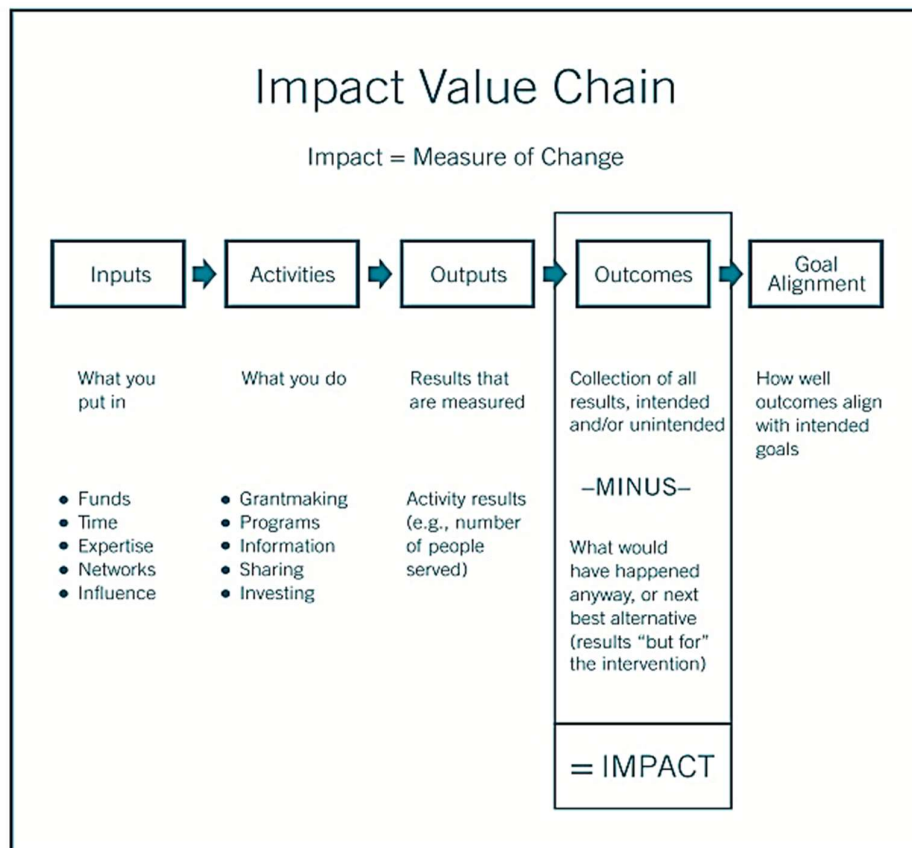
## Measuring the social value in impact investing

Measuring social value is difficult. In profit making companies, performance measurements can use financial values which is objective to measure, whereas in social value creating companies, measuring the social value is so challenging. Marshal Meyer (2002) points out that performance measurement proved to be so challenging many times because of the gap between what we want to measure and what we could measure. Social value is subjective and it can mean many things to various stakeholders. While social value does not have single meaning, it can refer to the non-financial impacts of programs, organizations, and projects. It can include impacts such as education, health, knowledge, skills, environment, etc. (Clark et al, 2004)

Currently, many impact investing companies use a wide range of approaches to measuring social and environmental values they create. However, these approaches do not have a standardized metrics to be used in place. While some like GIIN are trying to standardize those metrics, they are faced with poor data reporting and unreliable results due to the various conditions required by the broad range of missions, program areas, sizes and diversification of the social sector (Melianda Tuan, 2008). Because of this complexity in the nature of social value creating

activities, no single impact measurement framework or methodology can be applied to all socially motivated organizations. However, most impact measurement tools/methods are formulated based on Impact Logic Model which is the basis for all impact measurements related to social value (W.K Kellogg Foundation Logic Model Development Guide, W.K. Kellogg Foundation, 2004).

According to Impact Logic model, there are four major elements needed to measure social value creation: inputs, outputs, outcomes, and impacts. Inputs are resources used to deliver outputs (or to perform the activities), which result in outcomes for stakeholders. The relationship between inputs, outputs, and outcomes is also known as a logic model (McLaughlin, J.A. and G.B. Jordan. 1999. *Logic models: a tool for telling your program's performance story. Evaluation and Planning*). The logic model typically involves six steps that, once complete, will then help an organization focus on measuring its longer term impacts. These steps are common to most social value measurements.



**Source:** Clark, Catherine, William Rosenzweig, David Long, and Sara Olsen, Double Bottom Line Project Report: Assessing Social Impact in Double Bottom Line Ventures, *the Rockefeller Foundation*, 2004.

## Input

When defined in a general sense, inputs are resources (human resources, employee time, funding, etc.) that are invested in projects or programs that create financial and non-financial values. Some of these inputs are quantitatively measured in terms of their monetary value while others such as voluntary work are difficult to measure in terms of monetary values. Inputs can also mean the cash value invested by impact investor to generate financial and non-financial values.

## Activity

These are the actual tasks that are carried out in a social project or program. These are means of converting the input to output. These tasks are carried out by an agent who assumes the position to do the job. These includes meeting with customers or professional counterparts, development of materials, giving trainings, running a course, organizing a community for training, making campaigns, manufacturing products, etc.

## Output

Outputs are Products and services produced through those activities and delivered to the target customer. For example: the number of booklets produced, number of people trained, number of seminars conducted, number of pamphlets published, number of papers disseminated, etc. We cannot rely on output information to judge the result of a program or a project. Output information helps us relate the scope of input used and the output produced in the process of delivering a product or service. The direct relation between input and output of an activity can be used to evaluate performance of a program but it's not adequate by itself.

## Outcome

Outcome represents the changes or benefits that result from the program. It refers to a specific result a program is believed to create. It can be defined as the specific objective achieved by a program.

## Impact

(Clark et al, 2004 and Reismann, 2004)

By impact, we mean the portion of the total outcome that happened as a result of the activity of the venture, above and beyond what would have happened anyway (Clark et al, 2004). According to Reismann, to achieve a desired result, many other types of changes must occur along the way. Some of these “on the way changes” reflect actual changes in peoples’ lives, either at the individual level or population level. Changes in peoples’ lives can include changes in knowledge, skills, behaviors, health or conditions for children, adults, families or communities. These changes are defined as impacts.

## Literature review on Performance Measurement

In organizational performance measurement, financial data was used as the main performance measure tool before the 1980s. After late 1980s, scholars were aware that financial data, alone, does not capture comprehensive performance information and, hence, does not completely capture and fail to predict future performance.

Although much research has been conducted on the issues of performance measurement, the definition of performance measurement is still debated (Johnson and Kaplan, 1987). Neely (1998) defines performance measurement as “the process of qualifying the efficiency and effectiveness of past actions through acquisition, collation, sorting, analysis, interpretation and dissemination of appropriate data.

According to Neely (1998), performance measurement is a process which needs a thorough and in depth data gathering which is relevant to the results obtained from the performance measurement. Value capturing elements of data should be obtained through a careful gathering method. On the other hand, Moullin (2003) argues that performance measurement is evaluating how well organizations are managed and the value they deliver for customers and stakeholders. Moullin (2003) believes that being a management process for performance measurement is not enough. It should be more than just a process. It should be able to measure all the values created for



the stakeholders. It can be said that Moullin focuses on the purpose of performance measurement while Neely (1998) focuses on the activities carried out to achieve an effective and efficient performance measurement. Nanni et al. (1990) defined performance measurement as “a means of monitoring and maintaining organizational control which is the process of ensuring that an organization pursues strategies that lead to the achievement of the overall goals and objectives.

According to Nanni et al (1990), strategies are the nucleus of a performance measurement. Every performance measurement should start from its goals and objectives. These goals and objectives are the lead roadmap for a successful performance measurement development. Any measurement tool that does not align with its core strategy will not produce the intended result. But more specific definition of performance measurement is given by Amaratunga and Baldry (2002). They believe that performance measurement provides the basis for an organization to assess how well it is progressing towards its predetermined objectives, helps to identify areas of strengths and weakness, and decides on future initiatives with the goal of improving organizational performance. Amargatunga and Baldry (2002) focus on the role and process of performance measurement. We can say from the above definitions that a performance measurement is a structured system and a process of gathering, monitoring, and assessing the information about an organization's activities, in order to achieve the proposed goals and objectives. In all these definition, strategic objectives and goals should play a great role in designing a right performance measurement tool which yields results in demand.

## Performance Measurements and their properties

One of the ways to resolve coordination and motivation problems in Agency Theory is through performance measurement systems. The coordination and motivation problems in organizations are used as the point of departure for analyzing the firm value of a performance measurement system (Allen Hansen, 2013). According to Milgrom and Roberts (1992), whenever organizations get bigger and bigger, there comes a need to decentralize decision rights and create division of labour. Even though, this has its own advantages for big companies, it brings some problems such as issues of coordination and motivation. It can be complicated to coordinate

various activities and tasks given that the agents have their decision right. According to Milgrom and Roberts (1992), **coordination problem** is related to determination of what things should be done, how they should be accomplished, and who should do what. At the organizational level, the problem is also to determine who makes decisions and with what information, and how to arrange communications systems to ensure that the needed information is available, whereas **motivation problem** is related to the determination of what things should be done, how they should be accomplished, and who should do what. At the organizational level, the problem is also to determine who makes decisions and with what information, and how to arrange communications systems to ensure that the needed information is available.

The performance measurement system is often highlighted as a tool that adds firm value because it copes with these two problems (Jensen & Meckling, 1995). This means that the organization will communicate the tasks, activities, goals, decision rights, who does what, etc in order to create value to the company. Furthermore, by measuring performance of the agent, his or her efforts are monitored and can be rewarded, which conveys a way to cope with the motivation problem and align the interests of the principal with the interests of the agent (Allen Hansen, 2013).

When organizations try to resolve coordination and motivation problems through performance measurement, they may create new coordination and motivation problem (Allen Hansen, 2013). According to Hansen, these problems are to a wide extent a consequence of the performance measurement system's imperfection and they can be summarized by four types of imperfections:

- Distortion
- Risk
- Manipulation
- Measurement costs

These costs are characterised as the transaction costs of using performance measurement systems for coordination and motivation (Allen Hansen, 2013). As a result, the focus of a good design will be how to minimize the costs associated with the measurement as firms are trying to avoid costly measures. A costly measure

can run the firm into a loss and hence affecting value creation. According to Hansen, these costs become four design criteria that can be used to assess performance measurement system designs.

## Distortion

Distortion is related to the incompleteness of performance measurement systems when it comes to communicating what should be done in order to create value for the company (Allen Hansen, 2013). According to Hansen, there are a number of value creating activities, tasks, goals, etc., which need to be communicated through the performance measurement but the main question here is 'can the performance measure communicate or coordinate all these activities which are creating value to the company?'. This is obviously a question of coordination which plays a great role in putting all the available human and material resources together. The coordination problem points out that firms should focus on minimizing their cost of using combined resources in order to increase the firm value. Thus, the agent's performance of resource utilization should be measured as it plays the role of coordination in a firm to achieve organizational value.

According to Allen Hansen, this communicative role also introduces the risk that the performance measurement system excludes tasks, activities and goals incompletely or sets performance targets and weighting incorrectly. Precisely these kinds of incomplete specifications result in distorted behaviour when the agent's actions and decisions are coordinated through the performance measurement system (Allen Hansen, 2013). Therefore, communication plays an important role in reducing the intensity of distortion of the performance measurement system.

## Risk

Risk refers to the risk that the agent runs of his or her real effort not being reflected in the performance measure (Allen Hansen, 2013). According to Hansen, the agent believes that his true effort in contributing to the success of a firm is reflected by the performance measurement. So the agent expects to receive a fair compensation for his effort. However, the performance measures of the agent runs a risk of not measuring the whole effort of the agent. Of course,

there are several factors for this to happen, according to the Hansen's paper. These include:

1. External factors, such as fluctuations in the state of the market, competitor behaviour uncontrollable for the agent etc.
2. Decisions made by others in the company affecting the agent's performance. For example if the agent's superior makes decisions that affect the agent's performance (no decision rights)
3. Random/biased performance measures

The higher the risk associated with the performance measure, the less the agent is willing to accept this measure as the basis of his or her compensation for the work in the firm, unless the agent is compensated by a risk premium that reflects this risk (Milgrom & Roberts 1992). This leads the principal to focus on low-risk performance measures as the firms does not run high cost.

## Manipulation

Manipulation is defined as behaviour where the agent exploits the asymmetric information relationship between agent and principal for his or her own gain (Allen Hansen, 2013). This means that the agent is more aware of the performance that can be carried out than the principal. So the agent will try to use the asymmetric information on his/her favour to manipulate the result. According Marshal Meyer (2002) performance measurements proved to be so challenging because of the gap between what we want to measure and what we could measure. And he points out that this also creates an opportunity of manipulation.

Hidden action which is related to the »moral hazard« problem is the opportunistic behaviour that the agent can carry out during the period where the performances are measured (Allen Hansen, 2013). According to Hansen, this includes the hidden actions that the agent carries out in terms of shirking, working on projects which serve the agent's own interests instead of those of the company. Jensen (2003), for example, talks about how sales managers manipulate the sales amount for various budget periods in order to increase their bonus payments.

Hidden information is related to the “adverse selection” problem (Allen Hansen, 2013). According to Hansen, the agent will select manipulative information on his part when making choice of performance measures and setting targets to be used in the measurement system. The agent will be interested in increasing his own utility more than that of the company.

### Measurement costs

The measurement cost refers to a transaction cost of using performance measures to coordinate and motivate in companies (Allen Hansen, 2013). According to Hansen, it is obvious that firms try to reduce the distortions and risks related performance measurement. But the question is ‘is it possible to attain that?’ Then this arise a question of measurement costs. The benefit of the performance measurement system of reducing distortion and risk should be higher than the measurement cost. If the cost is higher than its benefit, the firm runs a risk of losing profit.

The measurement costs are the system costs of the resources that develop and maintain the system, but also the resources that are used by the agents that are subject to the measures (Allen Hansen, 2013). According to him, resources of a firm are used in order to measure the performance and maintain the system for the future, but these costs can be so high with time and it is believed that it is important for the firm to focus on least cost

## Common Performance measurement tools in impact investing: IRIS, SROI, Balanced Scorecard

### IRIS

In 2008, the Rockefeller Foundation gathered a group of pioneering impact investors to identify and begin to address critical barriers to investing for social and environmental impact, while also expecting a financial return. These investors, many of whom became the founding members of the Global Impact Investing Network (GIIN) Investors' Council identified a lack of transparency and credibility in how funds define, track, and report the social and environmental performance of their portfolios. This scarcity of consistent, credible non-financial performance information also prevented fair comparisons between impact investing opportunities, development of social and environmental performance benchmarks, and other aggregate industry analyses. To address these challenges, The Rockefeller Foundation, Acumen and B Lab began the IRIS initiative to create common metrics for reporting the performance of impact capital (IRIS website).

IRIS seeks to provide a common reporting framework that will inform investors about the social and environmental impacts of the firms in which they invest. It was developed in response to concerns that the lack of standardized reporting metrics would inhibit the growth of the impact investment industry by adding transaction costs to potential deals.

Rather than a new set of metrics, IRIS can be viewed as a catalogue or taxonomy of commonly accepted impact measurements. It draws on over 40 different commonly used social, environmental, and financial performance metrics with standard definitions that help organizations refine their performance measurement. It offers a standardized approach for any mission-driven business to use data to communicate its social and environmental impact to a wide range of stakeholders. Organizations that use IRIS can contribute their results to a global database that allows for industry benchmarking and data collection. The standard definitions allow for comparison of impact between organizations.

IRIS metrics are captured in a large, web-based spreadsheet. IRIS has nearly 500 individual impact measurement fields. Most organizations will apply filters to determine the best set of metrics according to their sector, product, location, objectives, and user type. Users can access IRIS metrics for free by registering online.

### IRIS Indicators

IRIS indicators are organized in the following categories:

1. Organization description Metrics that focus on the organization's mission, operational model, and location.
2. Product description Metrics that describe the organization's products and services and target markets
3. Financial performance Commonly reported financial metrics
4. Operational impact Metrics that describe the organization's policies, employees, and environmental performance
5. Product impact Metrics that describe the performance and reach of the organization's products and services

### Overview of the IRIS catalog

IRIS is designed as a catalog in which an organization can browse to find the most appropriate metrics for its work. IRIS includes metrics tailored to specific sectors, as well as metrics that can be used by companies irrespective of their social or environmental goals and the sector and regions in which they work. This means that IRIS is a useful resource for impact investors working around the world, in different sectors, and with a variety of social and environmental impact objectives. IRIS metrics can also be selected to complement and sit alongside any proprietary impact metrics an organization tracks. Because IRIS is a catalog, an organization can choose as few or as many metrics as it deems necessary to describe the performance of its investees. Using the IRIS catalog, an organization can measure its performance through metrics focusing on:

- **Financial performance**, including standard financial reporting metrics such as current assets and financial liabilities.
- **Operational performance**, including metrics to assess your investees' governance policies, employment practices, and the social and environmental impact of their day-to-day business activities.
- **Product performance**, including metrics that describe and quantify the social and environmental benefits of the products, services, and unique processes offered by your investees.
- **Sector performance**, including metrics that describe and quantify impact in particular social and environmental sectors, including agriculture, financial services, and healthcare.
- **Social and Environmental Objective performance**, including metrics that describe and quantify progress towards specific impact objectives such as employment generation or sustainable land use.

## Social Return on Investment (SROI)

SROI is a principles-based framework for measuring the environmental and social value of an organization's mission relative to resources invested. The framework can be used to evaluate positive changes on stakeholders and identify ways to enhance the performance of social investments (Wikipedia).

SROI focuses on stake holder's view of economic, social and environmental values and uses financial proxies to quantify impact that otherwise difficult to measure.



*Source: SROI Network*



SROI analysis is a process of understanding, measuring and reporting on the social, environmental and economic value that is being created by an organisation.

The monetization of nonmonetary values is an important part of an SROI analysis, allowing for at least some amount of performance measurement and reporting to stakeholders. Calculating a financial proxy adds another layer of complexity to an already convoluted process. It is important that organizations choose a credible financial proxy, depending on their primary stakeholder group.

The SROI Network notes:

*“The most credible proxies have been used before (by third-party sources with existing credibility), or are at least based on research undertaken by your organization. Other proxies are market comparisons (what it would cost to achieve the same outcome) or working assumptions that will need to be related to proposed future improvements. These latter two may be necessary but are usually less credible.”* (A Guide to Social Return on Investment, the SROI Network, January 2012)

SROI measures the value of the benefits relative to the costs of achieving those benefits. It is a ratio of the net present value of benefits to the net present value of the investment. It is calculated as:

$$SROI = \frac{\text{Net present value of benefits}}{\text{Net present value of investment}}$$

An SROI ratio is a comparison between the value being generated by an intervention and the investment required to achieve that impact.

## How to do an SROI Analysis: Six Stages

1. Establishing scope and identifying key stakeholders.
2. Mapping outcomes.
3. Evidencing outcomes and giving them a value.
4. Establishing impact.
5. Calculating the SROI.
6. Reporting, using, and embedding.



7

### Balanced Scorecard (*taken from [www.balancedscorecard.org](http://www.balancedscorecard.org)*)

The **balanced scorecard (BSC)** is a strategy performance management tool – a semi-standard structured report, supported by design methods and automation tools that can be used by managers to keep track of the execution of activities by the staff within their control and to monitor the consequences arising from these actions.

The critical characteristics that define a balanced scorecard are:

- its focus on the strategic agenda of the organization concerned
- the selection of a small number of data items to monitor
- mix of financial and non-financial data items

Balance Scorecard explicitly identifies links between different dimensions of performance. It incorporates four perspectives: financial, internal business, innovation and learning, and the customer. The four perspectives of the BSC minimizes the overloading of information but focuses on the most critical success factors of the organization (Kaplan and Norton, 1992). Furthermore, the BSC can be used to translate the organization's mission and strategic objectives to a set of performance measures and help communicate and implement the organization's

strategy throughout the organization, consequently enabling the employees to identify the drivers of current and future success (Kaplan and Norton, 1992). The most important thing BSC does is that it brings the organization's strategy to alignment to its performance measurement. BSC incorporates both the "lagging" and "leading" measures which make it different from traditional measures. BSC focuses on balancing the external measures such as shareholders and its customers in combination with internal employee innovation, business processes and learning various skills. It also focuses on the various outcomes with their important drivers including impact creating activities.

Balanced scorecard is formulated based on the following four perspectives: Customer, Financial, Internal Business Perspective, and Innovation and learning perspective.

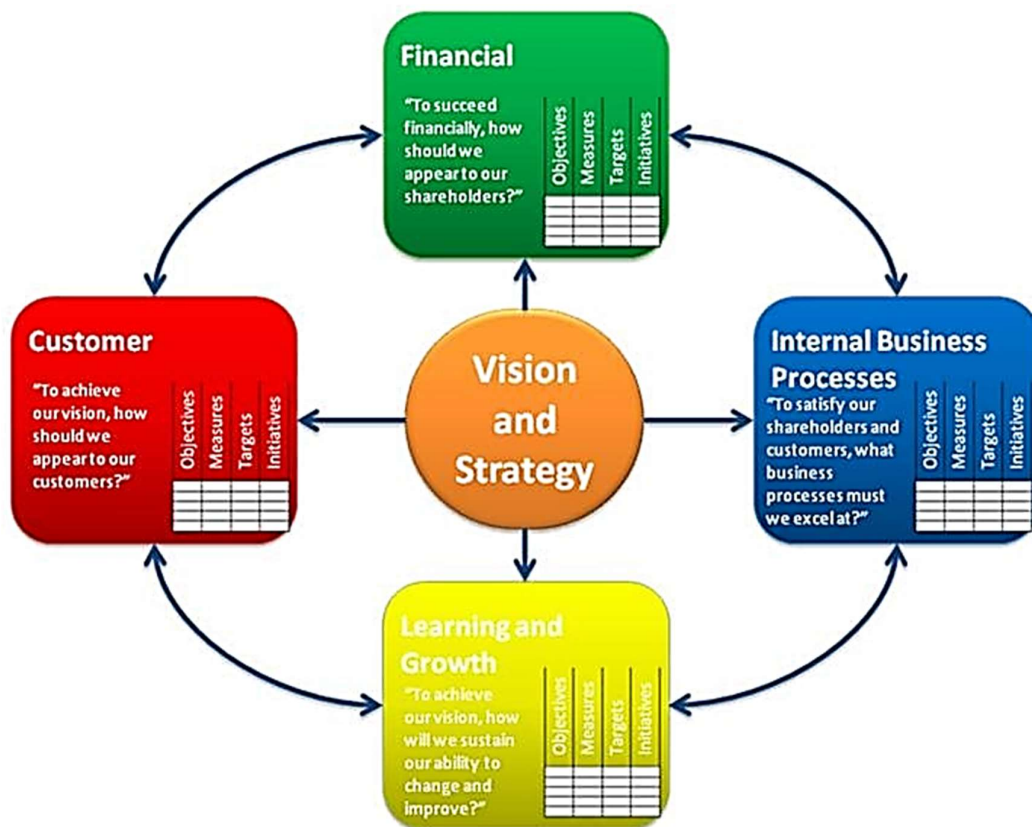


Figure: Balanced Scorecard vision and strategy (Kaplan and Norton, 1992)

## 1. Customer Perspective

This perspective will aid the company in addressing the important concerns of the customers and build continued patronage. Hence, to put the balanced scorecard to work, core measures ought to include overall indicators such as customer satisfaction, customer complaints, production of new products, retention of customer, customer profitability, on-time delivery etc. This can be summarized under clearly defining goals for time, quality, performance and service and converting these goals into specific measures. In view of all this, organizations must yet still remain sensitive to the cost of their products (Kaplan and Norton, 1992).

## 2. Financial Perspective

The financial measurement of performance is the traditional and most commonly used tool as a measure of an organizations performance. Financial measures are typically focused on profitability, market value of the firm, return on assets, investment and equity, liquidity and various other ratios.

## 3. Internal Business Perspective

This perspective aims at the identification and improvement of critical internal business processes that yield a competitive edge and result in greater customer satisfaction. The internal business perspective is based on the assumption that to satisfy customers and earn a financial return, the organization must be efficient and effective at what it does. Thus, this perspective's measurements are typically based on the objective of producing products and providing services that meet customer satisfaction efficiently and effectively.

## 4. Innovation and Learning Perspective

Innovation has become a key factor in the knowledge economy. This innovation and learning perspective can be measured in a variety of ways, these may include; the speed of transactions, IT usage, training and development, new product and

services development and strategic alliance and partnership. An organizations ability to innovate and learn, improves its operating efficiency causing the organization to grow and thereby increase shareholder value (Kaplan and Norton, 1992).

## Strategy Mapping of Balanced Scorecard

Strategy maps are communication tools used to tell a story of how value is created for the organization. They show a logical, step-by-step connection between strategic objectives (shown as ovals on the map) in the form of a cause-and-effect chain. Generally speaking, improving performance in the objectives found in the Learning & Growth perspective (the bottom row) enables the organization to improve its Internal Process perspective Objectives (the next row up), which in turn enables the organization to create desirable results in the Customer and Financial perspectives (the top two rows).

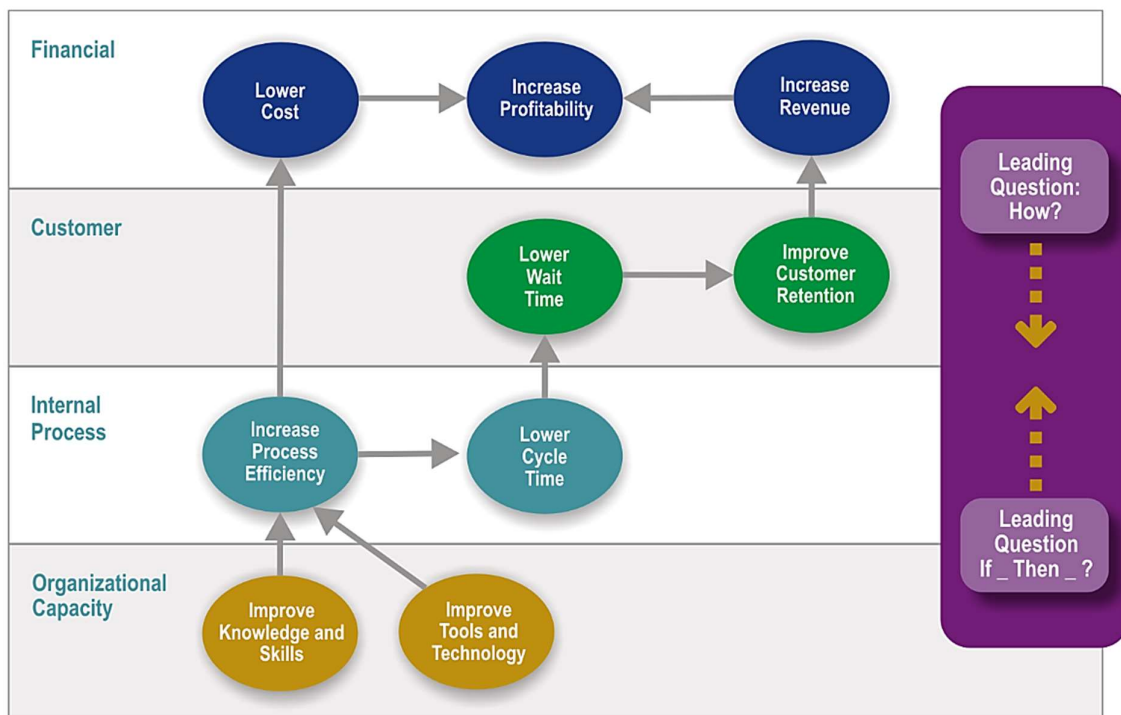


Figure: Balanced Scorecard strategy mapping (Kaplan and Norton, 1992)

# METHODOLOGY

---

The methodology outlines and justifies the methods chosen to answer the research questions that are important at arriving the discussions and conclusions. The method informs the reader what method is used to collect the data, development of questionnaire-sheet why this was considered suitable for the thesis.

---

## Role of Theory in Analysis

The outcome of this study is affected by the choice of methodology used in the thesis. Business scientific methodology differentiates between two different approaches: the deductive and inductive approach (Andersen, 1998). In order to use a right approach for this study, it is important to understand the above approaches and their application.

1. Inductive reasoning
2. Deductive reasoning

Inductive reasoning: Andersen (1998) argues that inductive reasoning believes there should be a strong supply of evidence to find the truth of a conclusion. Inductive reasoning is mostly used when there is little or no knowledge regarding the research area. This kind of approach is important when there is a new finding in social science areas.

On the other hand, deductive reasoning is based on a general statement or hypothesis and then researches the probability of a specific conclusion (Herr, 2008). This approach is mostly used with quantitative studies.

In this study, I have used deductive reasoning. This is based on the nature of the study and the objective of the thesis.

## Method of developing of the question-sheet

In this study, questionnaires were first prepared which are believed to address the problem statement and the objectives of the study. There were 17 questions for each interviewee involved in impact investing. The questions include the types of measurement tools used in their companies, the qualities of those measurement tools, including their strengths and weaknesses. Before sending the questionnaires out to potential respondents, a careful analysis and search was made to identify appropriate impact investors.

### Identifying the parameters of measurements tools and development of the questionnaire

#### Identifying social impact investors

Though impact investing has a wide range of meaning by various users of impact investment, it is believed that the investors engaged in these kinds of activities produce social or environmental impacts as opposed to traditional investing which focuses on financial value only. Various stake holders can give different impact values of the investment.

Impact investing has long been discussed by various companies which want to increase their corporate social responsibility. Many of them assigned huge amount of funds for creating impacts in various areas of social and environmental activities. Some companies purely focus on only social activities, some on only environments and some focus on both.

The degree of their involvement in impact investing can also be different. Some companies are fully engaged in it while others take it lightly. For example Bridges Capital is engaged in both social sector and sustainable growth impacts whereas

Lego foundation focus on education for children. Bestseller foundation focuses on job creation in third world countries.

**Therefore the Question is:** *Does your company engage in social impact invest?*

## How important are the financial and social values of impact investing

When we talk about measuring social impact, we generally mean measuring financial, social or environmental *outcomes* – i.e. the *result* of implementing a program, producing a good, or consuming a product or service. Outcomes are distinct from outputs – the amount of goods produced or products delivered. While traditional business is concerned with profitably generating outputs, an impact investing enterprise must produce outputs profitably (or at least sustainably), while *also* advancing a desired social or environmental outcome.

**Therefore the Question is:** *How important are the financial and social values for your company?*

## Importance of measuring the impact investment

Measuring impact investing is believed to be important by both the investor and investee. If an impact investing enterprise wants to raise capital for its project or wants to measure the effectiveness of achieving its goals and objectives, it needs to measure its impact. To tell the story of impact creation to its stake holders increases trust between the parties involved. Proper measurement creates transparency. To judge that the company has been successful with its execution of both financial and social value creating activities, impact measurement plays a great role.

Measuring Impact is important:

- To find out whether the project is achieving its goals
- To demonstrate project success
- To maintain focus on the intended effect and not just the day to day
- To allow projects to adapt to changes

**Therefore the Question is:** *How important is measuring your impact investment?*



## The measurement reflection on the goal and strategy

According to Nanni et al (1990), strategies are the nucleus of a performance measurement. Every performance measurement should start from its goals and objectives. These goals and objectives are the lead roadmap for a successful performance measurement development. Any measurement tool that does not align with its core strategy will not produce the intended result.

According to Hitchcock (1992), an integrated performance management system should have the following: Link to strategy, employee involved performance goals, measurement, reporting, feedback, planning and links the rewards to the results. When all of these items are in place, it helps the organization to achieve its strategic goals (Macaulay & Cook, 1994).

Including goals and strategies to the performance measurement system is related to distortion issue. If the measurement system does not include all the necessary information, there will be a coordination problem. This coordination problem leads to goals and strategies not meeting their initial plan. Once the measurement system has a flow, then it creates a distorted performance result.

**Therefore the Question is:** *Does the measurement tool reflect on the goal and strategy of the company?*

## Does it capture value driving activities (Accuracy)

Though it might seem to be easy to say that the values driven from the impact creating activities are captured, the accuracy will be always be in question. How accurate is the measurement in capturing it?

Activities which deliver social values can be very tricky and difficult to measure. It might be possible to see the end result of the activities but it can be difficult to create the relation between the output and the outcome. This complication leads to some outcomes not being measured while outcomes not directly related to the output can be part of the measurement. But does the performance measurement capture all the values created in the process?

Agents want that the performance measurement includes all the values they have created. It is with the risk of the agent that a certain value is created. They need that effort (risk taking) to be part of the measurement. Measuring value creating activities are related to **risk**. This leads to an issue of **motivation** (Allen Hansen, 2013).

**Therefore the Question is:** *Does the measurement capture all value driving activities?*

### How often do you measure?

Depending on the type of investments, performance measures should be able to communicate their results on time. If the results are not communicated on time, this can lead to a problem of **manipulation**, where the agent wants to either delay the information intentionally or postpone the needed results. Manipulation is one of the main reasons in creation of Agency problem (Allen Hansen, 2013). A measurement tool that is susceptible to manipulation leads to increase in agency costs.

Not every company follows the same way when it comes to measuring their impact investing. Some companies have big projects, while others have smaller ones. Some have many variables in the measurement, while others have few. One way or another, companies determine themselves when to measure their impacts.

**Therefore the Question is:** *How often do you measure your performance?*

### The importance of the measurement in decision making process

Even though it is not clearly mentioned in this study what types of decision making is connected to their performance measures, it is found to be important that the performance measures in the survey help the management to make a right decision.

Decision making is part of a bigger picture of strategy (Kenneth and Wim, 2007). The decision making process should be able to reflect on the objectives and tasks needed to carry out the company's overall goal. In this case, decision making is related to **Distortion** (Allen Hansen, 2013). A measurement that does not put

decision making process at the heart of its measurement tool/method risks distortion. This in turn creates an agency problem between the agent and the principal.

Every decision made in the organization should take into account the various results of performance measurements. Performance measurements play a great role in pushing a company in to becoming more effective and efficient. Decision makings for purposes such as strategy, administration, information, development, documentation, etc. need to be based on a well thought performance measurement which affects the overall objective of the company.

**Therefore the Question is:** *How important is the measurement tool in decision making process?*

### How understandable is the measurement

Understandability in measurement tools is important as its application depends on understanding the measurement. If a measurement tool is not understandable, this can lead to a problem of **distortion** and **Manipulation** (Allen Hensen, 2013). For example, Bridges Capital invests in solar energy in African cities where there is high level of pollution, and that investment created a host of social and environmental values. The measurement they use should be able to communicate to all the stakeholders such as the investors, investees, beneficiaries and government authorities in an understandable way. If not, the measurement will end up being distorted. The other issue is manipulation that can be easily created when the measurement is not understandable. For example, an investee of Rockefeller Foundation can manipulate on the social value created by the investment if the investors do not understand the measurement.

One of the main reasons why agency problems arise is due to the existence of misunderstanding of performance measurement between the principal and the agent. The agent wants to play for his/her gain whereas the principal might like to not expose all the information he/she has.

**Therefore the Question is:** *How understandable is the measurement tool?*

## How timely is the measurement

Performance measures are believed to be used in various decision making process. Decision making has its time horizon and the information needed for that purpose should be available on time. The time question of performance measurement tool is so important that it plays a great role in dealing with agency theory. This can be related to **distortion** and **cost of measurement tool** (Allen Hensen, 2013).

According to distortion criteria, to create a complete set of information, we need timely information. For example, the investor of Roots Capital wants to do further investments in local jobs creation project in Ethiopia, and needs to assess its past performance. It is not possible for the investor to make investment decisions without knowing its past performance. It creates a problem of distortion if the information is not present on time. The motive of the agent might be to use the time laps to hide some information. If the agent believes that the timely information can play against the gain of the agent that arise from information being on time, then he/she might take an initiative to delay it. The other issue is that time is a resource and not using the information in the time needed, it increases the cost of measurement.

**Therefore the Question is:** *How timely is the measurement tool?*

## How costly is the measurement

Impact investors are interested in measuring their performance of both financial and non-financial results. But measuring the non-financial aspect of impact investing can be very costly due to the intangible nature of the non-financial matter. **Cost of measurement** plays a great role in deciding which performance measurement should be used in effectively measuring the results. Most impact investing organizations have other commitments rather than spending their resources on covering the cost of the measurement. In many cases, principals often will not consider alternative approaches to performance measurement because of the cost. The cost of training, the cost of implementation, the cost of collecting and reporting of data.

Measurements need financial and non-financial resources to develop and execute. Some measurements are quite expensive while some are not. The cost of

measurement is related to the scope, the purpose and the type of the measurements.

**Therefore the Question is:** *How costly is the measurement tool?*

### How reliable is the measurement

Reliability is the degree to which a measurement technique can be depended upon to secure consistent results upon repeated application. Performance measurement tools which do not produce the same results for repeated actions are considered unreliable. Reliable performance measurement tools are accepted by both the principal and agent.

The question of reliability is related to **Risk** and **Manipulation** (Allen Hensen, 2013). A reliable measurement includes all the value creating activities of the agent by reducing risk. When the agent knows that the measurement is reliable, then the agent is ready to take risk. The level of taking risk will be manifested in the measurement and the agent requires premium payment for undertaking the risky task. For example, Bill Gates Foundation sends an agent for medical research in south Sudan where there is a cholera outbreak, the agent is aware of the situation and takes risk. That risk should be manifested in the measurement so that the agent is compensated. The other issue is manipulation in regard to reliability of performance measure. A reliable measurement produces a consistent result time after time. But if it is an unreliable measure, it gives an opportunity to either the principal or agent to manipulate the results.

**Therefore the Question is:** *How reliable is the measurement tool?*

### How neutral is the measurement

For performance measurement to be neutral, the participation of both parties is important to get feedback. If the agent feels that the measurement is not properly addressing his concerns, then he will try to act against the interest of the principal. If the principal thinks that the measurement is not adequately addressing the issue of

neutrality, then he/she will try to do something which is against the interest of the other. This issue raises a concern from both parties and it is related to **manipulation** (Allen Hensen, 2013). When a measurement is free from bias, its manipulative nature is low as both the principal and agents would see that the measurement represents their interest.

Even though both the principal and the agent have their own interest, they should play on the win-lose. It should always be in the interest of both parties that there should be an environment of win-win on both sides. To do that, it is necessary to have a performance measurement tool that supports free from being used by the other party.

**Therefore the Question is:** *How neutral is the measurement tool?*

### How repeatable is the measurement

Performance measurement should have repetitive characteristics if it should be applied with consistency. The principal should be able to see the performance results compared to different periods as well as its competitors. Not all performance measures are repeatable. This indicates that there is a room for some manipulation.

On the part of the principal, the performance measurement tool gives a means to find explanation to why there are differences in performance. The harder the measurement to be repeated, the higher the chances for existence of agency problem.

All the results of performance in an organization should be compared to different periods and also to different competitors. To do that, the organization should be able to produce consistent performance result. Consistent measurement results are possible when the performance measurement tool is repeatable.

**Therefore the Question is:** *How repeatable is the measurement tool?*

## Satisfaction by the measurement

Performance measurements should be accepted by both parties: the principal and the agent for creating a coordinated communication. Satisfaction of the measurement leads both the agent and principal in creating a trusted flow of information.

When a measurement gives the intended result, the **motivation** of both the agent and the principal increase. The agent will be motivated to do his/her part and the principal also keeps its promises.

**Therefore the Question is:** *Are you satisfied by the measurement tool?*

## Is it applied to deal with agency problem?

Agency problem arises when the agent wants to keep his/her interest alone instead of the principal's interest. The principal believes that the agent represents him/her. The performance measurement tools can play a great role in dealing with this conflict of interest provided that the measurement keeps the balance of interest for both parties.

In agency theory, the principal should be able to communicate well with the agent as to make the performance measurement tool to be part of the management system. Principal can use the tools either for incentivizing or punishing the agent.

Companies which have a well thought performance measures try to include all the factors which are relevant to both parties.

**Therefore the Question is:** *Is it applied to deal with agency problem?*

Does the measurement encourage appropriate behaviour (related to incentive)?

It is believed that there is a conflict of interest between the principal and the agent.

The principal has his/her own interest and the agent is there to keep the interest of the principal. But sometimes, the agent rather wants to keep his own interest. In this time, there arises a conflict of interest. The important aspect of measurement tool here is: does it encourage/discourage unwanted behaviour through incentives and other motivating factors, does it allow innovation, does it encourage/discourage improvements, etc.

**Motivation** (Allen Hensen, 2013) issues here comes to play. Agents want to be compensated if they are doing well. They want to be incentivized for achieving what the principal wants. When they do not have a right measure to give them what they deserve, whether intrinsic or extrinsic motivation, then they engage in some kind of play to keep their gain. This creates agency problem which can be mitigated by a right incentive mechanism.

**Therefore the Question is:** *Does the measurement encourage appropriate behaviour (related to incentive)?*



# Data Collection Method

Data collection is a very important task in research. Data can be collected from various sources. Most studies do not rely only on one source of data because collecting the data from various sources helps in arriving at a better conclusion or decision. Data can be found from both primary and secondary sources which are believed to be important for the study. In this thesis, both primary and secondary data sources are exploited. To strengthen the conclusion, important quantitative and qualitative data are used. Yin (2009) complements that inclusion of multiple sources of data helps in achieving data triangulations, where both quantitative and qualitative data are involved to strengthen the conclusions. The researcher can use different channels of data collections to gather the data needed to help arrive in the conclusion.

## Primary Data:

In primary data collection, the researcher gets the data directly from the potential respondents unlike the secondary data, which is previously collected or prepared by another person.

About 80 impact investing companies are identified as potential respondents and because of the nature of the study, Survey monkey, an on-line survey tool, was justified to collect the interview data.

One of the justification for using the Survey Monkey was that impact investors are not located just in one place or country. They were found in almost all continents. And it is very expensive and time consuming to interview them in person. The other reason is that most impact investors do not have time to answer the questions immediately. So the Survey Monkey gives them time to respond when suitable. It helps them also to take time and go through their answers.

## Secondary Data:

As impact investors are distributed across many countries, it is found to be very important to use their historical data available. Almost all impact investing companies have websites where they talk about what they do and the overall important information regarding the investment activities. These websites contain a wide range of information important to carry out the study. In some cases, they mention in their websites what performance measurements they use. Some of them have also timely magazines and newsletters which are important sources of secondary data for the study.

Their financial reports are also important aspect of secondary data. The financial statements can be used to see their economic, social and environmental values which are part of the measurement results.

The time required to collect some data from case studies is too long in some cases. On the other hand, this study is short and hence it is of paramount importance to use the case studies done by impact investing companies. I have collected some case studies done previously by some of the impact investing companies.

# ANALYSIS AND DISCUSSION

---

This section focuses on examination and evaluation of the data collected regarding impact investing measurement tools/methods, furthermore the most common performance measurement tools found from the survey are discussed in relation to measurement imperfections.

---

## Introduction

The analysis is based on the problems identified in the first chapter. The questionnaires prepared are focusing on the measurement qualities which are important in revealing the measurement imperfections such as **Distortion**, **Risk**, **Manipulation** and **Measurement Costs**.

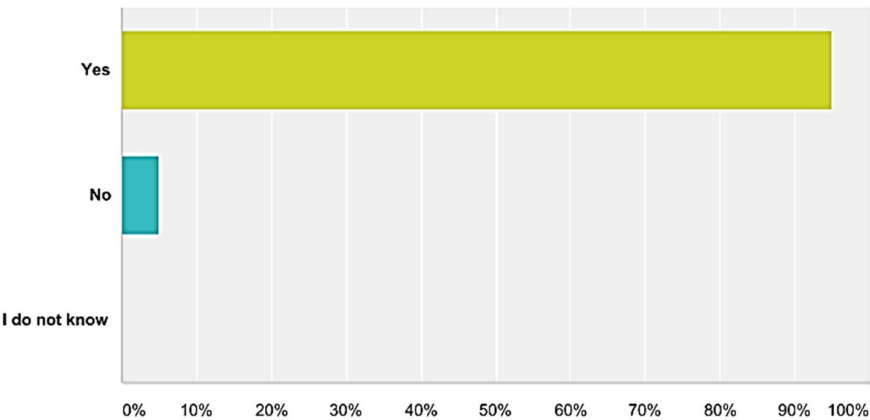
The analysis is divided in to four parts where the first part deals with analysis on the introductory questionnaire, the second section deals with specific analysis on the qualities on measurement tools, the third part deals with Agency theory and the last part deals with the common measurement tools and their imperfections.

This section also discusses the most common used performance measurement tools such as **SROI**, **IRIS** and **Balanced Scorecard** in relation to measurement imperfections such as Distortion, Risk, Manipulation and Measurement Cost.

# Analysis of Data from the survey

## 1. Introductory Questionnaire

### Does your company engage in social impact invest?



19 of the respondents said yes they engage in impact investing and 1 said no. This indicates that 95% of the respondents engage in impact investing activities while 5% of the respondent do not engage in it. From this response, it is possible to say that most the respondents are the right group of people for the study. That means this group of respondents engage themselves in investments which create social and environmental values on top of their financial values.

### How important are the financial and social values for the company

Financial Return (Very Important)			Financial and Social values equally important			Social Impact (Very Important)	Total
0.00%	0.00%	7.14%	35.71%	0.00%	28.57%	28.57%	
0	0	1	5	0	4	4	14

According to our survey, 7.14% of the respondents have given priority to financial gain, 35.71% responded in favour of both financial and social values equally whereas 28.57% favoured social gains and again 28.57% focus on only social gains.

This indicates that about 57.15% of the respondents are 'social first' investors who put social gains first. The 'financial first' investors are quite small portion of the survey.

### The importance of measuring the impact investment

Disagree				Strongly agree	Total
0.00%	0.00%	7.14%	14.29%	78.57%	
0	0	1	2	11	14

As to the above collected data from the respondents, 78.57% of the respondents strongly agree while 14.29% of them just fairly agree while 7.14% just agree with the importance of measuring impact investing. That means almost all the respondents agree with the importance of impact measurement. But this does not mean those respondents are trying their best to measure their impact investments.

### The importance of the measurement in decision making process

Not important				Very important	Total
0.00%	0.00%	15.38%	38.46%	46.15%	
0	0	2	5	6	13

From the respondents involved in the survey, approximately 15% believe that their performance measurement is fairly important for decision making while 85% of the respondents say it is very important.

Performance measurement tools provide important information for decision making. From the above table, it is possible to assume that less than half of the respondents said measuring their performance is very important. Decision regarding social and environmental values are so vital for impact investing, measuring their values should be one of the most important decisions to be made.

## 2. Qualities of measurement tools

### The measurement reflection on the goal and strategy

It does not reflect				It does reflect	Total
0.00%	0.00%	28.57%	7.14%	64.29%	
0	0	4	1	9	14

It is possible to see in the above result that 28.57% of the respondents have given a value of 3 out of 5 point scale. This means that more than a quarter of the respondents' measurement tool does not reflect the company's strategy and goal. According to Kaplan and Norton (1996), the goal and strategy should be the nucleus in the measurement tools formulation. If the measurement tools/methods do not start from the goals and strategy, they risk losing focus and measuring the activities which are important for the company's goals and strategy. In another word, there will be information incompleteness and asymmetries which mean high in **Distortion**. The distorted measures do not communicate well with both the principal and the agent. This in turn creates **Agency Problem** between the two parties (the principal and the agent).

### Does it capture value driving activities?

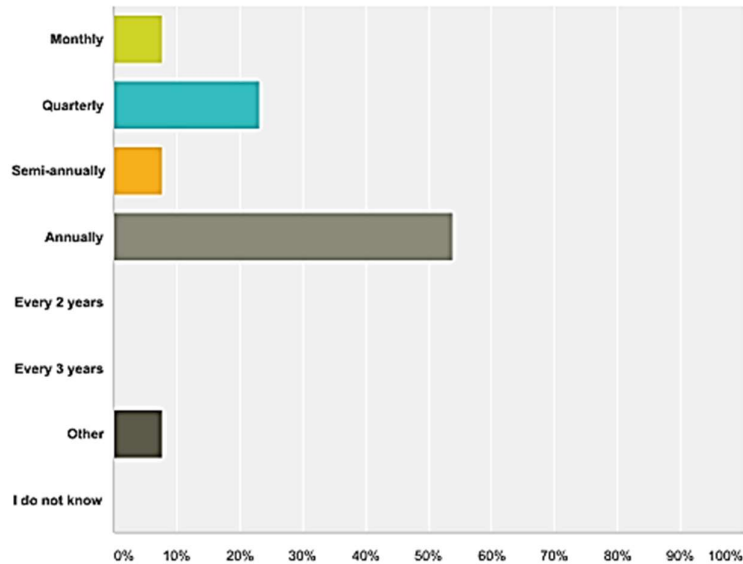
It does not capture				It captures	Total
0.00%	0.00%	23.08%	53.85%	23.08%	
0	0	3	7	3	13

It can be seen from the above table that only 23.08% of the respondents answered their measurement captures all the value driving activities. This means less than a quarter of the measurement tools focused on measuring the activities which create value. According to Mingrom and Roberts (1992), the measurement tools should be able to capture only the value creating activities. In the impact investment, the value creating activities include both the financial and non-financial (social and

environmental values). An effective measurement tool does not include non-value creating activities as they increase 'noise' in the measurement.

According to Allen Hansen (2013), the agent believes that his true effort in contributing to the success of a firm is reflected by the performance measurement. So the agent expects to receive a fair compensation for his effort. However, the performance measures of the agent runs a **risk** of not measuring the whole effort of the agent. This time the agent is faced with **motivation** problem. The higher the risk associated with the performance measure, the less the agent is willing to accept this measures as the basis of his or her compensation for the work in the organization. This means that because of the measurement inability to capture the whole effort of the agent, there will be **Agency Problem** between the agent and the principal.

How often do you measure?



Answer Choices	Responses
Monthly	7.69%1
Quarterly	23.08%3
Semi-annually	7.69%1
Annually	53.85%7
Every 2 years	0.00%0
Every 3 years	0.00%0
Other	7.69%1
I do not know	0.00%0
Total	13

As can be seen from the above table, 7.69% of the respondents answered they measure their impact investing every month, 23.08% said quarterly, 7.69% said semi-annually, 53.85% said annually and finally, 7.69% have not specified the time. Performance measurement should be able to provide information in time for action to be taken. The information helps in making a right decision when provided in time. The occurrence of the event and the information availability are vital in decision making. If the information is not available in time, it creates incompleteness of information which leads to **Distortion** in the measurement.

More than half of the respondents answered they provide the information annually and about 8% of the respondents do not have a specified time for measuring their investments. This might lead to **distorted** measure if important decision should be made every couple of months. This leads to Agency Problem between the principal and the agent.

The other issue with delayed performance result is **manipulation** as it is connected to the behaviour of the agent where the agent exploits the asymmetric information for his/her own personal gain. The more delayed the information is, the higher the possibility for manipulation as it is difficultly to truck the changes. This in turn may result in **Agency Problem**.

On the other hand, about 30% of the respondents report either monthly or quarterly. This may result in higher **Measurement Cost** as a performance measurement tool needs economic resources to implement it. In this case, the cost of the measurement might be higher than the benefit of it. Normally, principals are concerned with costs. This may lead to Agency Problem between the principal and the agent.

## How understandable is the measurement?

Not understandable				Very understandable	Total
0.00%	15.38%	46.15%	23.08%	15.38%	
0	2	6	3	2	13



The table above shows that only 15% of the respondents said the performance measure is very understandable. Nearly 50% of the respondents are on the middle of the table which means there is an issue of understandability. The question of understandability can be such as "is the measurement expressed clearly, does it have unclear definitions and meanings, does it have consistency in gathering the intended data, etc.". If the measurement is not understandable by the users of the information, it creates an opportunity for **Distortion** and **Manipulation**. Here distortion happens because of the unclear definitions and meanings. Once the measurement is distorted, it creates Agency Problem. On the other hand, if the measurement is not clearly expressed, it gives a chance for **manipulation** by the other party.

In the above table, nearly, half of the respondents are in between and hence it can be assumed that there is an issue of understandability, meaning that there is Agency Problem resulting from Distortion and Manipulation.

### How timely is the measurement?

Not timely				Very timely	Total
0.00%	7.69%	46.15%	38.46%	7.69%	
0	1	6	5	1	13

According to the data collected from our respondents, as can be seen from the above table, only 8% of the respondents said "very timely" while the majority fall in the middle. This finding corresponds very well with the frequency of measurement. The majority measure annually in the above table. Based on this data, it is possible to say that not every company makes a timely report. This gives an opportunity for manipulation. The agent might be interested to delay the access of the information to create asymmetries. At the same time, the more delayed information is, the more higher the cost for the principal. This can make the Agency Problem even worse.

## How costly is the measurement?

No costly				Very costly	Total
0.00%	15.38%	38.46%	7.69%	38.46%	
0	2	5	1	5	13

As the table above shows nearly 40% of the respondents said their performance measurement tools/methods are expensive while the other 40% is between. It can be said that the cost of measurement such as the cost of training, the cost of implementation, the cost of collecting and reporting of data play a great role in choosing the measurement tool. The more expensive the measurement tool is, the less likely the principal will be motivated to use the measurement because measuring results requires economic resources. This might have its draw back as the cheaper the measurement is, the less effective the measurement tool in delivering the needed information. The important aspect of cost of measurement here is the corresponding cost and benefit of the measurement tool. The higher the **measurement cost**, the higher the **Agency Problem** as the principal wants the agent to reduce the cost of measurement.

## How reliable is the measurement?

Not reliable				Very reliable	Total
0.00%	0.00%	30.77%	46.15%	23.08%	
0	0	4	6	3	13

In the above table, only 23% of the respondents said their performance measurement is reliable. That means there is an issue of reliability in the measurement used by the respondents. This issue of reliability can be such as "is the performance measure accurate enough as a measurement tool, is it responsive to change, will it show significant changes in performance, will the measure change because of random 'noise' rather than the actual performance'. If the measurement is not reliable, it creates an opportunity for **Distortion** and **Risk**. When the measurement changes due to random 'noise' rather than the actual performance, it

creates distorted measurement. This distorted measure increases the chance of **Agency Problem** between the principal and the agent as the result of the measurement does not communicate the actual performance. When the measurement is not accurate enough, the risk of measuring the effort of the agent is high, leading the agent to be not motivated to carry out the objective of the company. This time the Agency Problem increases between the principal and the agent.

### How neutral is the measurement?

Not neutral				Very neutral	Total
0.00%	7.69%	30.77%	53.85%	7.69%	
0	1	4	7	1	13

This table shows only 7% of the respondents say that their measurement tool is very neutral. In another word, it can be assumed that there is an issue of neutrality. The measurement neutrality means that the measurement is free from bias. This happens when the measurement includes the interest of all the stakeholders involved with the measurement. When the measurement is neutral, the results of the measurement be interpreted fairly the same by the users. However, when the measurement is based, it creates an opportunity for **manipulation**, i.e. either the agent or the principal wants to use the biased measurement for their own benefit. In many cases, biased measurement is a result of 'hidden' information. This means that there is a game play between the users of the information, leading to **Agency Problem**.

### How repeatable is the measurement?

Not repeatable				Very much repeatable	Total
0.00%	0.00%	15.38%	46.15%	38.46%	
0	0	2	6	5	13

It can be seen from the above table that only 38% of the respondents answered their measurement tools are very much repeatable. This means that less than half of the respondents in the survey think the measurement tool is very much repeatable. The

repeatability concern can be such as 'does the measurement allow comparison to past performance, can an objective outsider come up with the same results, can it be used for similar projects/programs, does it allow comparison with other similar projects/programs?'. When the measurement tool is not repeatable, it leads to

**Measurement Cost and Manipulation.** Performance measurement should be able to have a repetitive characteristics so as to reduce the measurement cost.

Formulating a new measurement tool and training the users leads to more expenses and it requires more time. On the other hand, the principal should able to see the performance results compared to different periods as well as its competitors. If there results of measurement provide different results, there is a manipulation issue with the measurement. In the above data, the overall result shows that not all performance measures are repeatable. This indicates that there are room for some manipulation, leading to Agency Problem.

### 3. Using the measurement tool for Agency Theory

#### Satisfaction by the measurement

Not satisfied				Satisfied	Total
0.00%	0.00%	15.38%	69.23%	15.38%	
0	0	2	9	2	13

#### Is it applied to deal with agency problem?

Not applicable				Very much applicable	Total
23.08%	7.69%	23.08%	30.77%	15.38%	
3	1	3	4	2	13

23% of the respondents gave a point of 1 which means that their performance measurements are not applicable at all to deal with agency problem. 8% of the respondents gave a point of 2, again 23% gave a point of 3, 31% scaled it as 4 and finally, 15% gave a scale of 5. When the overall scale is made at a scale of 10, average result shows 3.8.

It can be observed from this data that the performance measurement application to dealing with agency theory is very low. It is lower than 5. The lower the performance measure is applied in dealing with the agency problem, the higher the possibility for agency problem.

### Does the measurement encourage appropriate behaviour (related to incentive)?

Does not encourage				Encourages very much	Total
0.00%	7.69%	30.77%	30.77%	30.77%	
0	1	4	4	4	13

As can be seen on the above table, only about 31% of the respondents said their performance measures encourages appropriate behaviour very much. On the other hand, the rest of the respondents rest in the middle, meaning that relating the measurement tool to behaviours is not that important. Behaviours of agents are so crucial in determining company's success.

The important aspect of measurement tool here is: does it encourage/discourage unwanted behaviour through incentives and other motivating factors, does it allow innovation, does it encourage/discourage improvements, etc. When the measurement does not encourage appropriate behaviour or discourage misbehaviour, there is a problem of **manipulation**. The agent will use his behaviour to hide his motives as the measurement fails to capture his/her motives. This gives an opportunity to **Agency problem** where the agent's action are covered in the measurement. From the above data, less than one-third encourages a positive behaviour very much.

#### 4. Commonly used impact measurement tools and their imperfections

##### What impact measurement tools do you use?

Our respondents in this study have mentioned their measurement tool employed to address the issue of measuring their impacts. It can be seen from these respondents that there are various measurement tools/methods used. Here are the measurements used by our respondents:

s.no	Name of the measurement	No. of companies
1	IRIS	2
2	SROI	2
3	Balanced Scorecard	2
4	Theory of Change	1
5	Cost Benefit Analysis	1
6	Baseline Survey	1
7	Blended Value	1
8	Internal Measurement system	1
9	Sales and Audience Research	1
10	Outcome Stars	1
11	Evaluation and Monitoring Check Board	1

For the further discussion, I took performance measurements which are used at least by two companies. Even though, the number of companies using those measures is not high enough, it can be said with the help of literature review that they can be basis for making analysis on impact measurement tools widely used.

## List of Impact investing companies using the measurement tools

The data collected from impact investors regarding those qualities is given in a scale where the interviewee chooses the scale that represents the measurement tool. In the discussion section, we will talk about those criteria's that need to be met by performance measurement chosen for the study: SROI, IRIS and Balanced Scorecard.

Here is the list of impact investing company, what they do and their measurement tool:

Impact Investing company	<b>Bridges Ventures</b>
About the company	<p>Bridges Ventures is a specialist sustainable and impact fund manager. It uses an impact-driven approach to create superior returns for both investors and society as a whole. It manages almost £500m across Sustainable Growth Funds, Property Funds and Social Sector Funds. Its strategy is to focus on growth opportunities where its investments can generate attractive financial returns through helping meet pressing social or environmental challenges – be it backing businesses that generate jobs in areas of high unemployment, building environmentally-friendly care homes for the elderly to sustain an ageing population, or providing flexible financing for innovative youth employment programmes.</p> <p>Since 2002, it has been creating (and measuring) impact across four key themes: education &amp; skills, sustainable living, health &amp; well-being, and underserved markets. To facilitate this, it has pioneered a range of investment vehicles, allowing it to support different business models and attract a broad spectrum of investors.</p>
Name of the measurement tool	IRIS
Year of launch	2009

Impact Investing company	<b>ICCO-Investments</b>
About the company	ICCO Investments is a Fund Management company with several funds under management that finance enterprises, institutions and initiatives in developing countries that combine a financial returns with a positive social and environmental impacts. The total current portfolio size of loans, equity investments and guarantees is about € 25 Million. ICCO Investments has the ambition to increase their investment activities substantially over the coming years. Investment activities are coordinated, managed and consolidated at Global Office level in Utrecht, The Netherlands.
Name of the measurement tool	IRIS
Year of launch	2009

Impact Investing company	<b>Acumen Fund</b>
About the company	Acumen Fund, Inc. operates as a non-profit organization that focuses on poverty eradication. The organization raises charitable funds to invest equity and debt in enterprises serving low-income people. Additionally, it focuses on providing solutions to the problems of access to water, energy, housing, and medical care. The organization has strategic partnerships with Rockefeller Foundation, Bill & Melinda Gates Foundation, Google.org, Skoll Foundation, Nike Foundation, and Cisco. Acumen Fund, Inc. was incorporated in 2001 and is based in New York, New York with additional offices in Mumbai, India; Nairobi, Kenya; Karachi, Pakistan; and Accra, Ghana.
Name of the measurement tool	IRIS
Year of launch	2009



Impact Investing company	<b>CAN Mezzanine</b>
About the company	<p>CAN is a registered charity trading as a social enterprise and is committed to helping other charities and social ventures thrive, grow and maximize their impact. They strive to achieve that by offering business support, capital and flexible, affordable office space and a lot more besides.</p> <p>CAN's vision is of a social economy buoyed by a thriving social enterprise market. Our mission is to help social entrepreneurs achieve it. To build sustainable businesses, social entrepreneurs need business support, experience from their peers, capital funds and even space to grow.</p>
Name of the measurement tool	SROI
Year of launch	1997

Impact Investing company	<b>FRC Group</b>
About the company	<p>FRC Group runs social businesses that create profits and opportunities to change the lives of people living in poverty and unemployment. Social change is created through the training and work experience opportunities we provide for long-term unemployed people and others who are marginalized within the labor market, and through making great quality 'pre-loved' furniture available to low-income households so that they can furnish their homes, avoid expensive credit and improve their quality of life.</p>
Name of the measurement tool	SROI
Year of launch	1997

Impact Investing company	<b>BT</b>
About the company	BT works across the whole range of communications, from traditional telephony and mobile services, to broadband services and television channels. We work in over 170 countries worldwide, and we use the power of communications to make a better world. Amongst other things, this includes helping 10 million socially disadvantaged people get access to better healthcare, learning or employment opportunities by 2020. It also means helping our customers cut their carbon emissions by at least three times our own carbon impact by 2020.
Name of the measurement tool	SROI
Year of launch	1997

Impact Investing company	<b>New Profit Inc.</b>
About the company	New Profit is a non-profit social innovation organization and venture philanthropy fund based in Boston, Massachusetts, with a mission to increase social mobility by strengthening, connecting and amplifying the best ideas across the US. With their signature partners and a network of philanthropists, New Profit invests in a portfolio of social entrepreneurs, grows their impact, and drives systemic change in education, youth development, public health, workforce development, and other levers of opportunity.
Name of the measurement tool	Balanced Scorecard
Year of launch	1999

## Impact measurement tools and Distortion

Distortion is related to incompleteness of measurement, resulting in uncoordinated communication (Friis & Allen Hansen, 2013). Baker (2002) points out, the critical issue in most performance measurements may not be the noisiness of the performance measure, but rather its “distortion”. Baker defines distortion as the extent to which the effect of effort on measured performance is aligned with the effect of effort on the firm’s objective function. According to distortion criteria (Womack and Johnsen, 1996), the issue of distortion is related to the issue of information being incomplete in measuring unnecessarily some non-value creating activities in an organization. Impact investors are interested in both financial and non-financial activities with varying degrees of returns. Those value creating activities are the ones which matter most to the measurement tool.

### Distortion in IRIS

IRIS is an initiative of the Global Impact Investing Network (GIIN), a nonprofit organization dedicated to increasing the scale and effectiveness of impact investing with the intention to generate social and environmental impact alongside a financial return. The initiative is started as a means to measure the values created by impact investment. While it focuses on measuring the non-financial values created by impact investing, it neglects the financial values which is also as important as the non-financial values to some investors.

Some investors are financial first while some are social first. IRIS measurement does not clearly mention which investors are their primary targets. This can make **distortion** even bigger as financial first investors focus more on their financial gains rather than their social gains.

IRIS is not a full performance measurement by itself. It is a set of measurement tools to measure non-financial values. In reality, impact investing companies have their strategy and organizational goals. It seems that the IRIS measurement tool does not start from the strategy as it primarily focuses on the non-financial measurements. This means that there is an issue of the information being not coordinated.

Undistorted measurement focuses on capturing all value creating activities and puts them together to find coordination between the various activities which lead to value creation of the company. On the other hand, IRIS is a measurement focusing on individual tasks and programs. By itself, IRIS is not a complete set of measurement. It complements others. It is obvious to see that IRIS measurements can lead to high distortion as they act separately from the overall goal of the company.

The difficulty in measuring non-financial values in IRIS makes it a distorted measure because the measurement should not be subjective when it comes to value measurement (Bol, 2008; Lazear & Gibbs, 2009). The social and environmental objective performance of IRIS measurement leads to higher degree of distortion. As a measurement tool, it does not have a capacity to capture social and environmental values. That means it depends on subjective judgement. If a measurement tool is exposed to subjective measurement, its distortion level is quite high.

#### Distortion in SROI

SROI is an outcomes-based measurement tool that helps organizations understand and quantify the social, environmental and economic value they are creating. While SROI focuses on quantifying a social value, it focuses less on the financial value creation. Some investors are more interested in financial values than non-financial values. This creates **distortion** in the measurement because of its less focus on the financial market. The financial first investors may not be attracted by the results of SROI.

SROI focuses on monetizing non-monetary values. Social and environmental values are almost impossible to measure objectively. Even the monetary value assigned can be argued by all the stakeholders. This means it does not produce complete information which makes it a distorted measure.

The other important aspect of SROI is that it separately measures the cost and benefit of a project. It is based on cost-benefit accounting measurement system. It assigns a dollar value for social benefits and its related costs. In reality, it may be so

difficult to make such a ratio to use for decision making purpose. This ratio system can lead the information being incomplete and results in **distortion**. There is a danger of focusing narrowly on the ratio. The ratio is only meaningful within the wider narrative about the organizations.

#### Distortion in Balanced Scorecard

Balance scorecard incorporates so many small activities in order to achieve the organizational goals. These activities include all financial and non-financial activities (Kaplan and Norton, 1996). It is possible an agent could be assigned to run a number of small activities which increase the firm's value. The performance measurement should be able to capture all those activities and communicate to the principal. It can be assumed because of the nature of Balance Scorecard (high number of activities), and therefore the possibility of distortion is high as the measurement could fail to measure all value creating activities.

While the balanced scorecard gives us an overall view of the four areas for concern in business growth and development, these four areas do not paint the whole picture. The social and environmental values are not well represented in the Balanced Scorecard. This makes Balanced Scorecard unable to produce complete information regarding the social and environmental values which means it is subject to **distortion**.

#### Impact measurement tools and Risk

Risk is about how well the agent's effort is reflected in the performance measurement. Agents who take risk to carry out the principal's main objective want to be compensated for taking the risk.

#### Risk in IRIS

IRIS has more than 40 metrics catalogs and this may lead to disintegration in capturing the effort of the agent. On the other hand, the agent is interested in the

measurement consistently capturing the values created by his/her effort. The wider the tasks and performances, the higher the risk associated to the measurement (Allen Hansen, 2013).

The risk level in IRIS metrics could also be higher because of the social and environmental values it is trying to measure. The agent may be aware that his contribution to the social and environmental contribution is not reflected by the measurement, he/she might not be motivated to engage in creating social and environmental values. This makes the agency problem difficult to be dealt with IRIS measures. The higher the risk associated with the performance measure, the less the agent is willing to accept this measure as the basis of his or her compensation for the work on the project, unless the agent is compensated by a risk premium that reflects this risk (Milgrom & Roberts 1992).

#### Risk in SROI

Valuation methods are seen as the hardest part of any SROI calculation because they involve complex techniques for monetizing diverse aspects of social benefit, such as present and future value and value for specific populations compared to value for society. As a performance measurement, SROI focuses more on measuring the non-financial values which are difficult to measure in monetary value. This leaves SROI highly susceptible for measuring all the efforts made by the agent. The agent is unlikely to exert his efforts where his efforts are not measurable in objective way. This increases the likelihood of agency problem between the agent and the principal.

The other issue is that the financial value created by the agent may be given less focus as the SROI measurement focuses on the non-financial aspects of a project. The agent wants to be compensated for taking some risk when creating financial value for the project. This may lead to the issue of motivation for the agent. This creates an agency problem as motivation is one of the major reasons for the existence of agency problem (Milgrom & Roberts, 1992).

## Risk in Balanced Scorecard

It is well known that agents want to be compensated for taking risk. Risk premium is believed to motivate the employees to take more risks. One of the crucial aspects of Agency problem is the motivation problem which plays out that the employee is always willing to take risk in order to achieve what the principal wants. In impact investing, the social value is so important that the social values created by the agent should be able to reflect his/her effort. As performance measurement, Balance Scorecard tries to measure both financial and social values to communicate the agent's effort. But most of the time, the non-financial aspect of impact investing is not measured so accurately that the employee effort could be left out. This means the measurement has high risk. This high risk of measurement leads the employee to engage in game playing. The employee may not be willing to do the activities which are not reflected in the measurement even though those activities are so vital for achieving the organizations goal. The agency problem is higher for performance measures with high risk level.

The Balanced scorecard has also a subjective measurement issue which increases risk (Baker et al, 1996). The non-financial values of Balanced Scorecard opens up some room for leaving out measuring the whole effort of the agent. The agent's effort is important in motivating the agent. The Balanced Scorecard runs a risk in not being able to measure that effort. That leads to creation of agency situation.

## Impact measurement tools and Manipulation

### Manipulation in IRIS

The higher the number of tasks to be measured, the more specialized knowledge that the measurement requires. IRIS requires agents to be professional in their area of work. This gives the agent an opportunity to play on his side. This information asymmetry is difficult to detect as there are so many tasks to be measured. It will be difficult to find out where a bad result comes from since the agents are experts in their area. Impact investors have to rely on the results from this measurements.

## Manipulation in SROI

The economic, social and environmental dimension of SROI measurement makes it quite open for manipulation. Even though, it assigns a monetary value for non-financial aspects, its value is subjective. It can be interpreted differently by different stake holders. The way impact investor looks at the social value might be different from the way the beneficiaries look at the value. This subjective judgement of the value leaves a big room for **manipulation** of the numbers.

The other important aspect to consider here is the SROI measurement needs an expertise knowledge to use it. For example, the agent might use the lack of knowledge of the tool by the impact investor as a way to play for his/her gain. This asymmetry of information leads to hiding information which is called manipulation where the one with the information wants to create personal gain. One of the reasons for the existence of Agency problem is the existence of manipulation in the performance measurement (Jensen 2003)

## Manipulation in BSC

One of the main reasons of Agency problem is the asymmetry of information. The principal hires the agent to carry out his/her job but the agent might have other personal interests. In Balance Scorecard, the activities are categorized in to various small tasks. This specific division makes it so difficult for the principal to identify what is what as they need specialized knowledge. This will create the agent to use this opportunity to manipulate information in his/her own interests.

The other issue that complicates manipulation is the existence of social dimension in impact investing. The environmental and social benefits should be measured so as to deal with manipulation issue. But it is not possible to measure those values in quantitative measures.

The other important aspect of distortion is that the measurement is based on subjective judgement (Baker et al. 1994). The non-financial aspects of the Balanced



Scorecard such as the customer aspects which are difficult to objectively measure can lead to the performance measurement being biased. This creates a situation of **manipulation**.

## Impact measurement tools and Cost

### Measurement Cost in IRIS

In big organizations where there are so many tasks to be performed, IRIS measurement is for sure expensive as each task needs to be measured. Some companies engage in financial, social and environmental activities to create impacts. This motive even makes it more complicated than profit making companies. The financial aspect needs measurement for its many tasks, the social aspects need as well as the environmental. The higher the measurement cost is associated to the measurement tool, the higher the agency cost. The investor has other issues more than spending money just measuring its performance.

### Measurement Cost in SROI

It requires considerable capacity of human and capital resources. It is used by experts who can produce the needed information. That means there should be a proper training and experience sharing as how to use it. SROI requires a diverse skill set – from stakeholder engagement to working with Excel spreadsheets. This can be hard to find in one person. This makes SROI costly measurement which may demotivate investors in investing the measurement tool.

Time consumption is the other issue with SROI measurement tool. There are clear costs to implementing an SROI measurement process for organizations, especially the time commitment required by multiple stakeholders within and outside the organization staff, the need for expertise that often requires outside consultants, and the commitment of resources to build staff capacity

## Measurement Cost in BSC

Organizations, be it profit making or social enterprises, try to reduce the distortion and risk associated with the performance measurement (Allen Hansen, 2003). But the question is “is it possible to do so with little cost?”. This transactional cost comes in to play when designing the performance measurement. As mentioned earlier, Balanced Scorecard measures various tasks by categorizing them in to four areas of focus. These have both financial and non-financial dimensions. When we look at the vast area of activities to be measured in Balanced Scorecard, there is high cost associated to it. It is mentioned in recent literatures that many companies could not implement Balanced Scorecard because of its cost. It needs huge resources whether financial or human to keep up with providing the needed information.

### Summary of measurement tools and their imperfections

	<b>SROI</b>	<b>IRIS</b>	<b>Balanced Scorecard</b>
<b>Distortion</b>	Less focus on financial values, monetization of non-financial values	It is not a full measurement tool by itself and hence risks missing out some activities which create value	Too many variables to measure, ignores the social and environmental values, used mostly by “financial first” investors
<b>Risk</b>	Does not objectively measure social values	The social and environmental values are subjective	Possibility of missing some of the value creating activities
<b>Manipulation</b>	The ratios can be manipulative as non-financial values are difficult to measure	The non-financial results are subject to manipulation	Requires high amount of specialized knowledge
<b>Measurement cost</b>	Time consuming, resources and needs a specialized skill	Too long processes and hence time and resource consuming.	Time consuming and huge resources to implement

# CONCLUSION

---

The following section summarizes the study's findings and conclusion of the research is presented as well as recommendations for further research.

---

## Summary

This study focused on analysing the various impact measurement tools/methods used by impact investing companies. As measuring impact investing is a new phenomenon, there is no agreed impact measurement tool used as a standard one. However, many impact investing companies use measurement tools such as SROI, IRIS, Balanced Scorecard, etc. These measurement tools are used to solve any possible dispute between the principal and the agent. The paper also discussed the general attributes of performance measurement from various literatures and what qualities should be met to make a performance measurement tool an effective one.

Through the survey done in this thesis, it is discovered that the impact measurement tools lack the important qualities of measurement such as clarity, understandability, accuracy, neutrality, reliability, focus on strategy, etc. The tendency of subjectivity in the impact measurement tools due to the social and environmental values made those qualities less objective. Some measurements such as SROI monetize those values using financial proxies but they fail to capture the real values.

In this study, those qualities of performance measurement tools are linked to measurement imperfections. Subsequently, the impact measurement tools found to be flawed because of **Distortion, Risk, Manipulation** and **Measurement Cost** found in them. The more the measurement in impact investing is subject to those measurement imperfections the less likely it solves **the Agency Problem**. The result of the study shows that the existing impact investment measurement tools need more development and involvement of stakeholders to minimize the measurement imperfections.

## Further research

Currently, there are impact investing networks focusing on developing a standardized tool. Network groups such as Social Return on Investment Network, Global Impact Investing Network, etc. need an extensive collaboration with all the stake holders to develop a measurement tool that can be used for satisfying the demands of all users. This is a huge task and it needs a contribution of impact investors, investees, beneficiaries, government bodies, academicians and practitioners to solve this issue of impact investing measurement tool. When we have a standardized tool which is easy to understand, transparent, accurate, unbiased, reliable, then we will deal with the Agency Problem.

# References

- Jensen MC and Meckling WH (1976) Theory of the firm: Managerial behavior, agency costs, and ownership structure. *Journal of Financial Economics*, 3: 305–360.
- Eisenhardt K (1989) Agency theory: An assessment and review. *Academy of Management Review*, 14: 57–74.
- Jensen, M.C. 2003. Paying people to lie: The truth about the budgeting process. *European Financial Management*, 9, (3) 379-406
- Milgrom, P. & Roberts, J. 1992. Economics, Organization and Management Upper Saddle River, New Jersey, *Prentice-Hall*.
- Allen Hensen, 2013. Performance measurement systems, design choices and design criteria - On mechanisms affecting firm value, *Copenhagen Business School*.
- Saltuk, Y., Bouri, A., Mudaliar, A., & Pease, M. (2013). Perspectives on progress: The impact investor survey. New York, NY: J.P. Morgan.
- Harji, K., & Jackson, E. T. (2012). Accelerating impact: Achievements, challenges and what's next in building the impact investing industry. New York, NY: The Rockefeller Foundation.
- Louche, C., Arenas, D., & van Cranenburgh, K. (2012). From preaching to investing: Attitudes of religious organisations towards responsible investment. *Journal of Business Ethics*, 110(3), 301–320.
- Ashta, A. (2012). Co-creation for impact investment in microfinance. *Strategic Change*, 21(1/2), 71–81.
- Chua, C., Gupta, A., Hsu, V., Jimenez, J., & Li, Y. (2011). Beyond the margin: Redirecting Asia's capitalism. Hong Kong: Avantage Ventures.
- Best, H., & Harji, K. (2013). Guidebook for impact investors: Impact measurement. Toronto, ON: Purpose Capital.
- Chan, A., Mook, L. and Kislenko, S. (2015), "Stakeholders' stories of impact: the case of furniture bank", in Quarter, J., Ryan, S. and Chan, A. (Eds), *Social Purpose Enterprises: Case Studies for Social Change*, University of Toronto Press, Toronto.
- Christensen, R.A. and Ebrahim, A. (2006), "How does accountability affect mission?", *Nonprofit Management and Leadership*, Vol. 17 No. 2, pp. 195-209.
- Williams, A.P. and Taylor, J.A. (2013), "Resolving accountability ambiguity in nonprofit organizations", *Voluntas*, Vol. 24 No. 2, pp. 559-580.
- Evenett, R. and K. Richter (2011), "Making Good in Social Impact Investment: Opportunities in an emerging asset class", *The Social Investment Business*, TheCityUK, October.
- Freireich, J. and K. Fulton (2009), "Investing for Social and Environmental Impact: A Design for Catalyzing an Emerging Industry", *Monitor Institute*, January.
- Saltuk Y. (2012), "A Portfolio Approach to Impact Investment: A Practical Guide to Building, Analyzing and Managing a Portfolio of Impact Investments", *Global Social Finance Research*, J.P. Morgan, London, October.
- Saltuk, Y., A. Idrissi, A. Bouri, A. Mudaliar, and H. Schiff (2014), "Spotlight on the Market: The Impact Investor Survey", *Global Social Finance*, J.P. Morgan and the Global Impact Investing Network, London, 2 May.

Saltuk, Y., A. Bouri, A. Mudaliar and M. Pease (2013), "Perspectives on Progress: The Impact Investor Survey", Global Social Finance, J.P. Morgan and the Global Impact Investing Network, London, January 7.

Saltuk, Y., A. Bouri, and G. Leung (2011), "Insight into the Impact Investment Market: An in-depth analysis of investor perspectives and over 2,200 transactions", JP Morgan and the Global Impact Investing Network, New York, December.

Bridges Ventures (2010) Investing for impact: case studies across asset classes, Bridges Ventures

Ebrahim, A. (2013) Let's be realistic about measuring impact, Harvard Business Review blog March 13 2013

Grabenwarter, U. and Liechstenstein, H. (2011) In search of gamma: an unconventional perspective on impact investing, IESE working paper

International Association for Impact Assessment (IAIA), (2009), What Is Impact Assessment?, Fargo, USA

Louche, C., Arenas, D., van Cranenburgh, K. (2011), From Preaching to Investing: Attitudes of Religious Organisations Towards Responsible Investment, Springer Science and Business Media

Nicholls, J. (2013) SROI and Logic Models, blog 18th June 2013, SROI Network

O'Donohoe, N., Leijonhufvud, C., Saltuk, Y., Bugg-Levine, A. and Brandenburg, M. (2010) Impact investments: an emerging asset class, JP Morgan

Fenton, A. (2012) Misleading metrics of microfinance, opinion piece International Institute for Environment and Development

Addis, R., J. McLeod, and A. Raine (2013), "IMPACT Australia: Investment for Social and Economic Benefit", Australian Government, Department of Education, Employment and Workplace Relations, November.

Clark, C., J. Emerson, and B. Thornley (2012), "A Market Emerges: The Six Dynamics of Impact Investing", Pacific Community Ventures, ImpactAssets and CASE at Duke University's Fuqua School of Business, October.

McLaughlin, J.A. and G.B. Jordan. 1999. Logic models: a tool for telling your program's performance story. Evaluation and Planning

Amaratunga, D, Baldry, D and sarshar, M (2000), Assessment of facilities management performance- what next? Facilities, Vol. 18, No. 1/2, pp. 66-75.

Amaratunga, D and Baldry, D (2003), A conceptual framework to measure facilities management performance, Property Management, Vol. 21, No. 2, pp. 171-189.

Nani, A.J, Dixon, J.R and Vollmann, T.E (1990), Strategic control and performance measurement, Journal of Cost Management, 1990.

Neely, A, Gregory, M and Platts, K (1995), Performance measurement system design, a literature review and research agenda, International Journal of Operations & Productions Management, Vol. 15, No. 4, pp. 80-116

A Guide to Social Return on Investment, the SROI Network, January 2012)

# APPENDIX

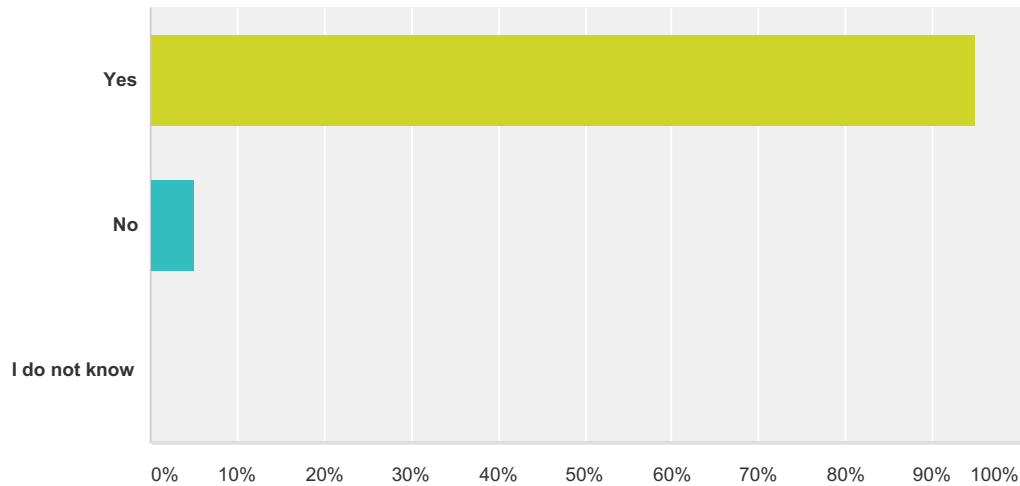
---

Summary of the survey data

---

Q1 Does your company  
(organization) engage in social impact  
investments?

Answered: 20 Skipped: 0



Answer Choices	Responses	
Yes	95.00%	19
No	5.00%	1
I do not know	0.00%	0
Total		20

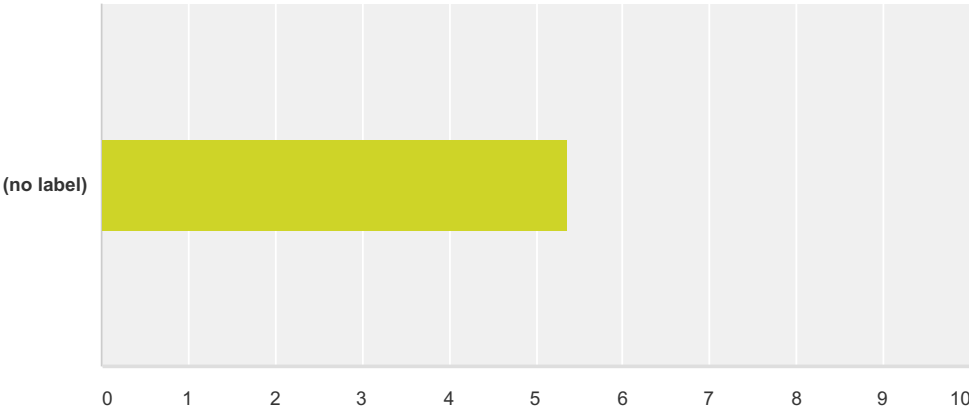


**Q2 Name the measurement tool/method you use.**

Answered: 15 Skipped: 5

Q3 How important are the following values for your impact investments?

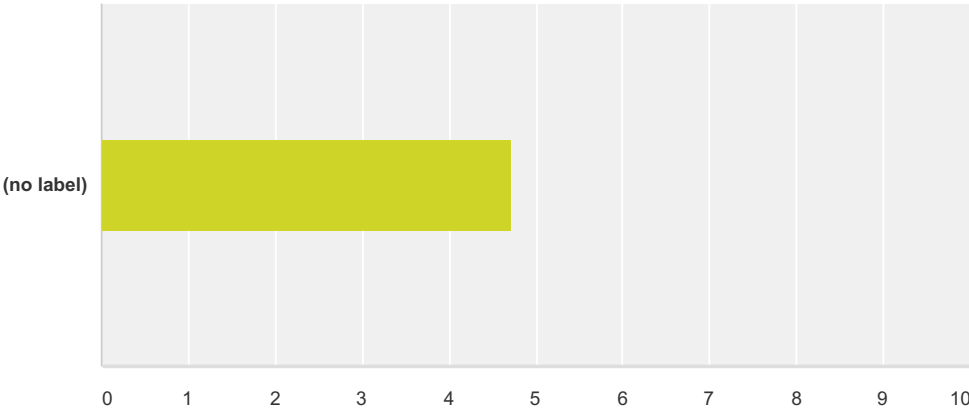
Answered: 14 Skipped: 6



	Financial Return (Very Important)	(no label)	(no label)	Financial and Social values equally important	(no label)	(no label)	Social Impact (Very Important)	Total	Weighted Average
(no label)	0.00% 0	0.00% 0	7.14% 1	35.71% 5	0.00% 0	28.57% 4	28.57% 4	14	5.36

Q4 Measuring your impact investments is very important?

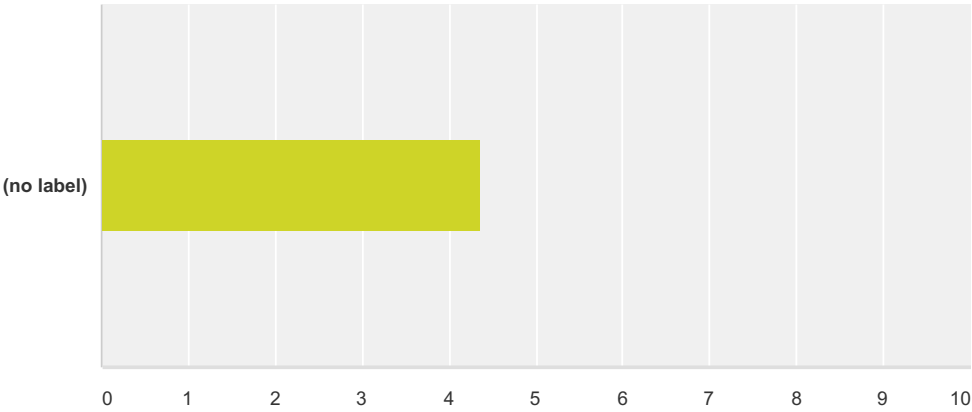
Answered: 14 Skipped: 6



	Disagree	(no label)	(no label)	(no label)	Strongly agree	Total	Weighted Average
(no label)	0.00% 0	0.00% 0	7.14% 1	14.29% 2	78.57% 11	14	4.71

Q5 How much does the measurement reflect on the overall organizational goals and strategies?

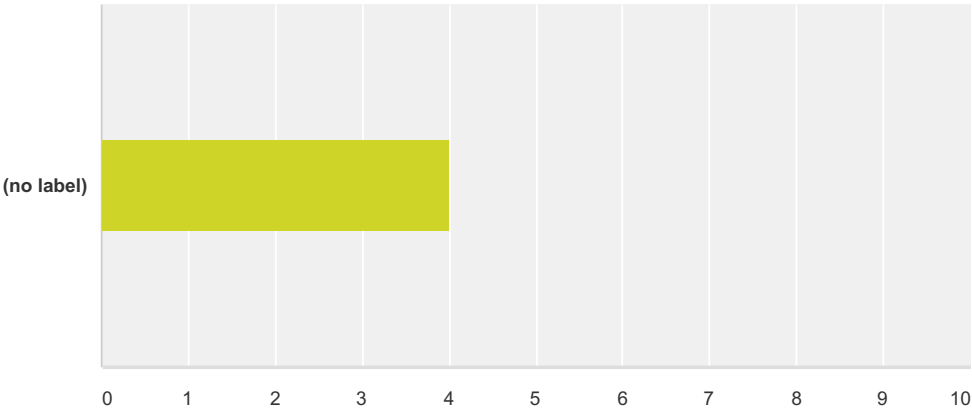
Answered: 14 Skipped: 6



	It does not reflect	(no label)	(no label)	(no label)	It does reflect	Total	Weighted Average
(no label)	0.00% 0	0.00% 0	28.57% 4	7.14% 1	64.29% 9	14	4.36

Q6 Does it capture all the value driving activities (all financial and non-financial), which contribute to impact value creation?

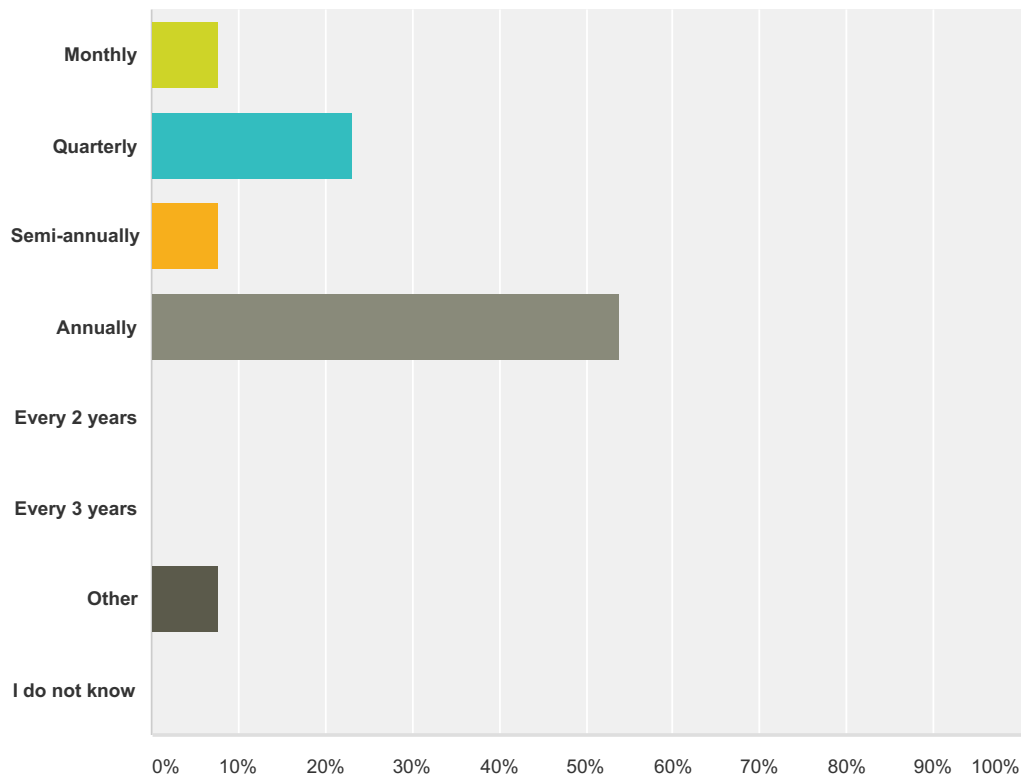
Answered: 13 Skipped: 7



	It does not capture	(no label)	(no label)	(no label)	It captures	Total	Weighted Average
(no label)	0.00% 0	0.00% 0	23.08% 3	53.85% 7	23.08% 3	13	4.00

**Q7 How often do you apply the measurement of the impact activities? (How frequently are the impact activities are tracked and monitored?)**

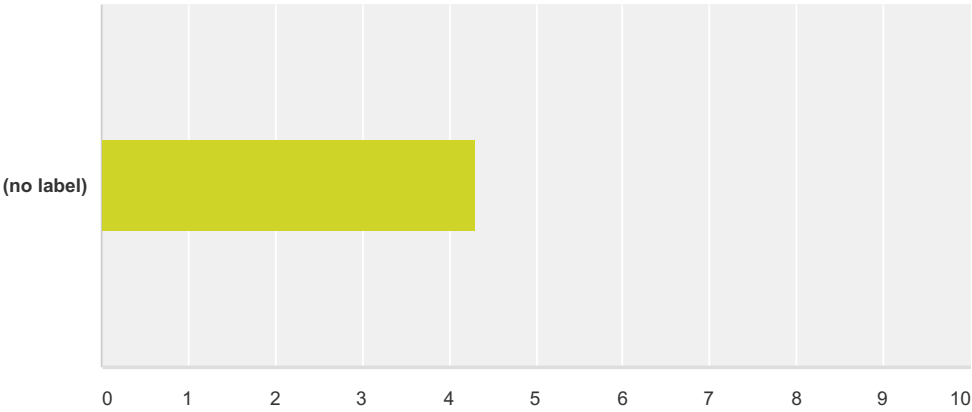
Answered: 13 Skipped: 7



Answer Choices	Responses	
Monthly	7.69%	1
Quarterly	23.08%	3
Semi-annually	7.69%	1
Annually	53.85%	7
Every 2 years	0.00%	0
Every 3 years	0.00%	0
Other	7.69%	1
I do not know	0.00%	0
<b>Total</b>		<b>13</b>

Q8 How important is the measurement in decision making process of the impact activities?

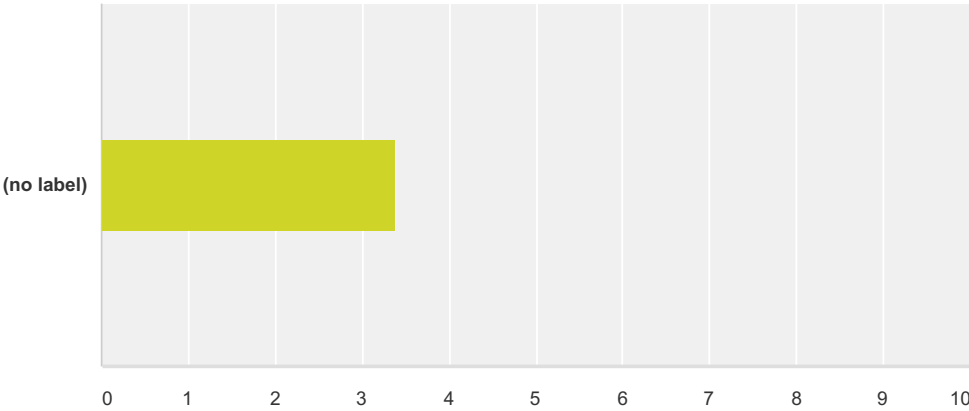
Answered: 13 Skipped: 7



	Not important	(no label)	(no label)	(no label)	Very important	Total	Weighted Average
(no label)	0.00% 0	0.00% 0	15.38% 2	38.46% 5	46.15% 6	13	4.31

Q9 How understandable (by layman) is your measurement?

Answered: 13 Skipped: 7

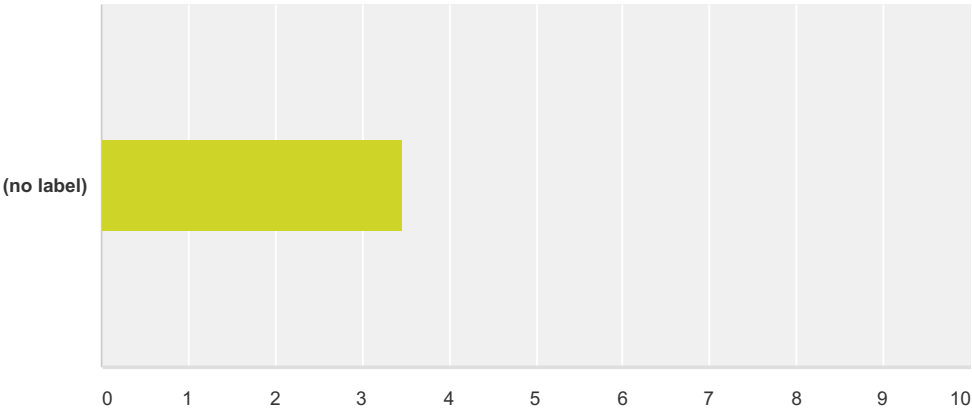


	Not understandable	(no label)	(no label)	(no label)	Very understandable	Total	Weighted Average
(no label)	0.00% 0	15.38% 2	46.15% 6	23.08% 3	15.38% 2	13	3.38



Q10 How timely (available in the right time for decision making) is the measurement tool?

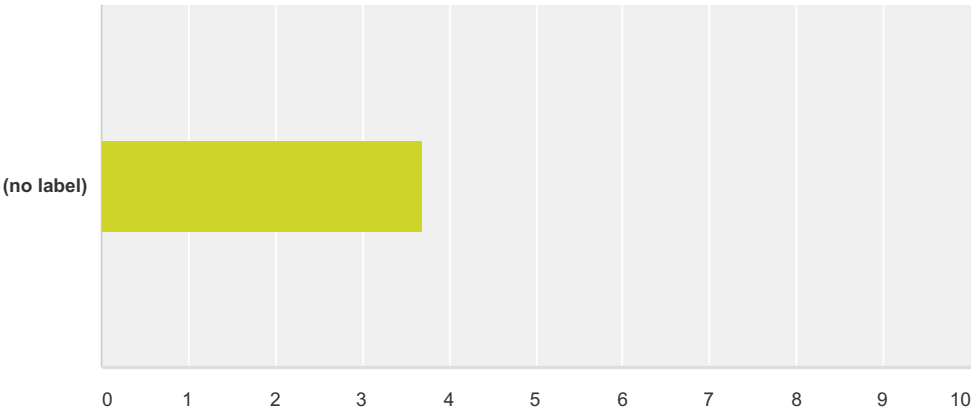
Answered: 13 Skipped: 7



	Not timely	(no label)	(no label)	(no label)	Very timely	Total	Weighted Average
(no label)	0.00% 0	7.69% 1	46.15% 6	38.46% 5	7.69% 1	13	3.46

Q11 How costly is the measurement?

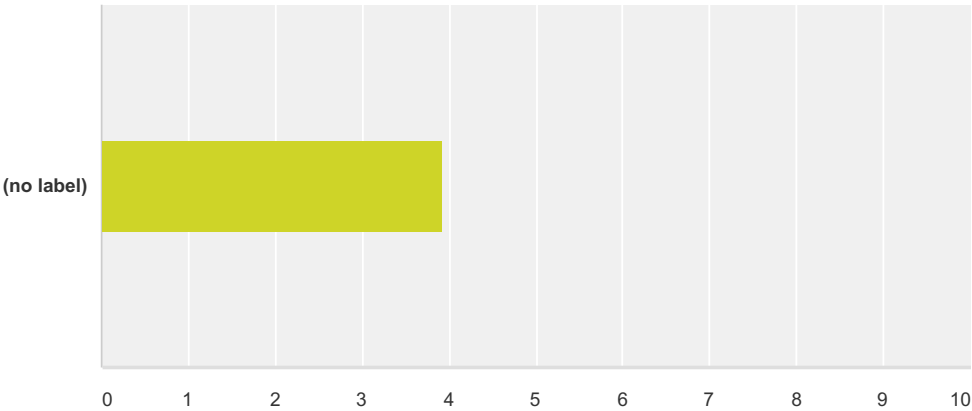
Answered: 13 Skipped: 7



	No costly	(no label)	(no label)	(no label)	Very costly	Total	Weighted Average
(no label)	0.00% 0	15.38% 2	38.46% 5	7.69% 1	38.46% 5	13	3.69

Q12 How reliable is the measurement?

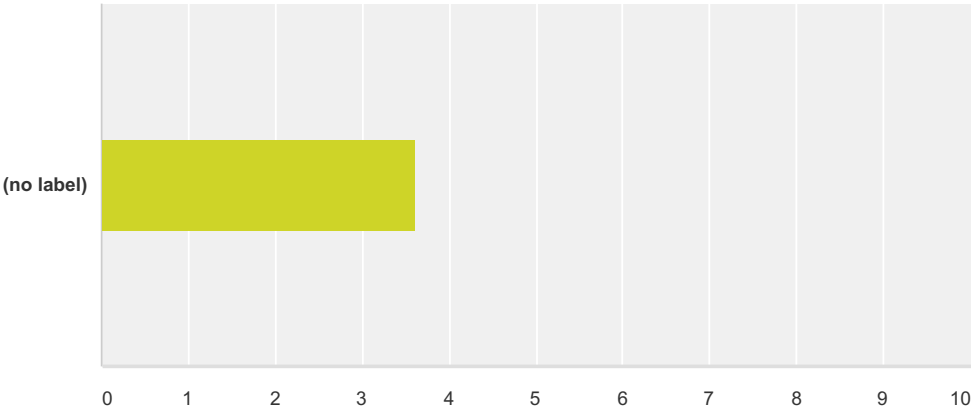
Answered: 13 Skipped: 7



	Not reliable	(no label)	(no label)	(no label)	Very reliable	Total	Weighted Average
(no label)	0.00% 0	0.00% 0	30.77% 4	46.15% 6	23.08% 3	13	3.92

Q13 How neutral is the measurement? (free from bias?)

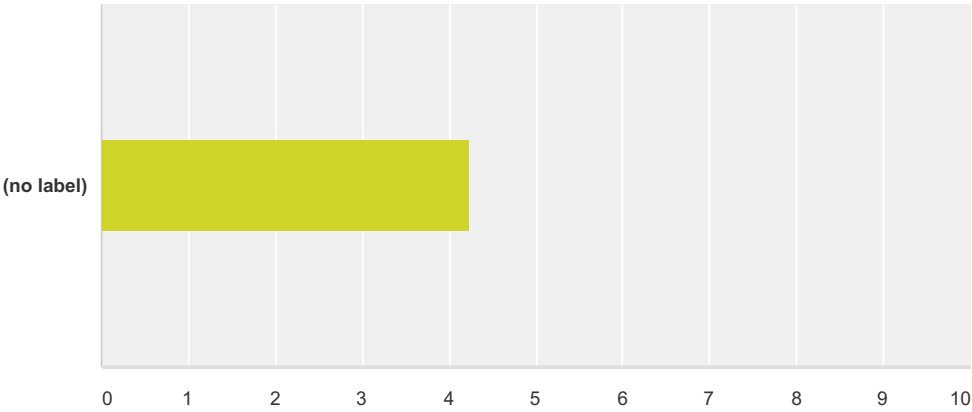
Answered: 13 Skipped: 7



	Not neutral	(no label)	(no label)	(no label)	Very neutral	Total	Weighted Average
(no label)	0.00% 0	7.69% 1	30.77% 4	53.85% 7	7.69% 1	13	3.62

Q14 How repeatable is the measurement?  
(Is the measurement applicable to similar projects?)

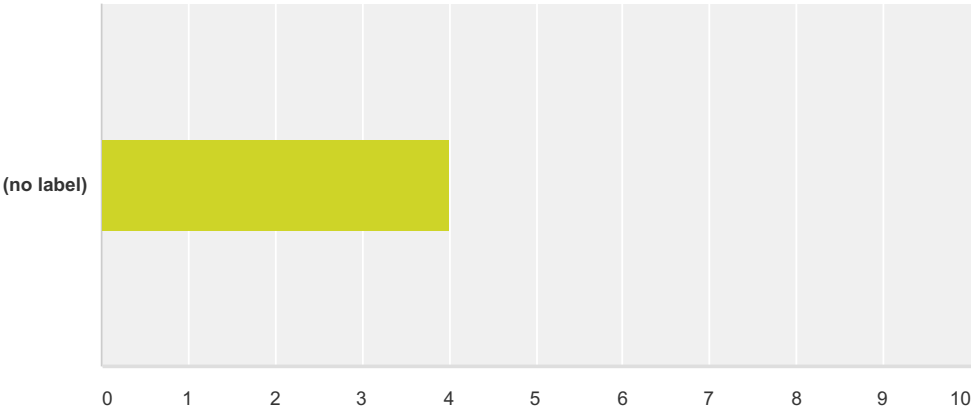
Answered: 13   Skipped: 7



	Not repeatable	(no label)	(no label)	(no label)	Very much repeatable	Total	Weighted Average
(no label)	0.00% 0	0.00% 0	15.38% 2	46.15% 6	38.46% 5	13	4.23

Q15 Are you all in all satisfied with the measurement tool?

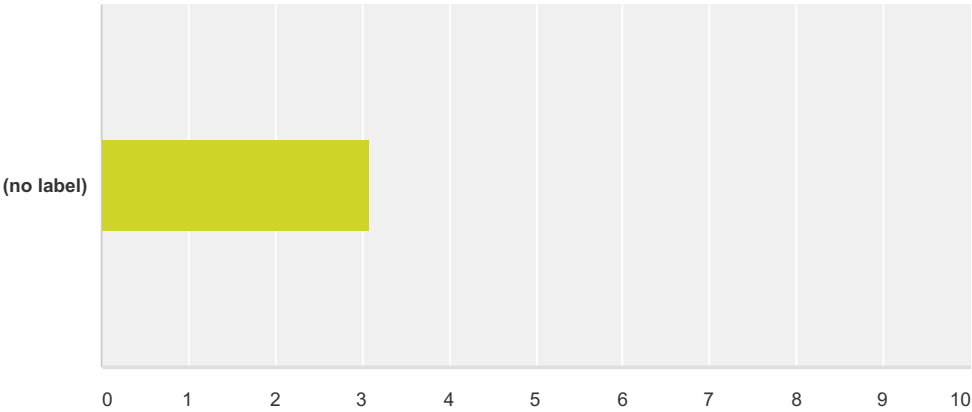
Answered: 13 Skipped: 7



	Not satisfied	(no label)	(no label)	(no label)	Satisfied	Total	Weighted Average
(no label)	0.00% 0	0.00% 0	15.38% 2	69.23% 9	15.38% 2	13	4.00

Q16 Do you apply the measurement tool to address the agency problem (the conflict between the investor and the investee)?

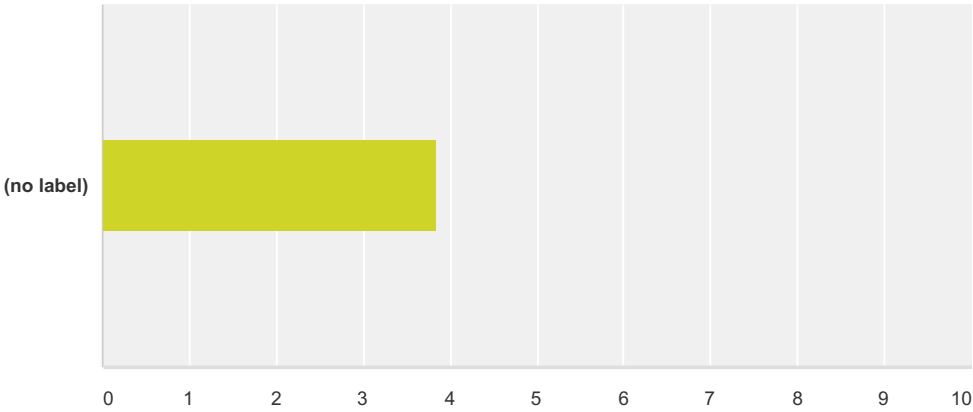
Answered: 13 Skipped: 7



	Not applicable	(no label)	(no label)	(no label)	Very much applicable	Total	Weighted Average
(no label)	23.08% 3	7.69% 1	23.08% 3	30.77% 4	15.38% 2	13	3.08

Q17 Does the measurement encourage appropriate behaviour (prevent 'game playing')?

Answered: 13 Skipped: 7



	Does not encourage	(no label)	(no label)	(no label)	Encourages very much	Total	Weighted Average
(no label)	0.00% 0	7.69% 1	30.77% 4	30.77% 4	30.77% 4	13	3.85



**Q18 What have you learnt from the measurement tool/method? (optional)**

Answered: 4   Skipped: 16