INNOVATION IN SOCIAL ENTERPRISES:
THE ROLE OF VENTURE INVESTORS

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“Business has only two functions - Marketing and Innovation”

- Milan Kundera

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1. BACKGROUND & CONTEXT

1.1 Social innovation

Innovation is among the most important functions of any business enterprise, mainstream or social. Constant innovation and generation of ideas is critical for all aspects of business - be it to respond to competition and changing trends or to improve efficiencies or to attract new customers. The important role of innovation in business success can be seen in technology companies like Apple, Microsoft and Google. The success and recognition of companies that are considered as “innovation leaders” as compared to “innovation laggards” have encouraged all types of enterprises to focus and invest in innovation. Social enterprises are no exception to this trend.

While the concept of innovation is traditionally associated with business and science, addressing problems in the social sector through innovation is a more recent trend. World over, irrespective of the field, the problems faced by the social sector are far greater than the solutions available - be it in providing better food, housing and healthcare, improving lifestyles, reducing poverty levels, providing education, catering to financial needs or protecting the environment. Therefore, innovations targeted at the social sector can have a more lasting and deeper impact by directly improving the lives of the disadvantaged.

Financing innovation carries substantial amounts of risk capital and the challenge is to find this form of capital. Financing innovation in the social sector is even more complex, because the tolerance for failure, which is a part of innovation, is often low among traditional supporters of social sector ventures. The conventional sources of finance in the social sector such as grants and other forms of social support do not fund risky innovations and often deter the innovation process. Traditional Venture Capital (VC), on the other hand, has focused more on financing innovation through investments in entrepreneurial businesses or in the SME sector rather than social ventures. New mechanisms such as social venture capital that provides funding for innovations in the social sector have recently emerged.

The role of VC funding in the social sector is to provide capital in the early stages of innovation, mostly when there are no cash flows and when the commercial success of the idea is not proven. Venture investors invest with a long timeframe of about 6 to 8 years, and therefore give sufficient time for the entrepreneurs to progress along the innovation lifecycle. As a source of risk capital, VC’s not only provide the required finance, but also add value in the form of management inputs for the entrepreneur. To the extent it helps to improve enterprise competitiveness and achieve scalability, VC’s would also support innovation, so as to realize better returns on their investments.

1.2 The Social Enterprise

Broadly, enterprises that are engaged in making of products or services that benefit the society and seek to address social challenges can be called as social enterprises. Dees (1994) provides important features that differentiate a social enterprise from a conventional business enterprise. Enterprises that can be classified under the umbrella of social enterprises cover a variety of areas, ranging from reducing poverty levels to improving living standards, from providing affordable housing to financial solutions and from improving education levels to providing healthcare to

people in the Bottom of the Pyramid (BoP). These enterprises can either be a non-profit enterprise or a ‘for-profit’ enterprise. ‘For-profit’ social enterprises aim to build a profitable business in addition to creating a social impact.

Traditionally, social enterprises were formed as non-profits or Non-Government Organizations (NGOs), which were structured in the form of Trusts or Societies. However, over the past decade, it is seen that social enterprises are increasingly using the corporate form and are getting incorporated under the Companies Act. This has enabled these entities to receive funding from new sources like the VC investors. Table 1 compares VC with the other traditional sources of capital for social enterprises.

Table 1
Comparison of Talent Development Programs

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Banks</th>
<th>Grants &amp; Donations</th>
<th>Promoter Equity</th>
<th>Venture Capital</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quantum of finance</td>
<td>Limited - depends on credit rating and amount of equity in capital structure</td>
<td>Limited</td>
<td>Depends on the financial capacity of the promoter</td>
<td>Large - depends on company performance, social impact achieved and valuation</td>
</tr>
<tr>
<td>Financing need</td>
<td>Depends on type of finance - term loan or working capital</td>
<td>Project specific</td>
<td>Any business need</td>
<td>Any business need</td>
</tr>
<tr>
<td>Timeline of funding / Projects funded</td>
<td>Long term and short term</td>
<td>Long term and short term</td>
<td>Long term</td>
<td>Long term</td>
</tr>
<tr>
<td>Repayment</td>
<td>Interest and principal to be serviced promptly</td>
<td>Not applicable</td>
<td>Own source - hence repayment has no timeline</td>
<td>Long term - generally 6 to 8 years timeframe</td>
</tr>
<tr>
<td>Effect on cash flows</td>
<td>Cash outflow on a monthly/quarterly basis due to interest payment</td>
<td>Not applicable</td>
<td>No effect</td>
<td>No effect</td>
</tr>
<tr>
<td>Sacrifice of entrepreneur’s stake in business</td>
<td>No stake sacrifice</td>
<td>No stake sacrifice</td>
<td>Not applicable</td>
<td>Equity stake to be given up by the entrepreneur</td>
</tr>
<tr>
<td>Loss of control in decision making</td>
<td>To a limited extent</td>
<td>No loss of control</td>
<td>No loss of control</td>
<td>Major decisions have to be approved by the investor</td>
</tr>
<tr>
<td>Mentoring and business advice</td>
<td>Banks normally do not have the capacity to provide mentoring or advice</td>
<td>Limited</td>
<td>Not applicable</td>
<td>Investors play an active role in mentoring and advising post investment</td>
</tr>
<tr>
<td>Enhanced company visibility</td>
<td>Not possible</td>
<td>Not possible</td>
<td>Not possible</td>
<td>Possible</td>
</tr>
</tbody>
</table>
While all businesses have challenges and obstacles, the types and intensity of business challenges faced by social enterprises are higher by many orders of magnitude as compared to that of conventional businesses. For instance, access to capital, achieving scale, market conditions, talent acquisition and achieving low cost operations have been tough challenges to manage for entrepreneurs in the social sector. In addition, entrepreneurs have to manage the fundamental challenge of balancing the social motive with commercial gains. While different companies opt for different funding sources, depending on the sector, nature of business and the need serviced, VC funding is emerging as a preferred source of capital when there is an option to obtain such funding. The reason being, in addition to the capital, VC investors provide a lot more managerial inputs in many aspects of business, which can be very valuable to the entrepreneurs in tackling the challenges of the social sector. While providing managerial inputs to the portfolio companies are not unique to VC's and are also provided by other support service providers such as incubation agencies, there are key differences. The support provided by incubators are largely oriented to seed and early stage enterprises, whereas VC’s can provide inputs that are relevant at different stages of the enterprise lifecycle. The support provided by incubation providers is largely relevant for young entrepreneurs who have limited knowledge about running an enterprise. VC’s on the other hand provide the necessary inputs that are valued even by the experienced entrepreneur.

1.3 Venture Capital Funding in the social sector

The objective of the VC investors in the social sector is to create a social impact through the investment and while expecting to earn financial returns from the investment made. A variety of investment forms can be grouped under the broad umbrella of social venture investments. Examples include Socially Responsible Investing, Blended Value, Impact Investing, Patient Capital, Mission-Driven Investing, Mission-Related Investing, Triple-Bottom Line, Social Investing, Values-Based Investing, Program Related Investing, Sustainable and Responsible Investing, Responsible Investing, Ethical Investing and Environmental, Social, and Governance Screening. While VC investments are primarily made as equity investments, some of the above forms such as Impact Investing cover a wider universe of asset classes such as equity, debt, working capital lines and loan guarantees. However, since these are structured similar to VC investments, they are often used synonymously.

Despite differences between these forms, there is a common theme that cuts across all of these forms of investment, thereby enabling them to be grouped under the broader umbrella of social venture investing. Appendix 1 provides a glossary of the different forms of social venture investments.

Social venture funding can happen from any of the following sources: venture funds that are dedicated for investments only in the social sector (for example Aavishkaar), venture funds that also incidentally invest in social businesses (for example Ventureast), and other sources that are not structured as a traditional VC fund partnership, but follow a style of investing practiced by VC investors (for example, Dell Foundation). The basic theme of investing by social VC’s and mainstream VC’s is the same - that is, investing in companies which will help them earn attractive financial returns. The biggest difference between these two forms of investing is that while conventional investors do not look at the social angle while investing, social investors evaluate this aspect as well. Table 2 captures the key differences between mainstream and social VC funding.

### Table 2

**Key differences between mainstream and social VC funding**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mainstream VC Funding</th>
<th>Social Sector VC Funding</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Investment selection</strong></td>
<td>Based on company financials, company growth prospects, sector growth prospects, management quality and the risk involved in the investment.</td>
<td>Based on the social impact created, financial returns expected, company growth prospects, sector growth prospects, management quality and the risk involved in the investment.</td>
</tr>
<tr>
<td><strong>Investment monitoring</strong></td>
<td>Financial performance and business related non-financial factors like client additions, expansion benchmarks etc.</td>
<td>Monitoring the social impact in addition to all the other parameters of a mainstream VC *</td>
</tr>
<tr>
<td><strong>Exit routes</strong></td>
<td>Exit route of VC investor can be by means of a stake sale to other investors, a trade sale or a strategic sale, sale of investor’s shares back to the company or an Initial Public Offer (IPO).</td>
<td>Sale to other investors and strategic sale are more popular exit routes compared to IPO.</td>
</tr>
<tr>
<td><strong>Typical investment range</strong></td>
<td>Between $2 - $10 million</td>
<td>≤ 1mn⁶</td>
</tr>
<tr>
<td><strong>Typical investment range</strong></td>
<td>Cash outflow on a monthly/quarterly basis due to interest payment</td>
<td>Not applicable</td>
</tr>
<tr>
<td><strong>Typical duration of Investment</strong></td>
<td>4 to 6 years</td>
<td>6 to 8 years; Sometimes longer (Acumen Fund invests for upto 15 years)</td>
</tr>
<tr>
<td><strong>Typical returns</strong></td>
<td>Internal Rate of Return of over 25%</td>
<td>Annual returns of 15% to 18% in addition to social returns* from the investment</td>
</tr>
<tr>
<td><strong>Risk tolerance</strong></td>
<td>Lower than social VC investors</td>
<td>Higher than mainstream VC investors</td>
</tr>
<tr>
<td><strong>Typical Investors in the VC fund</strong></td>
<td>99% by Limited Partners (LPs) which can be pension funds, insurance companies, hedge funds, endowments, corporates, high net-worth individuals or Governments. 1% by General Partners, who are the actual venture capitalists who manage the fund. ⁷ ⁸</td>
<td>Donations and investments from philanthropic institutions, individuals and foundations, high net-worth individuals and institutional investors. Some funds raise monies from banks, NABARD, commercial organizations and retail individual investors.⁹</td>
</tr>
<tr>
<td><strong>Fund Life</strong></td>
<td>Generally 10 years with investing life-cycle of 3-5 years for each fund ¹⁰</td>
<td>Generally long-term and more than 10 years</td>
</tr>
<tr>
<td><strong>Returns to the fund</strong></td>
<td>Management fee (ranging between 1.5% and 2.5% of funds under management) and a profit share or carried interest (ranging between 15%-25% of profits). The size and success of the fund usually determine which end of the spectrum they can demand from the investors ¹¹</td>
<td>Management fee paid to the VC fund is normally in the range of 1%-1.9% due to the lower returns from the investments made ¹²</td>
</tr>
</tbody>
</table>

*Absence of a standardized approach to measure social impact has resulted in many VC investors using their own proprietary models to evaluate and measure the social performance of the company in which they have invested. Adoption of Impact Reporting and Investment Standards (IRIS) by the Global Impact Investing Network (GIIN) by a broader spectrum of impact investors will solve this problem to a large extent, as it brings about a standardized framework for measuring the social performance of impact investments.¹³*

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¹¹. Refer Note 5 | ¹². Refer Note 4 | ¹³. Refer Note 4
In summary, it can be said that social venture investing is typically characterized by investments in early stage enterprises that are servicing the people in the BoP, a high risk tolerance and a longer time horizon for investments compared to mainstream VC investments. A majority of the social investors give equal importance to financial returns and social returns, although the actual returns clocked might be lower than conventional investments, mainly due to the sector in which they operate and the unique challenges faced by this sector.

1.4 Global trends in social venture funding

Private capital for the social sector is becoming more and more popular in recent times. According to a report by the Monitor Group\(^{14}\) in 2009, the impact investing industry was estimated to grow from USD 50 billion to USD 500 billion in assets within a decade \(^{15}\). This translates to a CAGR of 25% for the global impact investing industry.

Last year, The Aspen Network of Development Entrepreneurs (ANDE) counted about 199 impact investing funds globally\(^{16}\). The popular social venture capital firms include Acumen Fund, First Light, Gray Ghost Ventures, Root Capital, TBL Capital, and Underdog Ventures among others\(^ {17}\). Most of these funds look at the developing and underdeveloped world, as these regions have been identified as having a huge potential for development of social innovations. In fact, many global social VC funds have dedicated funds looking at investing in different countries of Africa and Asia.

An important contribution of these VC funds is to provide early stage risk capital to social enterprises, when other forms of external capital are difficult to access. While early stage investing by the VC investors has existed for a long time now, they were largely seen in the technology and other high growth business sectors. Social venture funds have provided access to early stage risk capital for the social sector, which do not get the attention of mainstream VC funds. By providing risk capital at the early stages of innovation, social VC funding helps in incentivising social innovations and encouraging entrepreneurs translate their vision to reality.

The long debatable issue and a source of criticism of impact investing was that the two factors of creating social impact and earning commercial returns do not go hand in hand. However, this need not be the case as seen in some of the social venture deals, where the investors have realized attractive returns on their investments. In fact, a November 2010 report by JP Morgan, Rockefeller Foundation and the Global Impact Investing Network (GIIN) estimated that the potential profit for impact investors across five sub-sectors (housing, rural water delivery, maternal health, primary education and financial services) could range between USD 183 - 667 over the next 10 years for an invested capital of USD 400 bn - USD 1 trillion\(^ {18}\). As markets mature and newer ways of functioning are introduced, both social entrepreneurs and social investors will need to effectively manage earning financial returns as well as delivering the desired social impact.

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15. Refer Note 3
16. From Blueprint to Scale (April 2012) – Report by Monitor Group in collaboration with Acumen Fund
18. Refer Note 4
Worldwide, the social sector and social sector investing are continuously witnessing innovations. Apart from venture type investing, new securities linking social impact to financial returns and new tools of finance are being created to earn returns out of social activities. Specialized agencies like Endeavor and Social Finance help social entrepreneurs gain access to global markets. Social impact bonds are another invention by many Government agencies in UK, USA, Canada, Australia and Israel, which reward investors according to results. It is expected that the success of social VC funding models can also result in further innovative approaches such as the ones indicated above for providing risk capital to social ventures.

1.5 Social venture funding trends in India

The percentage of population living in poverty in India is significant. A recent report stated that the number of poor people living in eight Indian states (including the states of Bihar, Uttar Pradesh and West Bengal) are more than the total poor people living in 26 of Africa’s poorest nations. This gives immense potential for VC funding in the social sector, simply because of the large numbers of intended beneficiaries comprising the BoP. While social VC funding in India has grown in recent years, the levels are not as comparable to the trends seen in other markets. The Planning Commission lists 17 funds operating in this sector. However, if all one-off investments are considered, it is estimated that there are more than 30 funds operating in this segment in India. The most popular funds are Aavishkaar, Lok Capital, Acumen Fund, Bellwether, Grassroots, Micheal and Susan Dell Foundation, Omdiyar Network, Oasis Fund, Gray Matters Capital and Unitus among others. Appendix 2 gives the highlights of some of the prominent social VC funds operating in India.

Figure 1 indicates the year wise number of social venture deals based on data between 2004 - Feb 2013 based on data from Venture Intelligence. It can be seen that a large number of deals were in the microfinance segment. The number of investments peaked during 2010, after which there has been a steady decline. Between 2010 and 2011, it can be seen that though the total number of deals reduced, the number of non micro finance investments actually increased from the previous year. On the whole, the trends in social venture funding tracked the overall trends in VC industry.

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22. Refer Note 19
Figure 2 gives the trends based on investment amount. It can be seen that the largest number of deals are in the category where the maximum investment was $1 million. The average deal size in the social venture funding was also significantly lower than overall average deal sizes (Thillairajan and Deshmukh, 2009). A general concern among Indian entrepreneurs is the low level of VC funding available for early stage enterprises. The large number of deals in the ≤$1 million category and lower average investment sizes indicate that VC funds are prepared to provide the much needed early stage capital to the social sector as compared to the other sectors.
The Southern region had the largest share of the deals in the social sector, similar to what was seen in the mainstream VC investments (Thillairajan and Deshmukh, 2009). Sector wise analysis of deals indicated that the Banking and Financial Services Industry (BFSI) accounted for the largest number of deals in the period 2004 - Feb 2013. This sector accounted for 159 of the 313 deals that were finalized during the above period, constituting close to 51% of the total deals. Within BFSI, the microfinance segment, with 139 deals (i.e., 87% of the total deals in BFSI and 44% of the total social VC deals) accounted for the largest number of deals. This indicated that for a part of the above period, the microfinance sector clearly stood out as the biggest favourite among the VC investors. Education was the next favourite among social venture capitalists, which witnessed 43 deals, followed by Healthcare & Life Sciences and Other Services (comprising of rural distribution, affordable housing, water purification and handicrafts sectors).

Figure 3
Sector wise distribution of social VC investments

1.6 Objective of this study and research questions

VC funding for the social sector is a fairly recent phenomenon. Therefore, published literature on this topic is not as exhaustive as in the case of mainstream VC funding. This study is an attempt to increase our existing understanding of VC funding in the social sector. The findings of this study would be of interest to two broad constituents: the entrepreneurs in the social sector and the investors keen to make investments in social ventures. For the former, this study would highlight the role and impact of VC investors. For the later, this study would provide insights on how to be more effective in the social sector.

This paper attempts to analyze how VC investment impact at different stages of the innovation lifecycle of the enterprise. While VC funding for innovative enterprises is not new, this study would help in understanding the “customization” of VC industry practices to suit the social context. In addition, the study also attempts to identify the venture investment practices that have specifically emerged in the social context, but not seen in the
commercial form of VC investment. It would also help to get a comparative understanding of VC as compared to other forms of financial support available to social ventures such as incubators, bank funding etc.

The focus is to understand both the financial and non-financial inputs that VC investors provide to their investee companies. Apart from experience, the study also seeks to capture the perceptions of the key participants on the impact of venture investors at different stages of enterprise lifecycle. Given that VC investment in this sector is in a nascent stage, the paper would also be helpful to identify those aspects of the VC involvement that are effective as well those that are limiting in achieving the objectives of the social enterprise.

1.7 Structure of the paper

This paper has five sections. The first introductory section outlined the background, context, and objectives of the study. The second section describes the methodology and analysis framework. Section three describes the case study companies chosen for this study. Section four gives the discussion and analysis and Section five provides the conclusion and summary.

2. METHODOLOGY & ANALYSIS FRAMEWORK

2.1 Study methodology

Given the objectives and the exploratory nature of this study, a qualitative approach was used. Miles and Huberman (1994) highlight some of the positive attributes of qualitative data. Among the various forms of qualitative approaches, the case study method was used for this research. Case study is considered as an apt method to for an objective and in-depth examination of events and phenomena in their natural settings. The case study method focuses on understanding the dynamics present in complex settings, and it also permits the researcher to trace the events over time (Yin, 1984). Case study method was considered as an apt method for this study because of the exploratory nature of this study and the objective of the research was to study the phenomenon of VC funding by taking into account the context of the companies that had received the funding. Case studies can be developed using data obtained from various means – observation, interviewing, as well as secondary data. Ball (1996) had said that holistic and exhaustive case studies retain the meaningful characteristic of realistic events and provides better insight to the research problem being addressed.

The research design included the following elements to increase the validity of the study. First, a multiple case embedded research design has been used, since “evidence from multiple cases is often considered more compelling, and the overall study is therefore regarded as being more robust” (Yin, 1984). Second, the following criteria were used to identify the most appropriate case studies for this research. (1) The nature and objective of the enterprise. Enterprises selected should have well articulated social objectives and desire to create a meaningful and sustainable impact on its stakeholders (2) Duration of VC investment. In order to fully understand the impact of VC investment, enterprises were chosen where the VC has stayed invested for a minimum of 30 months (3) Each of the cases chosen for the study would be from different sectors, to address issues of external validity. (4) Practical considerations such as data availability and
willingness of both the investor and the entrepreneur to participate in the study. (5) There is at least one common investor among all the companies identified.

Third, multiple sources of data were used to develop the case studies. To start with, information from various secondary sources was analyzed. These sources provided background information about the company, and the venture investors who had invested in the company, apart from other details. Information gaps that existed after secondary data research were probed in greater detail during the interviews. The in-depth interviews with entrepreneurs, senior management team, venture investors, and others who were involved in the fund raising process provided key information for the study. The list of people interviewed for the study is given in Appendix 3. The interviews were semi structured where the broad area of information needed from each respondent was determined before the interview was taken. This enabled to achieve focus during the discussion and obtain the required information while simultaneously permitting freedom to navigate to related topics depending upon the response of the interviewee. The interviews were conducted either through personal meetings or through telephone. In some cases, the respondents were interviewed more than once as the study progressed depending upon the information needed. To minimize loss of information, the interviews were recorded after obtaining the consent of the interviewee. These interviews were later transcribed, which was then used for analysis. In total, the interviews provided more than 10 hours of recorded audio, which resulted in about 3800 lines of transcribed data.

2.2 Analysis framework

To analyze the impact of VC’s at different stages of the innovation, we use a temporal framework of innovation lifecycle (adapted from Baya and Radding, 2011). We conceptualize innovation to have four different phases on a temporal scale: Discovery, Prototype, Acceleration and Scaling. It needs to be emphasized that this is more of a conceptual demarcation. In reality, the different phases would be more of a continuum with no distinguishable boundaries. The main features of these four different phases are described below.

**Discovery phase**

The discovery phase is characterized by the emergence of the conceptual contours of the innovation. The innovation is only in the idea stage, largely in the mind of the entrepreneur. There is limited information on the market potential or the viability. An organization structure rarely exists, and if it does is very small. At this stage, the entrepreneur needs small amounts of capital that will help him to validate his idea’s viability and potential.

**Prototype phase**

The prototype phase is characterized by various product development activities – such as prototype product development, testing, test launch, conduct market research and product surveys, etc. By this time, the organization would have been formally incorporated as an enterprise and has more number of employees as compared to the discovery phase. Because of the various investment and developmental activities, the capital requirements are higher and at this stage, entrepreneurs would not be able to sustain further development without external capital. Because of the small size, the organization structure is fairly informal and the focus is largely on product development, testing, and getting ready for the market launch.
Acceleration phase
By this time, the product development has reached a stage where it can be taken to market. The enterprise has also had a few successful test launches through their network of contacts, thereby preparing the ground for a more formal launch in the market. The objective of the enterprise during this phase is to go out and secure a few “quick-wins” from brand name clients thereby preparing itself for the next phase of scaling. The enterprise, of course, has grown much larger and become formal with the implementation of various systems and processes to support the growth. Though the enterprise has started generating revenues, they are not in a position to break-even. To fund the growth and execute the business plans, the company needs larger sums of capital. While the enterprise retains its “social” outlook, beginnings of a gradual transformation of becoming a conventional business enterprise can be seen.

Scaling phase
During the scaling phase, the company aims to rapidly capture market share and achieve profitability. Though product development is complete, substantial investments are needed in creating manufacturing capacity, recruitment of employees, and other corporate set and establishment expenses. By the end of scaling phase, the enterprise is expected to achieve enough internal cash flow generation to make the operations self-sustainable. Financial support in this phase is in the form of late-stage capital and is characterized by larger investment sizes. The organization is much larger with more formal structures and processes. The “social” innovation is in the process of becoming “mainstream” and the social enterprise is characterized by features that are seen in conventional business enterprises.

As the innovation moves from phase to the other, the requirement and the nature of the enterprise also changes. It is therefore expected that the demands on the VC investors as well as their contribution to the enterprise will vary from phase to phase. To understand the impact of VC investors at different phases of the innovation, we use a matrix-like approach. This would help to map the role of VC’s at different phases of the innovation lifecycle. In order to make the analysis more objective, the framework aims to evaluate both the areas of contribution as well as the areas of concern from VC investment. Since the VC’s also provide a lot of value addition in addition to capital, the contribution of VC’s were categorized under two domains: financial and non-financial.

3. CASE STUDIES
It was decided to base this study on three cases, partly because of the constraints on time and resources and partly on the reasoning that three cases would provide adequate opportunities to identify the commonalities across cases that can be generalized. The process by which the case studies were selected is as follows. To determine which of the three companies are to be used as case studies, a comprehensive list of social enterprises that received VC funding was first prepared from the Venture Intelligence database. This gave us a list of 313 social enterprises that had received venture funding during the period 2004 - Feb 2013. From this master list, we first excluded enterprises in micro-finance and related areas, given the different contexts in which they operated. This straightaway resulted in the exclusion of 139 companies from the list. Based on the type of business, the remaining companies were classified as either product innovation or process innovation, based on a common definition of these concepts (Smeds, 1994). When there was a physical product or service it was classified as a product innovation and when the focus was on interrelated chain of business activities it was classified as process innovation.
To limit the heterogeneity in the operating context, it was decided to consider only those companies that were in the product innovation category. Further, within the product innovation category, it was decided to consider only those companies that offered products and exclude those that offered services. From the shortlist of companies that was thus arrived, the list of three companies was chosen after applying the various selection criteria indicated in Section 2.1. Table 4 provides a summary of the three companies chosen for the study. The social focus of the three case study companies and details of their financing are given below. Appendix 4 provides more detailed background about these companies and the management team at these companies.

**Table 3**
Summary of the key features of the case study companies

<table>
<thead>
<tr>
<th></th>
<th>Servals</th>
<th>Vortex</th>
<th>Waterlife</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sector</strong></td>
<td>Energy</td>
<td>Banking</td>
<td>Water supply</td>
</tr>
<tr>
<td><strong>Year of incorporation</strong></td>
<td>2002</td>
<td>2001</td>
<td>2008</td>
</tr>
<tr>
<td><strong>Head office location</strong></td>
<td>Chennai</td>
<td>Chennai</td>
<td>Hyderabad</td>
</tr>
<tr>
<td><strong>Social objective (in 5-6 words)</strong></td>
<td>Energy efficient products for the poor</td>
<td>Making banking accessible to all</td>
<td>Clean and safe drinking water to all</td>
</tr>
<tr>
<td><strong>Flagship product</strong></td>
<td>Energy efficient burner</td>
<td>ATMs for the rural market</td>
<td>Water purification plant</td>
</tr>
<tr>
<td><strong>No. of employees</strong></td>
<td>12</td>
<td>165</td>
<td>400</td>
</tr>
<tr>
<td><strong>Estimated revenues ($, million)</strong></td>
<td>2</td>
<td></td>
<td>7</td>
</tr>
<tr>
<td><strong>No. of rounds of venture funding obtained</strong></td>
<td>3</td>
<td>6</td>
<td>3*</td>
</tr>
<tr>
<td><strong>Total venture funding obtained ($, million)</strong></td>
<td>0.2</td>
<td>16</td>
<td>5</td>
</tr>
</tbody>
</table>

(Note: All financial and organization information are as of 2012-13)
* Investment by Michael and Dell Foundation cannot be considered as a regular VC investment, as it was more structured as a loan instrument.)
3.1 Case study A: Vortex Engineering Private Limited

The social objective of the company: Making banking accessible

Vortex was involved in developing Automatic Teller Machines (ATM’s) for the rural markets. “Helping banks reach out” was the underlying objective of Vortex as it provided ATMs and other related technologies to Indian banks to help them reach out profitably to unbanked and under-banked regions of India. The company intended to serve the remotest parts of rural India to improve the quality of life of people living at the BoP.

An important parameter to measure the development of any country is the extent of availability of banking services to the people of the country - both rich and poor. In India, despite the expansion in the banking sector over the past few decades in terms of increase in the number of bank branches as well as technological advancements, it is estimated that about 40% of households in the country did not have a bank account. Majority of this segment comprised of farmers, agricultural workers and casual labourers, based in rural India. This exclusion of the poor from banking services is common to many developing countries across the world.

It has been recognized by the government and by many in the industry that innovations in banking can reduce this access divide and can help in achieving financial inclusion. This called for the use of technology to adopt smarter ways of spreading banking services in the rural areas. In a study done by IIT Madras, it was found that installing ATMs can play a major role in increasing the penetration of banking services in hinterland areas in a cost effective manner.

The ATM market in India was highly underpenetrated, with only 3.6 ATMs present for every 100,000 adults, while the comparable number read as 173.5 for USA. The penetration of ATM’s in rural India was even less, where a large proportion of India’s population lives. One of the reasons for this under penetration was that conventional ATMs were not equipped for the rural conditions, viz., unreliable power supply, low incidence of transactions, illiteracy of users, and harsh geographical conditions.

With over 6.5 lakh villages in India, the rural ATM industry, according to Kannan, was an attractive business opportunity. At the same time, it also furthered the important social cause of making banking services accessible to people living in rural areas. The team at Vortex envisaged installing an ATM in every village of India. Kamal Sharma, vice president of Sales & Marketing said that, “The Vortex solar-powered ATM has already created a tremendous impact and there is a huge demand created for deploying solar powered ATMs. In about 10 years, it is expected that there will be at least one ATM in every village. This will enable the financial inclusion scheme introduced by the Government and the regulatory norms adopted by the RBI.”

Social Impact of Vortex

Vortex ATMs were designed to aptly suit rural requirements and were an effective way for banks to reach rural India without having to open full-service branches. These easy to use, environment-friendly ATMs served approximately half a million users.

23. http://vortexindia.co.in/
every month. The company estimated that 10,000 ATMs will provide banking access to 30 million people, who form the BoP. ATMs were compact in nature and had very low installation and recurring costs compared to conventional ATMs. While a conventional ATM costs close to Rs.8 lakhs to install, Vortex ATMs costs 30% lower, even after including the high installation costs of the solar panels. Power consumption was low and poor power supply in rural areas was managed by using solar powered ATMs. Conventional ATMs consumed a lot of power and monthly electricity bills are anywhere between Rs. 7,000 to Rs. 10,000. In contrast, Vortex ATMs brought down monthly electricity bills to Rs. 600, due to the low power consumption and absence of air-conditioning units. The ATMs were designed to endure power fluctuations and power cuts as they also have a built-in battery backup for four hours. Other advantages included the ability of the ATM to handle and dispense teller grade notes and the facility to obtain statements and transaction receipts in the regional language used for transactions. The above features of Vortex ATMs made it the best choice for a rural setting in comparison to conventional ATMs.

A survey estimated a saving in time of 20 minutes for every transaction done on Vortex ATMs, apart from the associated savings in transportation costs and other non-productive transaction time spent by rural and semi-urban customers. With 22% of ATMs using solar power, it was also considered environment-friendly, with 559 metric tonnes of CO2 being offset in Q3-2012. These ATMs are also used by the Government to disburse payments under the National Rural Employment Guarantee Act (NREGA) programme to beneficiaries located across the country. Amounts of any denomination can be easily withdrawn by the beneficiary directly, without the hassle of middlemen.

Venture Investment in Vortex

Vortex had several rounds of investments from venture firms, and had raised close to Rs. 800 million ($16 million) till 2012. The firm received its first round of VC funding in 2004 from Ventureast, which was followed by a second round of funding by Aavishkaar, along with Ventureast in 2006. Bulk of the initial funding amount was towards research and development of the product and on hiring a strong team. Vortex also received additional rounds of funding from the following investors in various years: Ray Stata - founder of Analog Devices Inc (2008), Bamboo finance, through its Oasis Fund (June 2009), Tata Capital Innovations Fund and Aavishkaar (December 2011) and International Finance Corporation, the private sector arm of World Bank (June 2012). Appendix 5 provides a short description and profile of the above investors.

The investment thesis of the venture funds in Vortex was a combination of both social impact and commercial sense. The social impact aspect of the investment was highlighted by Thomas Davenport, IFC Director for South Asia when he said, “The investment will help in taking basic banking and financial inclusion schemes to rural and semi-urban areas in India. Bringing banking close to home means a lot in a country where less than one-fifth of over 600,000 villages have a banking touch-point. Many of our investments are geared to facilitate financial inclusion in such markets. This also meshes well with the intent of the Reserve Bank of India, which is supporting greater branch outreach and financial access in rural/semi-urban India.” Some of the VC investors in Vortex have also been repeat investors, underlining the good relations and performance of the company.
Investors in Vortex have shown tremendous patience as well. While VC firms would normally like to exit from their investments in 3 - 5 years from the time of investment, the investors in Vortex have stayed invested in the company for 7 - 8 years.

3. 2 Case study B: Servals Automation Private Limited

The social objective of the company: Energy efficient cooking products for the poor
Servals was involved in developing energy efficient cooking products for the poor. Cooking conditions for a majority of people in developing countries are far from being safe or healthy. This is because of the heavy dependence and usage of solid fuels which are undesirable for healthy cooking conditions. According to World Health Organization’s report35 - ‘Indoor Air Pollution: National Burden of Disease Estimates’, in 2002, at least 82% of India’s population used solid fuels for cooking, and over 400,000 deaths were reported due to solid fuel use. The reliance on solid fuels had emerged as one of the ten most important threats to public health worldwide. The indoor air pollution caused from solid fuels has been linked to many different diseases, including acute and chronic respiratory diseases, tuberculosis, asthma and cardiovascular diseases.

Kerosene is a common choice of fuel for cooking in villages and among the poor. It is considered to be safer, more efficient and easier for cooking than traditional solid fuels36. However, kerosene is usually costly and unaffordable for bulk of the poor. Since demand outstrips supply, the supply of kerosene in India is regulated by the government through the Public Distribution System (PDS). Since the eligible quantity through the PDS is often not sufficient for an average household, families buy it in black markets, usually paying more than double the rate charged through the PDS. This created a financial strain on the family, forcing them to use the unsafe solid fuels to meet the deficit. A device that enhanced the burning efficiency of Kerosene was expected to provide twin benefits to the poor: First, it will considerably reduce their financial burden as their consumption of kerosene from secondary markets would be less and second, it would reduce the occurrence of diseases caused from using solid fuels.

Social Impact of Servals
The burners helped the users to minimize use of solid fuels for cooking, thereby reducing air pollution. The biggest advantage of their burner was savings in kerosene consumption by 5%-15%, compared to other burners in the market. If the burner was used along with energy efficient Servalskerosene stoves, the savings in kerosene could be as high as 30%. The reduction in kerosene usage resulted in substantial savings to the rural household. Lower kerosene consumption occurred because of the burner’s unique design, resulting in better combustion and thermal efficiency. Better design also made the Venus burner safer compared to other burners. The thermal efficiency of copper/brass burners have been found to be 65.4% compared to the minimum standard of 55% specified by the Indian Standards Institute. The better combustion efficiency also helped in reducing harmful emissions, resulting in lesser air pollution compared to other burners. Because of less fuel consumption, use of Venus burners also resulted in lower carbon-di-oxide emissions37.

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36. https://energypedia.info/images/0/0c/Practical_action_kerosene_lpg.pdf
37. http://servalsgroup.blogspot.in/2008/03/energy-efficient-kerosene-burners.html
A study undertaken by ERM, one of the investors in the company, estimated that approximately 6 million people had benefited by way of increased savings because of the use of the energy efficient burner. The low emissions because of the higher combustion efficiency led to improved health, thus reducing medical expenses of the households and improving their quality of life.

Venture Investment in Servals

As of 2012, SAPL had received investment from three VC investors. The first investment in the company was made by Aavishkaar in 2002, when it acquired a stake of 49% in SAPL. The first round of venture funding fructified even before the commercial success of the product. Culmination of various factors resulted in this first round of funding. For example, it was during this time that Aavishkaar had set up its investment operations and they were looking for suitable investment opportunities. Vineet Rai, the CEO of Aavishkaar had known Mukundan because of his ties with Rural Innovations Network, an organization that was closely associated with Aavishkaar. The high degree of comfort and understanding between the investor and the entrepreneur formed an important part of the investment thesis.

The company also secured additional rounds of funding in 2008 and 2010. In 2008, Servals received funding from Environmental Resources Management (ERM) - a leading global provider of environmental, health, safety, risk, and social consulting services. In 2010, Servals was the first social enterprise that provided an exit to one of its previous investors. Aavishkaar made a partial exit from Servals when it sold a part of its shareholding to Grassroots Business Fund (GBF). Mukundan said, “The idea was to show that there is a possibility of an exit even when the involvement is in a social enterprise. VC investors need exit. Normally you don’t get exit for venture capital [in the social sector], because the company takes a lot of time to grow and value. Fortunately we did it reasonably well”. Apart from acquiring a partial shareholding of Aavishkaar, GBF also advanced technical assistance to the company in the form of Compulsorily Convertible Debentures.

3.3 Case study C: Waterlife India

The social objective of the company: Clean and safe drinking water

Waterlife was involved in the setting up and operations of water purification plants to provide water supply for the poor and in rural areas. Leonardo da Vinci once said, “Water is the driving force in nature.” In modern times, water is the driving force for any nation’s development – industrial as well as social. While inadequate water can hamper the country’s industrial growth, insufficient clean drinking water can have a large social cost in terms of increased occurrence of chronic diseases, leading to increased health costs and loss of productivity.

While depleting ground water table due to increasing population is an important reason for water scarcity, a more critical cause for the water crisis in India is increasing water pollution. Almost 70% of the surface water and a high proportion of ground water are contaminated by various organic, inorganic, biological, chemical and toxic pollutants.
Industrial effluents and domestic wastes are the biggest sources of water pollution\(^{41}\). Despite water being a basic need, millions of people are deprived of safe, clean water. Using contaminated water not only results in harmful diseases, but disturbs and destroys the entire ecosystem. For water recycling, the concentration of the pollutants must be reduced to desirable levels in order to make the waste water reusable or suitable to return to the ground.

While access to clean and safe water was a major problem in many parts of the country, the problem was more acute in rural and under developed areas. There was a strong need for sustainable water management solutions in these areas that enables access to clean and safe water among the poor and rural. Recognizing the need for clean water, Waterlife provides total, sustainable solutions to water contamination and focuses primarily on underserved and underdeveloped areas of India.

**Social Impact of Waterlife**

Waterborne diseases in India were the most prevalent and the main cause for this was the non-availability of clean drinking water. Over 600 million people in India did not have access to safe water. This was especially true in rural areas. It was estimated that close to 2000 children died in India everyday due to water borne diseases.\(^{42}\) Waterlife aimed to provide clean water to the poor by treating the water contaminated by sewage, industrial chemicals and other pollutants, which in turn reduced diseases and medical costs for the poor. The impact of Waterlife’s solutions was established by the reduction in water borne diseases after drinking water from the plants installed by Waterlife. Sudesh Menon said, "In one village, the rate of diarrhoea dropped from 100 cases per month to fewer than 10 after Waterlife installed a water purification plant.\(^{43}\)

Water from Waterlife could be consumed without boiling, thus saving on fuel costs as well as avoiding harmful emissions. In addition, the technology used by Waterlife was environment friendly, requiring less water and electricity.\(^{44}\) Potable water was provided free of cost to many schools where the resources are limited.\(^{45}\)

**Venture Investment in Waterlife**

By 2013, Waterlife had raised a total venture funding of Rs. 250 million ($5 million) from three investors - Aavishkaar, Michael & Susan Dell Foundation and Matrix Partners.

The first investment was by Aavishkaar in September 2009 to the extent of Rs.1 crore ($0.2 million) for a significant minority stake. The funds raised by Waterlife were used to expand its presence across the country by installing more water purification systems. The investment thesis of Aavishkaar was the attractive business opportunity in addition to the social impact created by the business. Vineet Rai, founder and Head of Aavishkaar said that, "It is difficult to come across sustainable interventions in water space that are led by exceptional people driven to build a business with impact. Waterlife has offered us an opportunity to make interventions that touch the lives of rural folks on a daily basis. We believe that water as a sector needs right entrepreneurial energy to remain social and sustainable and the Waterlife team has done that."\(^{46}\) Sudesh Menon views
Aavishkaar to be more than just a capital provider. In his words, "We are proud to be associated with Aavishkaar and we share a similar vision of building profitable businesses which create long term and meaningful impacts on social issues. The association will help us rapidly scale up as we pursue our goal of providing safe and clean water to all of India by 2020." 47

In March 2011, Michael & Susan Dell Foundation picked up 5% of Waterlife in the form of fully and compulsorily convertible debentures.48 This funding helped the company to validate their water installation systems for the urban markets.

Waterlife’s next round of VC investment was in December 2011 when Matrix Partners invested Rs. 22 crore into the company, which was also used for scaling up. The investment thesis in this case was the extremely promising opportunity. Avnish Bajaj, Partner at Matrix Partners’ said that, "We believe water will remain a high growth sector driven by strong government focus and socio-economic relevance of water as a resource. We believe Waterlife with its innovative business model complemented by a high quality management team is set to emerge as a leader in the potable water segment".49

4. DISCUSSION

The following paragraphs summarize our findings on the role played by VC investors in different stages of the innovation lifecycle.

4.1 Discovery phase

Any investment in this phase involves a lot of risk - exceeding even the risk appetite of VC investors. Therefore, there is limited interest from VC investors to invest in enterprises during this phase. For funding the capital requirements during this phase of innovation lifecycle, entrepreneurs should look at alternative means such as personal sources, incubation funding and grants, angel investors, or contacts from past work experience. In the case of Servals, the discovery phase was funded by the personal capital of the innovator. In Vortex, the incubation support from IIT Madras helped. At Waterlife, the contours of the idea emerged from the professional experience of the entrepreneur.

4.2 Prototype phase

Formal investment and involvement by venture funds largely starts during the prototype phase. VCs provide the critical early stage risk capital to fund the activities during this phase. The crucial role of VC funding in starting Servals was highlighted by Mukundan. He said, “If Aavishkaar had not invested, probably there wouldn't have been a major activity. Frankly I would not have got into it”. A unique feature of the VC funding at this stage is the investment made when there is no proven product or service. While the VC needs to be convinced of the idea before making their investment, an important influencer at this stage is the capability and the background of the entrepreneur. In the case of Servals, the initial investment from Aavishkaar was on

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47. Refer Note 44
the basis of the background and capability of Mukundan, who had been an entrepreneur all his life. Highlighting this aspect, Pradeep of Aavishkaar said, “A lot of our investment decisions are [also] linked to the capability and the background of the entrepreneur. We try to understand questions like, where he or she is coming from. What is really driving him or her to into this line?"

There is a thin line separating the discovery and the prototype phase. The concept identified during the discovery phase is continuously iterated during the prototype phase to give it a shape and form, which can then be translated into a business. During this phase, only smaller and early stage VCs like the Social VC funds invest in the social enterprise. Reason being the small investment size during this phase (<$1 million) does not interest the larger mainstream VC funds. Or as Sudesh put it, “even if they are interested, what they demand or ask in return for the investment would be so high, that it would not be acceptable to the entrepreneur.” In addition, entrepreneurs generally indicated that it is not possible to access debt from banks at this stage, for various reasons such as lack of collateral, absence of operating history, limitations of banks in appraising innovative projects, etc.

Money obtained from investors is used for furthering R&D, market research, legal expenses involved in patent filing etc. Social enterprises face several challenges in the prototype phase, just like any other start-up. The innovation undergoes several changes till the product is stabilized, which calls for complete patience and understanding by the investor. The entrepreneur and the enterprise go through tremendous learning during this phase. The early stage VC investors need to show a lot of trust and confidence in the ability of the entrepreneur. Lack of confidence with the entrepreneur and the team can lead to disastrous results, which can even defeat the very purpose of the VC funding. Vortex’s Vijay Babu asserts, “We were lucky that the initial investors, Ventureast and Aavishkaar, are really good social cum early stage investors who give a lot of rope. Basically in the very early stages the VC’s will simply have to trust the founding team and hope the founding team will figure a way out of the difficulties you [the firm] keep facing month after month, quarter after quarter. In our case, they [the VCs] gave that level of trust in us to help us build the products. So, within a short span from 2008 till 2013 we had actually launched 3 products with very different and innovative designs. Such experiments and learning will have to be accepted by the investor to continue to keep trust in us.”

While VC firms provide a lot more support apart from capital, as the innovation owner the primary responsibility for product development during this phase is on the entrepreneur. The contribution towards enterprise development by VC firms increases with the growth of the enterprise. Therefore, the value addition by VCs during this phase is comparatively less intense as compared to the subsequent phases.

Early stage funding by VC firms in the social sector has grown in the recent years. However, the proportion of firms that have raised VC is still low. Not all entrepreneurs are able to successfully access capital from VC firms. While low innovation quotient or market viability can be a prime reason for lack of interest from VC firms, there are two more important reasons that entrepreneurs need to be aware of. First, unlike bank or grant funding where even enterprises or entrepreneurs previously unknown to the funding agency can successfully get funding on the strength of their application, VC firms generally invest in those firms where they have known the entrepreneur. This characteristic was seen in all the three companies studied. In the case of Servals and Waterlife, both Mukundan and Sudesh had known Vineet Rai, the Managing Director of Aavishkaar, even before setting up their respective enterprises. This long term familiarity provided a degree of comfort between the investor and the entrepreneur, and was an important reason for successfully getting funded. In the case of Vortex, the first VC investor Ventureast, had strong links with IIT Madras, the
technology collaborator of the company. This common linkage with IIT Madras by both the enterprise and the VC firm played an important role in getting funding.

Second, as indicated by Kannan, “inherently the nature of venture funding is to seek domains that are familiar to the investor.” Entrepreneurs need to be aware that VC firms would invest only in those sectors that are familiar or comfortable with. Therefore, they should approach only those investors who plan to invest in the sector in which the firm operated. Serval and Waterlife had got funding from Aavishkaar, because they targeted rural consumers and the energy and water sector were areas of focus for the fund. Similarly, since Ventureast had identified banking as one of their areas of interest, Vortex was able to get funding from them. To a certain extent, the ability of the enterprise to get capital is also limited by the scope of operations of the VC fund.

4.3 Acceleration phase

The capital required during this stage increases as the enterprise needs to reach out to the market, build the sales engine, recruit employees and strengthen the innovation. Given their small investment ticket size, social venture investors use their networks to bring in investments from the larger commercial VC investors. The entrepreneurs in all the three cases agreed on the key role played by the social VC firm (which was Aavishkaar in all the three cases) in attracting subsequent rounds of larger investment from mainstream investors. In the case of Vortex and Waterlife, they also co-invested in the subsequent rounds.

As the enterprise starts rolling out its products in the marketplace, the “certification effect” from having VC investors in the enterprise helps the firm to enhance its credibility in the marketplace. Providing professional networks and visibility to the social enterprise is an important advantage. Kannan stated that, “With VC funding, you become a part of a broader fraternity, which gives you access to networks. Moreover, it gives you credibility, than if you are lone ranger trying to prove that you are a credible person. And when you need to meet some potential customer or you need to raise additional finance, the kind of investor you are already associated with, what that investor has to say about his conviction in your business model - all these definitely help a great deal.” A similar thought was expressed by Sujatha, Director, Serval, when she said, “Having a [social]VC investor on board is a good endorsement of the mission of the business itself. The investor is like a brand ambassador. This is an intangible, but good marketing collateral. You cannot say that with banks; you can say that with social investors.”

The venture investors also help the company to strengthen its internal systems and processes, partly to monitor the investment effectively and partly to help the company in managing its expansion during this phase and be ready for the subsequent rapid scaling. The shortcomings in the company’s processes are revealed as early as the due diligence stage, as corroborated by Vortex’s Indira, “….. so their due diligence process helped us identify the business structure we need to put in place; from a situation where we would struggle to provide the social impact matrix required by various investors every quarter, we are now in a position to send it ahead of them [the VC’s] asking us”. Investors also agree that in addition to capital, the entrepreneurs also expect other forms of support and involvement as required from them. Pradeep of Aavishkaar said that, “I think the reason our companies are talking to us is because they expect us to be more than just being a money machine; they want us to be really partnering with them in their entrepreneurial journey.”
VC funds also structure their investment in ways that can support such value addition. For example, GBF’s direct investment in Serval was not in the form of cash, but in the form of technical assistance provided by experts, who would be paid for by GBF. The objective of such technical assistance support was to strengthen the weak areas of the enterprise. In the case of Serval, GBF gave access to the dedicated resources of the fund itself, as well as access to specialized external consultants to seek advice on various operational issues. This helped Serval to expand its geographic footprint in the kerosene burner market and also to set up the NGO distribution channel to bundle the cooking solutions products and launch the company’s biomass stoves.

Social companies in the early stage do not have easy access to finance. Traditional sources of finance for a social enterprise are grants and donations, bank debt and promoter equity. However, each of these sources comes with its own limitations. For instance, bank debt is not easy to obtain in the initial stages as start-ups generally do not have collateral security to offer. Therefore it is limited in nature and also results in cash outflow due to regular interest and principal repayments. Besides, the entrepreneur does not receive mentoring benefits or enhanced visibility in a bank funding. Similarly promoter equity is also limited in nature.

Although grants have been the most popular source of finance for social innovations for long, it is considered that they are not scalable and do not help the social enterprise to grow quickly with the funds received. On the other hand, VC investments help the company to scale faster, due to the quantum of funds received. Further rounds of investments are also scalable, with each round seeing a higher infusion than the previous round. For example, Vortex which received Rs. 30 lakhs from its first investor in 2005 saw progressive increase in investment amounts in every subsequent round, with the company raising up to Rs. 37 crores in December 2011. In the words of Vortex’s Kannan, “Grants not scalable. So if I look at the magnitude of first round funding that I got, may be something of that magnitude - I could have got through grants, but where the grant process will lead to a cul-de-sac is if I perform well in how I use up the money in terms of meeting certain milestones, but I am still far away from actually being a profitable enterprise; then I cannot showcase my track record and ask for 5 times more grant to do the next round of whatever needs to be done. So it is not repeatable and it is not scalable”. Further, grant making agencies are generally based abroad, unlike social VC funds which are either India-based, or have an Indian office. The presence of a local office always helps in better interactions with the company, leading to better development. Kannan says, “Normally the grant giving agency has the mandate to disburse certain amount of money, and the decision makers there are concerned about doing the disbursements on some acceptable quality projects. But they do not have a larger commitment to it”.

Sudesh highlighted a different limitation of grant funding. Waterlife had received funding from Michael and Susan Dell Foundation (MSDF), which was in the nature of a soft loan with low rates of interest. According to Sudesh, “Grant agencies like MSDF are not interested to continue funding for a project beyond a certain stage. The way they operate is to finance a similar pilot project in many enterprises, and publicize the success of these projects to the world at large. They would then expect other investors to chip in and continue to fund the project. They also provide adequate non-financial support to enable the success of the project. For example, in our case they involved Monitor Consulting to help us on various aspects of the project implementation.”

50. Interactions with investment manager at GBF
51Refer Note 12
As in the Prototype phase, the social enterprise needs constant support and confidence of the VC investor in the Acceleration phase as well. For example in Vortex, the initial social VC investors supported many of the decisions that the company took because of the long term benefits, though they were not profitable in the short run. As indicated by Rangarajan of Spark Capital, Vortex’s advisor in the fund raising process, “When Vortex bid for their first order from State Bank of India, they had to quote a very low price, because that was the only way they would have got the order. Though the investors were aware that the order was not economically attractive, they supported the company in their decision of bidding at a low price. I don’t know how many larger investors would have possibly being supportive at that kind of stage.”

Social enterprises face a huge challenge of acquiring and retaining talented employees, who not only share the social entrepreneur’s vision, but also accept a lower pay package compared to corporate pay packages. When a company receives funding from VC investors, it builds credibility and confidence in the eyes of potential employees, as they believe that the company will grow to greater heights. However, this is true only to a certain extent, and cannot be construed to be the sole reason behind having a strong top management team. Nevertheless, the investors play an important part in making sure that a good team is in place. Vortex’s Vijay Babu opines, “So, I am of the belief that the investor’s key role would have to be to ensure that they have a good team in place”.

Another interesting trend we observed in the case study of Vortex was that, although some of the members of the senior management team came on board after the entry of VC investors, most of the top management joined Vortex based on the passion of being able to create a world-class product. As a result of the strong top management team, the investors in Vortex have continued to believe in the company despite the challenges faced in its 10-year journey. In the words of Vijay Babu, “Having created such a strong team also helped us in managing or building trust with the investors. So, investors found that during the last 3-4 years we had built a very solid team, and the team is very committed and believes that we can make a clear difference to the world by building an Indian product that is useful worldwide. Having created such a strong team also helped us in managing or building trust with the investors”.

Although social enterprises benefit from the rich experience of the investors, it is sometimes cited by entrepreneurs that too much involvement and monitoring by the VC in the company affairs hampers the decision making process. While investors look at incorporating successful practices across different investee companies, irrespective of the sector or the stage of the innovation, entrepreneurs tend to believe that what worked in one Portfolio Company might not necessarily work for other companies. In some cases, entrepreneurs feel that having a VC poses additional demands on their time. For example, VC firms often showcase their current investee companies in their fund raising efforts. Therefore, entrepreneurs often requested to engage with prospective investors in the proposed new fund offering of their current investors.

Post investment, VC firms require the enterprises to provide frequent reporting to investors in the form of regular MIS, quarterly reports etc. High investment of management time and effort is necessary to carry out regular reporting which suit the fund’s requirements. When a company has more than one investor, more often than not, each investor will require reporting in a different format and style. This necessitates tracking different
parameters and preparing different reports to suit the diverse internal requirements of the invested funds. Management time is also spent when investors conduct social audits and visit the company at regular intervals. While regular reporting and auditing are important steps to achieve good corporate governance, it is generally construed by small enterprises as a sacrifice of valuable time which can be used to grow the business, as some reports and the parameters tracked may not even have a direct bearing on the growth of the company.

### 4.4 Scaling phase

Since the capital requirements of the enterprise at this stage exceed the investment levels of social VCs, investments have to come from mainstream VC funds. The cumulative funding from the VCs plays an important role in successfully getting to the scaling phase. Vijay Babu states, “In fact we would not be where we are without the active investment by the investors and the trust the investors had in the product and the team. It’s a huge risk that the investors had taken.........without them it would be impossible to develop such a product”.

The mainstream VC funds generally have lower investment durations as compared to the social VCs. Investors’ exit from the investee companies is dependent on quick and successful scaling up of the innovation. This focus on rapid scaling can put enormous pressure on the entrepreneur of the social enterprise - who is concerned about the social impact of the innovation rather than just scaling up. As indicated by Mukundan, “the relentless pursuit of scaling, can liquidate the passion of the entrepreneur.” Firms that have reached the scaling phase would have normally obtained multiple rounds of VC investment from different investors. Each of the investors could have different objectives and perspectives on the company - such as the market strategy it should pursue, return expectations, timing of exit, etc. It is very important for the entrepreneur to successfully manage such diverse interests from different investors. In fact, entrepreneurs should get subsequent funding only from those VC investors who are in broad agreement with perspectives of the investors in the earlier rounds. While this might seem a big challenge, entrepreneurs have successfully managed this since it is in the interest of the investors to avoid potential conflicts with other investors as well as the entrepreneur. As indicated by Kannan, “In venture funding the investors upside is tied to the upside of the entrepreneur. So, there is a self-interest that drives it.” Vijay Babu indicated that, “I think one other lucky thing for us had been that, to be honest, our investors are actually very good and understanding and in spite of having 6 investors I can say with great deal of confidence and truth that things have actually not changed much with different investors coming in”.

Shortage of capital during the scaling phase can result in delayed roll-out of the product and slower growth of the innovation. Vijay Babu opined that the association with the VC community has helped the company reach its present size and scale significantly, both in terms of volume as well as geographical reach. The company’s relationship with the investor has been good and has helped to transform it into a completely professional organization. VC funding also helps to increase the equity base of the company, which can then be leveraged to attract debt capital. Because the investment is in the form of equity, VC funding also indirectly helps the investee company eligible to participate in large projects. As indicated by Sudesh, “Increase in equity also makes the company bid for some large projects, which would not have been possible at lower levels of equity.”

The success of the VC investment would depend on the successful exit from the investee company. All VC investors want their investee companies to grow fast and achieve higher scale, so that their investment grows
and gives better returns. Although entrepreneurs also would like to see their business grow, they usually prefer to chart their own growth path. The social enterprise needs to manage this challenge by working out a realistic growth path that meets the expectation of the investor as well. The mainstream VC investor has a smaller investment horizon as compared to the social VC investor. Given the long gestation time in scaling up of social enterprises, the sequence of investors in the company can be very important. In the prototype phase, funding has to be obtained from social venture funds or other such early stage funds because they are prepared to wait for a longer time for exit. As Sudesh indicated, “Since the quantum of investment made by these funds are small, they are willing to wait longer before exiting.” Vijay Babu also expressed a similar thought when he said, “Although there is exit pressure, it is currently not a huge challenge, as initial investment amounts were very small.” Investment from the larger mainstream funds should be obtained only during the acceleration or scaling stage. A wrong sequence of investors can result in a mismatch in the expectations of exit timing, which can harm the growth of the enterprise.

Even when there is a delay in exit, investors are willing to be patient if they see the investee company making good progress. Kannan said that, “The whole point of making investment is to get an exit, but I must say that investors in Vortex have been very patient”. This has been corroborated by VineetRai of Aavishkaar, one of the early investors in Vortex - “It was a tough investment. It took a long time to perfect.” Entrepreneurs on their part, however, must be sensitive to the VCs priority for exit and look at ways to address this in a proactive manner. While exit through a stock market listing is not always possible, finding worthy buyers for the investor’s stake or to buy back the shares if there is no third party investor are potential exit options. For example, S servals provided a partial exit to Aavishkaar when GBF acquired a part of their shareholding through a secondary transaction. In the words of Mukundan, “The idea was to show that there is a possibility of an exit even when the involvement is in a social enterprise.”

Figure 4 (overleaf) summarizes the above discussion and findings in the conceptual framework described in Section 2.2.

Figure 4
Conceptual mapping of VC involvement in the innovation lifecycle

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Stages in Innovation Lifecycle</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discovery</td>
<td>Small &lt;----------------------------- Size of Enterprise &lt;-----------------------------&gt; Large</td>
</tr>
<tr>
<td>Prototype</td>
<td>Low &lt;----------------------------- Scale of Funding requirement &lt;-----------------------------&gt; High</td>
</tr>
<tr>
<td>Acceleration</td>
<td>Informal &lt;------------------------ Organization Systems &amp; Processes &lt;------------------------&gt; Formal</td>
</tr>
<tr>
<td>Scaling</td>
<td>High &lt;----------------------------- Level of Risk Involved &lt;-----------------------------&gt; Moderate</td>
</tr>
<tr>
<td>Social</td>
<td>Social &lt;----------------------------- Nature of Innovation &lt;-----------------------------&gt; Mainstream</td>
</tr>
</tbody>
</table>

### Financial Areas of Contribution
- **Early stage risk capital (<$1 million)**: Due diligence finding help in strengthening internal processes.
- **Patient capital with long investment duration**: Strength of internal systems and processes.
- **Funding for relatively risky activities such as product development & innovation**: Limited choice of new investor for entrepreneur as the incoming investor needs to be in sync with existing investors.
- **Late stage capital (> $5 million)**: Pressure to scale rapidly with a strong commercial motive.

### Non-Financial Areas of Contribution
- **Due diligence finding help in strengthening internal processes**
- **Access and familiarity with the VC investors**
- **Enterprise domain should fall within investment scope of the fund**
- **Limited involvement from VC investors during the discovery phase**
- **Entrepreneurs depend on their personal savings, friends and families, support from incubation funds, and angel investors to support the enterprise**
- **Strength of internal systems and processes**
- **Assistance in recruiting and building strong team**
- **Mentoring and advice in business operations**
- **Provides increased visibility, credibility and network support**
- **Provide networking support to expand market share and scaling the social impact**
- **Area of concern and challenges**
- **Areas of concern and challenges**
- **Limited choice of new investor for entrepreneur as the incoming investor needs to be in sync with existing investors**
- **Investor involvement leading to delays in decision making**
- **Need to manage multiple investors**
- **Effort needed to service the reporting & other compliance requirements of investors**
- **Pressure to scale rapidly with a strong commercial motive**
- **Increased monitoring if there is delay in scaling**
- **Mix of social & mainstream investors to be managed simultaneously, with different needs to be serviced, resulting in management time and effort**
- **Exit Pressures**
5. CONCLUSION AND SUMMARY

Venture funding in the social sector has been increasing over the past few years. Even in a country like India, where the concept is relatively new, there are several VC funds that are interested in the social sector. VC funds which operate in the social space look to address unmet needs of social entrepreneurs while taking advantage of the market opportunity. The large population at the BoP gives immense potential to start and fund social enterprises. Dedicated social VC funds are able to understand the context and ground realities of social enterprise better than the mainstream VC funds. Compared to other sources of capital, VC investment provides much more than just capital. As indicated by Sateesh Andra, Managing Partner, Ventureast, “Many VC investors have been entrepreneurs themselves. They are able to understand the challenges of entrepreneurs and are able to empathize with them better because they have experienced such challenges themselves.” Creation of social VC segment has facilitated capital availability to deserving entrepreneurs who were earlier finding it difficult to raise early stage capital for social enterprises.

Social VC funds focus on promoting businesses where social impact is built into the business model. Unlike traditional VC funds which look at only sector attractiveness and business opportunity, social VC funds also assign a strong weightage to the social impact created by the investee company. Apart from the sustainability of the business itself, they also look at the sustainability and scalability of the social impact created. In the words of Snigdha Rao of Aavishkaar, “In the businesses that we invest in, we look for how impact is directly related to the outcome of the business plan in addition to satisfying [all the] criteria that a regular VC fund looks for. We try to see if the deal that we evaluate is delivering that impact, and we make sure that impact is an intrinsic part of the business model; in the sense if the business grows the impact should grow.” Generally, social VC investments do not consider impact created at the cost of financial returns. The enterprise should be capable of delivering healthy financial returns and scaling higher over a period of time for it to qualify as a potential investment for a social VC fund.

Despite the growth in social venture funding, the proportion of entrepreneurs who are able to successfully get VC funding is still small. Entrepreneurs who have strong professional experience and/ or good formal education backgrounds have a higher probability of successfully obtaining VC funding. VC investors expect the entrepreneurs to be committed and focussed on the success of the enterprise.

The contribution of VC investors can be classified into two categories: (i) financial; and (ii) non-financial. Social venture funds provide early stage risk capital for social enterprises, which at that stage may not meet the investment criteria of the larger mainstream VC funds. Moreover, since the social VC funds in general have a lower fund corpus as compared to the mainstream VC funds, their role is predominant in the early stage of enterprise. They would not be in a position to provide the large capital required for scaling up and late stage growth of the enterprise. However, as the enterprise grows and the innovation becomes more and more mainstream, a successful social enterprise is able to meet the investment criteria of the mainstream VC funds, which can then provide the funding for late stage growth. The initial investment from social VC funds thus facilitates subsequent investment from the larger mainstream funds.

Apart from funding, the VC firms provide inputs and guidance on overall operations of the enterprise. Broadly, these can be grouped as the “non-financial” contributions by the investor. Investors can provide valuable inputs in various areas like marketing, operations, and human resources. At the same time, entrepreneurs have to understand that
the investors would expect a higher degree of systems, processes and reporting from the enterprise. Given the exit pressures on the VC funds, the funds might want the enterprise to scale up faster, which at times might conflict with the growth objectives of the entrepreneur. Unlike conventional entrepreneurs, entrepreneurs of social enterprises may be more passionate about creating a social impact rather than pursue only business growth.

Entrepreneurs should bear in mind that VC investors do not make any special concessions when they make an investment in social enterprise. The same rigour and benchmarks that they use to evaluate investment opportunities in other sectors is used to evaluate social enterprises as well. VC investors not only expect to recover their capital but also expect a return on their investment. As VC investments are generally in the form of equity, there are no periodical interest payments to be made as in the case of debt funding. This however should not lead the entrepreneur to construe it akin to grant funding. From the beginning, there should be complete alignment in the objectives of both the investor and the entrepreneur for the success of the enterprise.

This study has highlighted the contributions of VC investor at different stages of social innovation. However, given the exploratory nature of the study, additional studies can be done to strengthen the findings of the present study. Scope for future studies include: (i) Empirical research on the impact of VC investment in the social sector, using a large sample base. This would help in identifying the dimensions on which the VC investors create an impact using robust quantitative methods. (ii) To identify areas and mechanisms that needs to be strengthened in the social innovation ecosystem that can increase the effectiveness of VC funding. (iii) Identify forms of investment structuring that can manage the potential conflicts between social impact and financial returns.


All the web links given in the document were last accessed on 17th July 2013.
APPENDIX 1

Glossary of different forms of social venture investing

Socially Responsible Investing: (a) It is also known as sustainable, socially conscious, “green” or ethical investing and is any investment strategy which seeks to consider both financial return and social good. (b) It is an investment strategy employed by individuals, corporations, and governments looking for ways to ensure their funds go to support socially responsible firms.\(^5^4\)

Blended Value: It refers to a business model that combines a revenue-generating business with a component which generates social-value.\(^5^5\)

Impact Investing: Impact investments are investments made into companies, organizations, and funds with the intention to generate measurable social and environmental impact alongside a financial return.\(^5^6\)

Mission-Driven Investing: Investing that has a double bottom line focused on achieving both financial and social returns.\(^5^7\)

Mission-Related Investing: Mission related investing is the term used to describe investments made by philanthropic entities in the pursuit of both financial and social returns. Unlike traditional socially responsible investing that relies on “negative screening” - the avoidance of public companies that do not pass certain social criteria - mission related investing implies proactively seeking investment opportunities that produce a blend of financial returns and social impact that are in line with the philanthropy’s mission.\(^5^8\)

Triple-Bottom Line: (a) The triple bottom line (abbreviated as TBL or 3BL, and also known as people, planet, profit or “the three pillars”) captures an expanded spectrum of values and criteria for measuring organizational (and societal) success: economic, ecological, and social.\(^5^9\) (b) Financial, social, and environmental effects of a firm’s policies and actions that determine its viability as a sustainable organization.\(^6^0\)

Values-Based Investing: An investment philosophy that considers criteria based on social and environmental values alongside financial returns when selecting an investment opportunity.\(^6^1\)

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56. Refer Note 3
Program Related Investing: Investments made by foundations to support charitable activities that involve the potential return of capital within an established time frame.  

Responsible Investing: Responsible investment is an investment strategy which seeks to generate both financial and sustainable value. It consists of a set of investment approaches that integrate environmental, social and governance and ethical issues into financial analysis and decision-making. 

Ethical Investing: Ethical investing gives individuals the power to allocate capital toward companies that are in line with their personal views, whether they are based on environmental, religious or political precepts. 

Environmental, Social, and Governance Screening: Environmental, social and corporate governance, also known as ESG, describes the three main areas of concern that have developed as the central factors in measuring the sustainability and ethical impact of an investment in a company or business.

64. Investopedia - http://www.investopedia.com/terms/e/ethical-investing.asp
### APPENDIX 2

Salient features of some of the prominent social venture funds operating in India

<table>
<thead>
<tr>
<th>Fund Name</th>
<th>Sector Focus</th>
<th>Fund Investors</th>
<th>Investment Size ($, million)</th>
<th>Aim of investment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aavishkaar</td>
<td>Agriculture and Dairy, Education, Energy, Handicrafts, Health, Water and Sanitation, Technology for Development &amp; Microfinance and Financial Inclusion</td>
<td>Banks, foundations, NABARD, SIDBI, IFC, CDC Group, pension funds, commercial organisations and retail individual Indian investors</td>
<td>0.05 - 4</td>
<td>Working with portfolio companies to provide services in rural areas as well as under-served regions</td>
</tr>
<tr>
<td>Lok Capital</td>
<td>Financial inclusion, education, healthcare and technology</td>
<td>Information not available</td>
<td>0.2 - 5</td>
<td>To promote inclusive growth by supporting the development of social enterprises to deliver basic services to serve the BoP segment</td>
</tr>
<tr>
<td>Acumen Fund</td>
<td>Health, water, energy, education and agriculture</td>
<td>Information not available</td>
<td>0.3 - 2.5</td>
<td>Potential to create significant social impact, show financial stability within 5-7 years and potential to achieve scale</td>
</tr>
<tr>
<td>Unitus</td>
<td>Rural distribution, Microfinance and financial inclusion, IT services and Education</td>
<td>Information not available</td>
<td>0.6 - 15</td>
<td>To reduce global poverty through economic self-empowerment</td>
</tr>
<tr>
<td>Oasis Fund</td>
<td>Affordable housing, healthcare, education, energy, livelihood opportunities, water and sanitation</td>
<td>Managed by Bamboo Finance; Targets high net worth and institutional investors for funds</td>
<td>3 - 7</td>
<td>To create significant social impact while earning attractive financial returns</td>
</tr>
<tr>
<td>Gray Matters Capital</td>
<td>Information, communication and technology space to bridge the urban-rural digital gap</td>
<td>Foundations like Rockdale, Rockefeller and Global Investment Initiative, among others</td>
<td>Information not available</td>
<td>Look at opportunities considering market demand and social impact</td>
</tr>
</tbody>
</table>

66. Refer Note 7
67. http://www.aavishkaar.in/
70. http://unitus.com/
72. http://grayghostventures.com/about/initiatives/graymatterscapital.html#tabSection
<table>
<thead>
<tr>
<th>Fund Name</th>
<th>Aavishkaar&lt;sup&gt;67&lt;/sup&gt;</th>
<th>Lok Capital&lt;sup&gt;68&lt;/sup&gt;</th>
<th>Acumen Fund&lt;sup&gt;69&lt;/sup&gt;</th>
<th>Unitus&lt;sup&gt;70&lt;/sup&gt;</th>
<th>Oasis Fund&lt;sup&gt;71&lt;/sup&gt;</th>
<th>Gray Matters Capital&lt;sup&gt;72&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage of Investment</td>
<td>Early stage</td>
<td>Across all stages</td>
<td>Across all stages</td>
<td>Across all stages</td>
<td>Across all stages</td>
<td>Information not available</td>
</tr>
<tr>
<td>Instrument</td>
<td>Generally a mix of common equity and convertible debentures. When appropriate, other venture capital instruments are used</td>
<td>Equity</td>
<td>Equity or Debt or Quasi- Equity instruments</td>
<td>Equity or Debt or Structured Products</td>
<td>Equity</td>
<td>Information not available</td>
</tr>
<tr>
<td>Number of Funds</td>
<td>4</td>
<td>2 + 1 charitable trust</td>
<td>Information not available</td>
<td>4</td>
<td>Information not available</td>
<td>Information not available</td>
</tr>
<tr>
<td>Number of Investments</td>
<td>28</td>
<td>Information not available</td>
<td>16</td>
<td>39</td>
<td>7</td>
<td>3</td>
</tr>
</tbody>
</table>
## APPENDIX 3

<table>
<thead>
<tr>
<th>Name</th>
<th>Designation</th>
<th>Organization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kannan</td>
<td>Founder, CTO &amp; Ex-CEO</td>
<td>Vortex</td>
</tr>
<tr>
<td>Vijay Babu</td>
<td>CEO</td>
<td>Vortex</td>
</tr>
<tr>
<td>Indira Bongarala</td>
<td>CFO</td>
<td>Vortex</td>
</tr>
<tr>
<td>P. Mukundan</td>
<td>Managing Director</td>
<td>Servals</td>
</tr>
<tr>
<td>Sujatha</td>
<td>Director</td>
<td>Servals</td>
</tr>
<tr>
<td>P. Pradeep</td>
<td>Partner</td>
<td>Aavishkaar</td>
</tr>
<tr>
<td>Snigdha Ra</td>
<td>Portfolio Manager</td>
<td>Aavishkaar</td>
</tr>
<tr>
<td>Shiva Shanker</td>
<td>Asia Investment Officer</td>
<td>Grassroots Business Fund</td>
</tr>
<tr>
<td>Sateesh Andra</td>
<td>Managing Partner</td>
<td>Ventureast</td>
</tr>
<tr>
<td>Siddharth Tata</td>
<td>Investment Officer</td>
<td>Acumen Fund</td>
</tr>
<tr>
<td>Sudesh Menon</td>
<td>Managing Director</td>
<td>Waterlife</td>
</tr>
<tr>
<td>K. Ramakrishnan</td>
<td>Executive Director</td>
<td>Spark Capital Advisors</td>
</tr>
<tr>
<td>Rangarajan Krishnan</td>
<td>Executive Vice President</td>
<td>Spark Capital Advisors</td>
</tr>
<tr>
<td>V. Harikesh</td>
<td>Executive Vice President</td>
<td>Spark Capital Advisors</td>
</tr>
</tbody>
</table>
APPENDIX 4

Detailed background information on the case study companies

A4.1 Vortex Engineering Private Limited

About Vortex

Vortex, based in Chennai, the capital of the state of Tamil Nadu, was founded in 2001 by Kannan to develop an ATM suitable for rural and semi-urban areas. The initial technology for such ATMs was developed by Kannan in collaboration with IIT Madras. Many trials later, in 2007, Kannan and his team developed a prototype of the ATM. This underwent several changes before it was launched commercially in 2008. In the same year, a pilot run of the equipment was conducted with the government owned State Bank of India, India’s largest bank. In 2009, the company won its first ever large-scale order of 545 ATMs from State Bank of India, after successful completion of the pilot run. In March 2010, Vortex announced its first large-scale roll out of solar ATMs in the country. Soon, many other public sector and private sector banks started placing small orders with Vortex.

With the growth of Vortex, there was an urgent need to bring in top management expertise in marketing and other commercial aspects of the business. In 2009, Kannan handed over the role of CEO of the company to Vijay Babu and took over as the CTO of the company to focus his efforts more on innovation and product development. While Kannan continued to have a minority shareholding in Vortex, he was also involved in several other activities that lead to grass-root level development.

By 2012, Vortex had an installation base of about 800 ATMs across the country, serving 23 banks. The company employed more than 130 employees working in various parts of the country. Vortex had also deployed solar ATMs in Nepal, Bangladesh and Dubai. Around 13 national and international Switch Partners worked with Vortex, with the ATMs having been tested to work with some of the leading switches in the market. Vortex also had export partners in Madagascar, Dhaka, Dubai and Kathmandu to handle the respective regions.

The TIME Magazine had cited Vortex to be one among the 10 start-ups which will change your life. Vortex had also won several prestigious awards and accolades in the past, including the Srijan Innovation Awards in 2009 in the Technology Innovation Category. The World Economic Forum had also selected Vortex to be one among 31 companies in the world which are Technology Pioneers 2011. Other notable recognitions of Vortex included being a finalist of the Wall Street Journal Asia Innovation Awards 2010 and being elected as a member of ‘Business Call to Action’ (BCtA). Vortex was also shortlisted for the Ashden Awards - 2013 in the International Ashden Awards category.

73. Refer Note 22 | 74. Interactions with management team at Vortex | 75. Refer Note 27
76. http://vortexindia.co.in/index.php/switch-partners
77. Time - Tech Pioneers 2010 - http://www.time.com/time/specials/packages/article/0,28804,2017050_2017049_2017042,00.html
Promoters background and Key Management Team at Vortex\textsuperscript{83,84,85,86,87}

**Kannan - Founder, CTO, and Ex-CEO**

Kannan, known as a ‘serial entrepreneur’, graduated in Mechanical Engineering in 1988 from IIT Madras, an institute of national importance set up by Government of India. His first entrepreneurial venture was the Sunbeam group of schools he set up in Vellore in 1990. In 2001, Kannan founded Vortex. In 2009, after he stepped down from the full-time CEO position in Vortex, Kannan started Fractal Foundation (a non-profit) to carry out work in the area of micro-spinning. He invented the Carding Machine, which simplified fabric production and helped handloom weavers use simple and efficient technology in the process. He also founded a company in 2011, which designed and manufactured machinery to convert cotton to yarn that brought down the minimum viable size of a spinning unit by about 100 times. In 2012, Kannan co-founded a company, which was aimed at building a platform for vocational skill training and to transform skill development by realistic simulation of various trades.

**Vijay Babu, CEO\textsuperscript{88}**

Vijay Babu was appointed as the CEO of Vortex in 2009. Vijay Babu holds a Masters’ degree from IIT-Madras and has over 20 years of experience of working with start-ups and established companies. Apart from working in senior positions in well-known companies, he has also founded many companies in the software and technology areas. His earlier experience includes being the Vice President & Head of Technology, Network Solutions Group in Sasken Communications, a leading solutions provider in telecommunications. Before this he was the Co-Founder of iSoftTech, which was subsequently acquired by Sasken. He has also worked in senior positions in companies like MTL Instruments Group plc and MTL Systems. Companies founded by Vijay Babu include iSoftTech, Sentinel Technologies and VisaSofts.

**Indira Bongarala, CFO\textsuperscript{89}**

Indira Bongarala is a chartered accountant and has over 17 years of experience in finance. Her specializations include business transitions & reengineering, setting up finance operations and business partnering in addition to normal finance functions. Her earlier stints include senior positions in Scope International, Areva T & D (for Asia-Pacific) and Tyco Fire & Security, India.

Over the years, the company has attracted senior level managers with 2-3 decades experience to lead the development, manufacturing, and service functions.

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\textsuperscript{84}. http://skillveri.com/about-us/mentor-profile-kannan/
\textsuperscript{85}. http://bilconference.in/2010/12/kannan/
\textsuperscript{86}. The Better India (May 2011) - http://www.thebetterindia.com/3343/carding-machine-inventing-india-weaving-genius/
\textsuperscript{87}. Linkedin - http://www.linkedin.com/company/skillveri-training-solutions-pvt-ltd
\textsuperscript{88}. http://vortexindia.co.in/index.php/about-us/management-team
\textsuperscript{89}. Refer Note 86
A4.2 Servals Automation Private Limited

About Servals Automation

Servals Automation Private Limited (Servals) is a Chennai based company and was started by Mukundan in 2002. At the time of his starting Servals, Mukundan had over 40 years of experience in the engineering industry. The flagship product of the company was the energy efficient “Venus” burner for the kerosene pump stoves used for cooking.

The “Venus” burner was invented by a grass roots innovator, V. Thiyagarajan. Unable to make investments to commercialize his product, he approached Mukundan to get professional support to scale his product. After repeated discussions, Mukundan was convinced with the product and decided to launch this product through Servals. He incorporated additional developments on product design, and subsequently the product was tested and validated by the Central Scientific Instruments Organization. After the initial launch, the product was further re-engineered to make it more affordable to the masses.

Servals enjoyed recognition right from the initial stages of its product history. The company won a competition for innovative stoves in South Africa sponsored by British Petroleum. The product then received support by The World Bank and British Petroleum. The Government of Tamilnadu recognized the importance of the burners and included it as a part of the relief kit distributed to Tsunami hit victims in 2004. The company received an order of 130,000 burners from the Government for this purpose. Despite the operational challenges to produce this huge quantity in a short time-span, the order was completed, giving the business the much needed boost.

In mid-2005, the burner was tested by Bureau of Indian Standards for energy efficiency. This testing and certification as the most fuel efficient burner with the highest thermal efficiency of over 66% helped Servals get additional recognition and credibility. As of 2012, the company claimed to be largest producer of kerosene burners in the country and had a creditable market share of 7% in the highly competitive market segment.

As an organization, Servals outsourced its manufacturing functions. While the company had only a core group of 12 as direct employees, they used NGOs and Self Help Groups (SHG) as channel partners for their production and marketing. For production, SAPL had tied up with an NGO in the village of Kuthambakkam, 35 km from Chennai, which produced 60% of Servals’s entire burner capacity. The NGO manufactured the burners and provided employment to the rural poor. Servals provided the materials and technical know-how and the NGO used their own people and facilities for production. As regards marketing, Servals worked with other NGOs who in turn networked with SHGs. These SHGs were used as marketing partners by the company, which ensured increased reach to the target audience. The main theme behind this model was to provide rural employment.

In its 10 year old journey, SAPL had been the recipient of several certifications and awards, including the prestigious Sankalp award in 2010 from Villgro. The company’s plant oil stove was included as a social innovation in the book ‘Break-through’ by CII. Servals won the award from Paraffin Safety Association, South Africa in 2005 for designing the most fuel efficient stove.

91. Interactions with management team at SAPL
Outlining his vision for Servals, Mukundan described his company as a “for-profit organisation that’s also a social enterprise”. He said, “My aim is to touch as many lives as possible while making this firm a successful and profitable entity.”

Promoters’ background

Mukundan, Founder and Managing Director

Mukundan had over four decades of experience in the industry. Though over 70 (as of 2012) and suffering health problems, he was actively spending time in managing the operations of the company with the help of a strong second line management team. Before starting Servals, Mukundan ran an agency business that he started in 1970. Through that entity, he created a bridge between small Indian manufacturers and customers of engineering products. In addition to the agency business, Mukundan also pursued other activities as and when business opportunities arose. For example, he ran a reprography business for some time, where he re-printed high priced equipment manuals at low prices for distribution along with the equipment to Indian customers. Another example of his acumen to identify opportunities is illustrated by the automation of loading operations at Indian Oil, the public sector oil behemoth.

Though Mukundan had been in business since 1970, his transformation as a social entrepreneur started with the setting up of Servals in 2002. This was a culmination of his inner desire to engage in a business activity that can benefit the poor and the rural people. The first product that was launched by Servals was the energy efficient Venus burner. Many products have been introduced into the market ever since.

He was also actively involved in guiding small scale industries on various business matters. He formed an association with the help of his professor from college to help small scale industries on various business matters. He has been in positions of responsibility in commercial and industrial bodies. He has held several posts of repute during his career including the past General Secretary of TANSTIA (Tamil Nadu Small and Tiny Industries Association), the past Chairman of All India Manufacturers Association (TNSB), the Chairman of Rural Energy Cell of ENFUSE (a service organization for energy conservation), Chairman of Policy and Programme in Federation of Associations of Small Industries (India) (an apex organization for all India small enterprises), Vice President of FESLA (the apex body of stove and burner manufacturers), Director at Rural Innovations Network and Director at Small Industries Product Promotion Organization (an NGO involved in market promotion of small scale industries’ products). He also represented the small scale industry in many committees and forums of both State and Central Government.

Mukundan has also been regularly invited to participate in related discussions on television and print media. He was included by Confederation of Indian Industries (CII) among 108 successful entrepreneurs in Tamil Nadu as well as profiled in Business Outlook, Rediff Business - An Amazing Journey of a 70 year old Social Entrepreneur. He was also included as one of the 20
social entrepreneurs in the book “I have a dream” by Rashmi Bansal.

A4.3 Waterlife India

About Waterlife
Waterlife was started in 2008 by an IIT alumnus Sudesh Menon, along with Mohan Ranbaore and Indranil Das. The company was headquartered in Hyderabad. It built and ran water purification plants focusing primarily on underserved areas of rural and urban India where people have no access to clean drinking water.

Waterlife built its first purification plant in Sukantanagar near Kolkata in West Bengal. The state accounts for one of the highest rates of waterborne diseases in the country. In about six months, about 150 villages in the state were covered by Waterlife. The operations were then expanded to the villages of Uttar Pradesh and TamilNadu, providing rural communities with potable drinking water.

The main business model of Waterlife involved setting up of community based water stations that provided safe water to the entire community at affordable rates. The scale (capacity) of the plant was on the estimated demand in the community. Before building the plant, the company first tested and analysed the water to understand the extent and nature of contamination. Considering the increasing incidence of waterborne diseases in urban areas, Waterlife then started providing custom made treatment systems for housing complexes, offices, residential buildings, schools, hospitals, restaurants and other institutional complexes. Waterlife also offered indigenous products that treated different types of contamination.

Apart from water purification plants, the company provided water harvesting solutions at both the household and the community level to conserve water and preserve the water table. Waste water management and sewage treatment plants were other areas that were being concentrated on by the company.

In addition to building the water purification plants, Waterlife also operated and maintained the plants. The company used latest, imported technology in the plants and customized the solution based on the extent of bacterial and chemical contamination in the local water source. The clean, pure drinking water was sold to the rural communities at affordable rates of Rs. 3 for 10 litres. The biggest challenge faced by the company was to convince the villagers to buy safe drinking water. The company took the help of a few educated locals to build the business model. Thus the delivery network was built by working with local entrepreneurs to expand the reach of each plant. Waterlife emphasised on green and environment friendly technology to build and maintain the plants, thus providing a clean, sustainable solution to the areas it services.

By 2013, the company had 137 installations, over 2.6 million consumers and had its presence in 7 Indian states. The company has been recognised at many prestigious forums including winning the Sankalp Forum Award in 2011 in the health, water and sanitation category and winning the G20 Challenge on Inclusive Business Innovation in 2012.96

Promoters’ background and key management team at Waterlife

Sudesh Menon - Founder and CEO\(^{97,98}\)

Menon holds a B.Tech degree from IIT Kharagpur and a degree in Management. He founded Waterlife in 2008 realising the critical need of clean water for people at the BOP. Before starting Waterlife, Menon was the CEO at WaterHealth International which was also involved in providing potable water to the villages in Hyderabad. When he realised that he wanted to serve a larger section of the society, he quit WaterHealth along with the other co-founders and started Waterlife. He was credited with pioneering the concept of sustainable community water systems in India. Menon has been at the forefront of both start-ups as well as large companies both in India and abroad. Prior experience included working as country head for General Electric in Kuala Lumpur.

Mohan Ranbaore - Executive Director\(^{99}\)

Mohan held an M.Sc degree in Chemistry from Mumbai University and was earlier the national director with Xerox India. At Xerox, Mohan was responsible for the largest business vertical and was the key member of the leadership, strategy and operations team. Mohan’s experience spans across direct and indirect sales, government sales and operations.

Indranil Das - Executive Director\(^{100}\)

Indranil is an MBA from Xavier Institute of Management, Bhubaneshwar and has experience at leadership positions in organizations like Xerox, Procter & Gamble, HCL and other start-ups. He has experience in sales, operations, strategy and business development.

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98. Refer Note 43 above
100. http://www.waterlifeindia.com/managementteam.html#das
## APPENDIX 5

Summary of the key features of VC investors who have funded the case study companies

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<thead>
<tr>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Headquarter location</strong></td>
<td>Chennai</td>
<td>USA</td>
<td>Luxembourg</td>
<td>Chennai</td>
<td>London</td>
<td>Mumbai</td>
<td>Washington DC</td>
<td>Boston</td>
</tr>
<tr>
<td><strong>Type of Fund</strong></td>
<td>Social VC fund</td>
<td>Social VC fund</td>
<td>Social VC fund</td>
<td>Social VC Fund/Foundation</td>
<td>Mainstream VC Fund</td>
<td>Mainstream VC Fund</td>
<td>Member of World Bank Group</td>
<td>Mainstream VC Fund</td>
</tr>
<tr>
<td><strong>Stage of investment</strong></td>
<td>Early stage</td>
<td>Growth stage</td>
<td>Seed, Early and Growth stage</td>
<td>Not applicable</td>
<td>Early and Growth stage</td>
<td>Seed, Early and Early growth stage</td>
<td>Member of World Bank Group</td>
<td>Mainstream VC Fund</td>
</tr>
<tr>
<td><strong>Sectors of interest</strong></td>
<td>Agriculture and Dairy, Education, Energy, Handicrafts, Health, Water and Sanitation, Technology for Development, Microfinance and Financial Inclusion</td>
<td>Affordable housing, education, energy, healthcare and livelihood opportunities</td>
<td>Technology and Technology-enabled, life science and clean environment</td>
<td>Fuel efficient stoves, hydro power, forest friendly livelihoods, solar, wind energy and low carbon manufacturing</td>
<td>Technology led innovations across IT/ITeS and Clean Tech sectors</td>
<td>Energy, water, roads, phone connections, healthcare, education, sanitation, waste management and access to financial services</td>
<td>Multiple sectors including internet, mobile, education, financial services, healthcare, consumer and emerging areas</td>
<td>Education, Health, Microfinance</td>
</tr>
<tr>
<td><strong>Geographical or other preferences if any</strong></td>
<td>Rural India</td>
<td>Emerging markets (Kenya, Tanzania, India, Indonesia, Bolivia &amp; Peru)</td>
<td>Asia, Latin America and Africa</td>
<td>Asia, Latin America and Africa</td>
<td>Low-income, rural, and fragile regions</td>
<td>Across India</td>
<td>United States, South Africa, India; 6 major cities in India with 18 million slum inhabitants</td>
<td></td>
</tr>
</tbody>
</table>

[^101]: [http://www.aavishkaar.in/](http://www.aavishkaar.in/)
[^103]: Interactions with the team at Aavishkaar
[^105]: Interactions with the team at GBF
[^108]: [http://www.tatacapital.com/PrivateEquity/OurFunds.htm](http://www.tatacapital.com/PrivateEquity/OurFunds.htm)
[^111]: [http://www.msdf.org/about/](http://www.msdf.org/about/)
<table>
<thead>
<tr>
<th>Fund Name</th>
<th>Range of funding ($, million)</th>
<th>Investment philosophy</th>
<th>Nature of post investment involvement</th>
<th>Investment structure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aavishkaar Venture Management Services, 101,102</td>
<td>0.5 - 4</td>
<td>Investing in commercially viable enterprises that also have social impact</td>
<td>Provides necessary advisory and implementation support, monitors both social and commercial returns, helps in further fund raise</td>
<td>Generally a mix of common equity and convertible debentures.</td>
</tr>
<tr>
<td>Grassroots Business Fund, 103,104</td>
<td>0.5 - 2</td>
<td>Fuel companies bringing affordable services to the Bop and create financial inclusion, while at the same time delivering profitable returns</td>
<td>Provides business advisory assistance to strengthen financial and strategic planning, corporate governance, human resource management, marketing, supply chain management, and MIS</td>
<td>Equity, mezzanine equity, straight debt and mezzanine debt instruments</td>
</tr>
<tr>
<td>Bamboo Finance 105</td>
<td>3 - 7</td>
<td>Supporting fast growth businesses with unique competitive advantages</td>
<td>Provides pro-active value-addition across business functions; helps companies in raising both debt and equity finance to support growth</td>
<td>Equity, mezzanine equity, straight debt and mezzanine debt instruments</td>
</tr>
<tr>
<td>Ventureast 106</td>
<td>4 - 10</td>
<td>Addresses issue of climate change by providing finance, technical and management support for low carbon entrepreneurs in the developing world</td>
<td>Provides pro-bono technical and management support</td>
<td>Equity, low interest loans and equity</td>
</tr>
<tr>
<td>Environmental Resources Management Foundation - Low Carbon Enterprise Fund 107</td>
<td>0.2 - 15</td>
<td>Invest in businesses that offer the potential for significant growth and financial return</td>
<td>Joint responsibility with owner-managers to execute on the realisation of growth and financial return</td>
<td>Equity, loans, convertible loans, structured instruments</td>
</tr>
<tr>
<td>Tata Capital Innovations Fund 108</td>
<td></td>
<td></td>
<td>Networking across the globe, business advice, enhance shareholder value, acts as advisor in future fund raise, strategizing with the top management</td>
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<tr>
<td>International Finance Corporation 110, 113</td>
<td></td>
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<td>Matrix Partners 111</td>
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<td>Michael &amp; Susan Dell Foundation 112</td>
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</table>

<p>| Duration of investment (years)                                           | 6-8 years                     | 8-15 years                                                                            |                                                                                           |                                                                                  |
| No. of funds under management (No.)                                      | 4                             | 3 6 2 1 180                                                                           |                                                                                           |                                                                                  |
| Total funds under management ($, million)                                | $ 232.2 million (Target size) | $47 million private investment and $12 million in grants                              | $ 250 million                                                                             | $ 300 million                                                                    | $ 2.3 million                                                                       | $ 600 million                                                                       |
| Total investments made in India (No.)                                    | 28                            | 5 10 46                                                                               | 311                                                                                      | 24                                                                               |                                                                                  |</p>
<table>
<thead>
<tr>
<th>In the words of the investors</th>
<th>Aavishkaar Venture Management Services</th>
<th>Grassroots Business Fund</th>
<th>Bamboo Finance</th>
<th>Ventureast</th>
<th>Environmental Resources Management Foundation-Low Carbon Enterprise Fund</th>
<th>Tata Capital Innovations Fund</th>
<th>International Finance Corporation</th>
<th>Matrix Partners</th>
<th>Michael &amp; Susan Dell Foundation</th>
</tr>
</thead>
<tbody>
<tr>
<td>We stand for early stage, risk capital, entrepreneur driven, local, and skill economy growth</td>
<td>So the way we are set up, we understand that any investment that goes in needs to be complimented with certain amount of technical assistance funding which from our side, we raise the grant funding specifically to help address certain challenges at these companies to have some scale up.</td>
<td>We are helping to grow low carbon businesses around the world.</td>
<td>Many of our investments are geared to facilitate financial inclusion in such markets. This also meshes well with the intent of the Reserve Bank of India, which is supporting greater branch outreach and financial access in rural/semi-urban India.</td>
<td>Business is a journey. We are a compass</td>
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<td></td>
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</tr>
</tbody>
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114. Refer Note 27