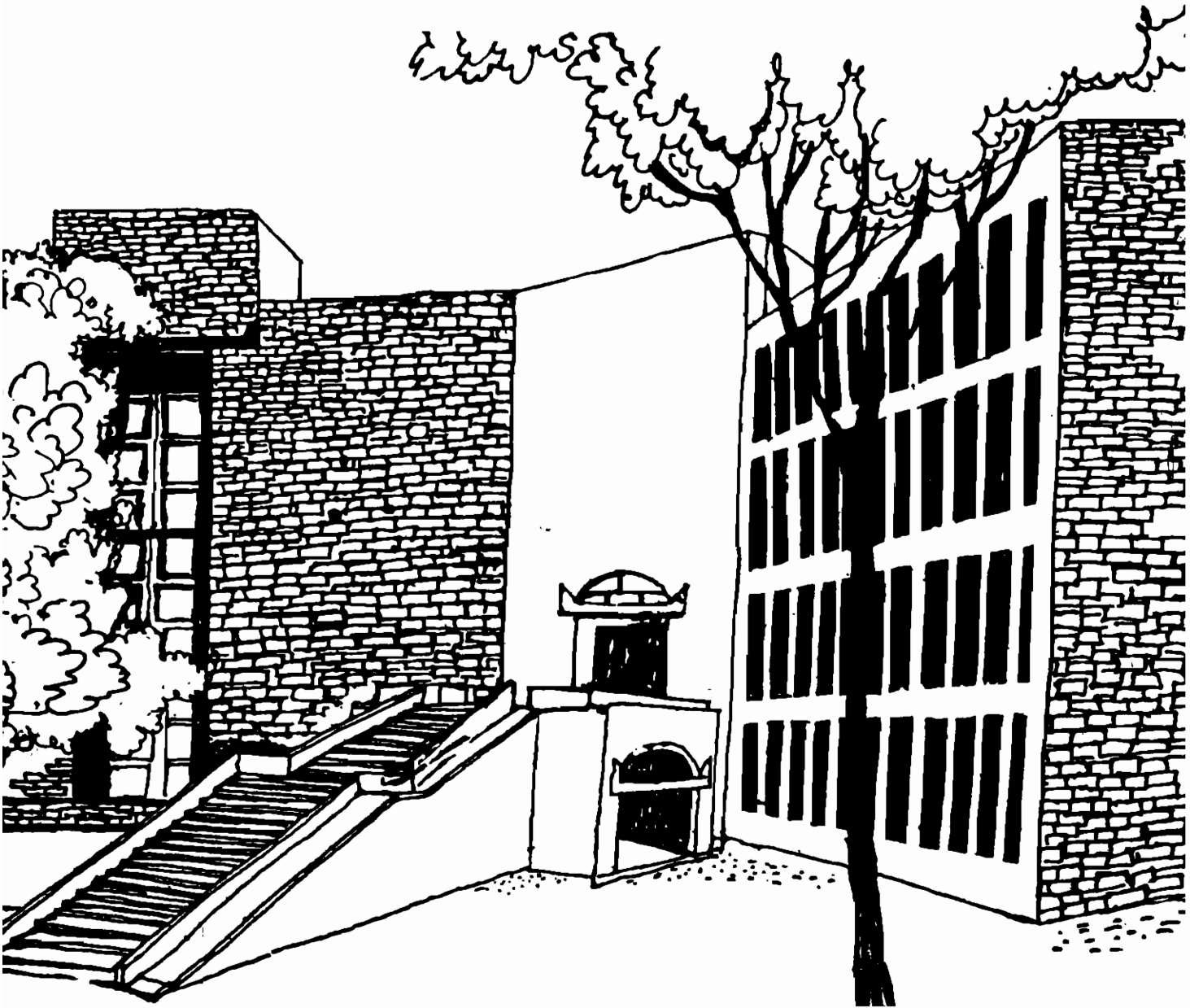




Working Paper




PROCESS OF DEVELOPING VENTURE CAPITAL
ACTIVITY: A STUDY OF THREE INDIAN VCFs

By

I.M. Pandey
Shantanu Dutta

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Abstract

This study investigates the venture capital activity development process in India. The discussion covers the issues of the initiation of venture capital fund, investment strategy and evaluation criteria and the value addition by venture capital firms (VCFs). The history of modern venture capital in India is not very old, which was formally introduced in 1986-87. In the initial years, VCFs in India encountered a number of problems in developing their business. From in-depth case studies of three VCFs of India, it is found that all of them went through the initial constraints of not knowing the venture capital business well and learnt through trial and error and failures and mistakes. They faced problems in raising funds and evaluating prospective ventures. All of them initially focused their investment on the high technology business. But gradually they shifted their focus towards potentially high-growth, high profitable businesses and not just high-tech businesses. It is also noticed that VCFs maintained a closer link with the assisted firms in order to ensure the success of the venture capital.

1. INTRODUCTION

The concept of venture capital in the sense of risk or start-up capital is quite old in India. This sort of capital has been made available for establishing new business, and financing later developments, by friends, relatives and family members for centuries. The history of modern venture capital in India is not very old, which started in mid '80s. Like many other Asian countries, in India as well, at the government policy level, venture capital is defined in terms of technology financing. For example, in India, tax and other incentives are given to venture capitalists only when finance is provided for high-tech ventures. In practice, most venture capitalists in India, however, follow a flexible and broad approach to venture capital. Venture capitalists supply funds to new, high risk, not necessarily high-tech ventures, and also extend management, marketing and financial skills to the assisted firms. In the Indian context, the concept of venture capital may be defined as investment in the form of equity, quasi-equity and/or conditional loan, made in new, unlisted, high risk or high-tech firms, started by technically or professionally qualified entrepreneurs, where venture capitalists

- expects the enterprise to have a very high growth rate,
- provides management and business skills to the enterprise,
- expects medium to long term gains, and
- does not expect any collateral to cover the capital provided (Pandey and Jang, 1996).

There are number of studies on the investment activities of venture capitalists in developed countries (Clarke, 1987; Bygrave and Timmons, 1985 and 1992; Fried and

Hisrich, 1988 and 1994; Macmillian et. al., 1985 and 1987; Tyebjee and Bruno, 1984; Wan, 1991; Wilson, 1993). There are few studies in the context of Asian countries (Ray 1991; Ray and Turpin, 1993; Rah et. al., 1994; Pandey, 1995), particularly the developing countries. But most of the studies have concentrated on the venture investment process and evaluation criteria. The issue of venture capital development process adopted by venture capital firms (VCFs), which will be discussed in this article, is not addressed in most of these studies.

The purpose of this article is to discuss the venture capital activity development process in India with the help of three in-depth case studies. The discussion will cover the issues of the initiation of venture capital activity, the sources of venture capital fund, the profile of funds, investment strategy and evaluation and the value addition by VCFs. For the case studies, we have selected Technology Development and Information Company of India (TDICI), Gujarat Venture Finance Limited (GVFL) and Canfina-VCF. TDICI, sponsored by all-India financial institution, the Industrial Credit & Investment Corporation of India (ICICI), is the largest venture capital company in India. GVFL, started by a state level financial institution has recently emerged as a significant player in the venture capital industry in India. GVFL is located in Gujarat, a fast growing industrial state, and is the only venture capital company in this state with a lot of promises. Canfina-VCF was started by a commercial bank, Canara Bank, and it is an important player in the southern part of India. The cases are analysed on the basis of the data and information obtained from the company reports, brochures, and extensive interviews

with the executives of these VCFs. The paper is divided into six parts. Part one gives introduction and objective of the study. In part two, we provide a brief profile of the status of venture capital in India. Part three to five analyse three case studies, and part six provides main conclusions of the study.

2. PROFILE OF VENTURE CAPITAL IN INDIA

In 1995, there were 11 venture capital firms in India who were members of the Indian Venture Capital Association (IVCA). The growth of these firms is given Table 1.

Table 1 here.

We may notice from Table 1 a steady increase in the number of projects as well as in the amount invested by VCFs. The average investment size has also increased over the years. This steady increase reflects the general trend in the venture capital industry in the country, with investors moving away from small and medium scale projects to larger ones. The total venture funds available for investment have also increased. In 1995, bulk of the funding for the venture firms came from the all India financial institutions (60%). Other contributors to the funds included the multilateral development agencies, such as the World Bank (17%); the private sector (6%); non-resident Indians (4%) and the nationalised banks (4%). Further, there are state financial institutions, foreign institutional

investors, the public sector, insurance companies, mutual funds, other banks and even members of the public.

As per the stages of financing, maximum investments were in projects in the start-up stage (44%), followed by later stage investment (29%). Turnaround financing attracted the least amount of investment (1%). These preferences were also reflected in the number of members who have invested in different financing stages. All the 11 members of IVCA have invested in start-up and later-stage projects, 7 members invested in other early stage projects, 6 in seed stage projects and only 4 in turnaround projects. Out of total venture capital investment, most of it was made in industrial products and machinery. Other favoured industries were consumer related and food and food processing (Table 2).

Table 2 here.

VCFs in India can be categorised into the following four groups (Pandey, 1996):

1. All-India DFIs-sponsored VCFs promoted by the all-India development financial institutions such as Technology Development and Information Company of India Limited (TDICI) by ICICI, Risk Capital and Technology Finance Corporation Limited (RCTFC) by IFCI and Risk Capital Fund by IDBI.

2. SFCs-sponsored VCFs promoted by the state-level developmental financial institutions such as Gujarat Venture Finance Limited (GVFL) by GIIC and Andhra Pradesh Venture Capital Limited (APVCL) by APSFC.

3. Banks-sponsored VCFs promoted by the public sector banks such as Canfina and SBI Caps.

4. Private VCFs promoted by the foreign banks/private sector companies and financial institutions such as Indus Venture Fund, Credit Capital Venture Fund and Grindlay's India Development Fund.

The selected VCFs for this study come from the first three different categories. Also they differ in size. TDICI ranks 1st, GVFL ranks 3rd and Canfina-VCF ranks 8th respectively in terms of amounts of funds under management.

3. TECHNOLOGY DEVELOPMENT AND INFORMATION

COMPANY OF INDIA LIMITED

In the era of economic liberalisation in Indian industry which started in 1980's, new financial products and services were introduced to support the resulting growth in the industrial sector. Technology Development and Information Company of India Limited

(TDICI), the first institutional initiative to deliver venture capital to Indian businesses, was established in this milieu.

3.1 Initial Initiatives and Constraints

Around 1983-84, the Industrial Credit and Investment Corporation of India (ICICI)* was toying with the idea of setting up a venture capital fund. It did some background work, particularly studying the way in which venture capital operates. The idea took shape only in 1985 when the new government came into power at the centre, and it started taking the initiative to liberalise the economy. ICICI management thought that liberalisation was an essential condition for the success of venture capital. An investor of equity looks for market growth, competition, and information for determining the share prices without which he may not be willing to put up his money. Thus in 1996, a venture capital division was set up within ICICI. The activity started with one or two persons, and the division was headed by Mr. K.S. Nadkarni. It took ICICI quite some time to get off the ground. Because, first of all, the management was looking for small- and medium-size business having an investment of Rs. 1-3 million. ICICI had experience of dealing with medium- to large-size companies. It did not have any experience in the SSI (small scale industries) sector. Thus, management did not have an idea about small-size business. Even to talk to the entrepreneurs of the small- and medium-sized firms was an effort on the part of ICICI's venture capital division. Secondly in India, at the time when ICICI started its venture capital division, the cult of equity did not exist. Loans were available from

* ICICI is a large development finance company in India. It has government, government-controlled banks and private institutions and individuals as its shareholders. It has grown under a private sector environment.

various sources (State Finance Corporations, Industrial Development Corporation, Commercial Banks, etc.), and equity was therefore, not a widely prevalent and favoured instrument. Thus there was initial resistance to the idea of equity participation. The debt-equity ratios were very high, even 2.5 : 1. Also ICICI did not know how to get out of the equity investment made in SSEs. There did not exist a secondary market for small companies. In those days listing requirement was Rs. 10 million. There was talk of an OTC exchange. When the idea took shape, the listing requirement was raised to Rs. 30 million. So it became very difficult for ICICI's venture capital division. Thirdly, the pricing of equity shares was controlled by the Controller of Capital Issues (CCI), even in the case of private limited companies. Thus, the environment was hostile to the concept of equity investment. Fourthly, the internal problems of ICICI created constraints for the operation of venture capital. It clearly had a development banking bias. ICICI was charging interest at 14 per cent on its lending, and in structuring their venture capital deals, this was taken as the basis and added 4-6 per cent more. Thus, the venture capital division's expectation was a return of 18-20 per cent. These projects were taken on an experimental basis with the intention of getting out quickly. The ICICI's venture capital division thus went the whole learning curve.

Because of these problems, particularly the low popularity of equity, the venture capital division of ICICI went for a number of non-equity instruments of venture financing. They devised an instrument which was quite actively used for the first 2-3 years, called a conditional loan. Over a period, management realised that the conditional loan was a bad

instrument in terms of return for supporting venture capital. So designing of new instruments, trying to understand the market and products, and convincing the entrepreneurs, were the tasks in the initial stages of the development of venture capital activity by ICICI. In fact, it took ICICI quite some time to understand the business of venture capital.

3.2 Establishment of TDICI

TDICI was promoted by ICICI and The Unit Trust of India (UTI)[†] in 1988. ICICI is among the more prominent development banks in India, with assets in excess of Rs. 183 billion (as on March 31, 1995) and over three thousand corporates in its loan portfolio. ICICI pioneered several innovations in the Indian Financial market place such as the first credit rating company, the first screen based stock market and first venture capital company. UTI is the largest mutual fund in the country with an investor base of 38 million and funds under management of over Rs. 517 billion. Through its ingenious savings products and astute funds management, UTI has effectively catalysed the flow of retail home savings into Indian corporate equity. As an asset management company, TDICI raises capital from a variety of domestic and international investors, constitutes them into distinct pools and deploys them primarily in unlisted companies that do not have easy access to public sources of debt or equity capital.

[†] UTI is a government-owned and one of the largest mutual funds in Asia.

3.3 Investment Philosophy and Strategy

At the core of TDICI's investment philosophy is the quest for extraordinary value. Investment opportunities are identified at an early stage, supportive with reasonably priced capital which provides for equitable sharing of risk and reward between the investor and the management team, and need-based, situation-specific post financing involvement.

The investment team adopts the following structured approach to discover opportunities:

- Identification of industries in high-growth and profitable sectors which can exploit the comparative advantages of the economy in a global context.
- Taking advantage of the powerful business development network to locate and pursue those companies that are well positioned to emerge as leaders in these industries.

TDICI believes that companies are only as good as the management teams behind them. Accordingly, its business is targeted at teams that possess the managerial bandwidth to compete and excel in the global marketplace. TDICI would ideally prefer to invest in innovative business ideas. However, TDICI also recognises that in emerging economies there will be numerous business delivering traditional products and services, that can develop into high-growth business opportunities. TDICI invests in such traditional businesses with a sustainable competitive edge.

As a successful early-stage private equity investor, TDICI's primary focus is on small- and medium-sized unlisted companies with exceptional growth and capital appreciation potential. These include start-up companies with one to three years of revenue record that require growth financing and companies close to a public offering.

TDICI also participates selectively in some initial public offerings (IPOs) that have the risk and capital appreciation profile of typical venture capital investments. Such offerings are often due to premature public floatation of stocks by Indian companies, taking advantage of certain regulatory provisions. As a rule investments are largely confined to those companies where TDICI can play the role of a significant financial stakeholder and an influential partner.

TDICI's funds are invested across a wide spectrum of industries and across companies at various stages of growth. Particularly worthy of mention is TDICI's understanding of knowledge-intensive sectors such as information technology, biotechnology and healthcare and appreciation of issues involved in financing of small and medium size companies. TDICI is uniquely positioned to invest in this types of situation because of its expertise.

Investments are primarily structured as subscription to equity share capital. Quite often, especially in the case of start-ups or early stage investments, funding is also structured as convertible preference share or convertible loans. Convertible instruments have been

useful in providing sweat equity to management teams through performance based conversion (pricing) contracts.

3.4 Change in Investment Focus over Time

TDICI had its initial focus on technological investment and this bias was continued for about 1-2 years (Pandey 1996). In 1988 when the TDICI's then president (Mr. K.S. Nadkarni) visited the USA, the venture capitalists there asked him about TDICI's primary objectives. They said if TDICI's primary objective was merely financing technology or the making of money. TDICI's initial focus on technology financing perhaps helped in financing new technologies, but the investment were not profitable (they did not have significant return potential to the investors of venture capital). To some extent TDICI's commercial approach to investment was secondary to technology. That was the learning curve for the TDICI's management.

Today, TDICI is looking at investments as an investor, and in the process. it has been able to support technologies. Today there is great demand for equity. A lot of restrictions have been removed. Debt-equity ratio norm of financial institutions has come down from 2.5:1 to 1:1 or less. Thus there is a great opportunity for the development of venture capital (Pandey 1996).

TDICI can also make portfolio investment in an existing company which is raising funds in the market. From day one it can get quotation in the press. These are companies owned

or started by well-established groups. So TDICI's risk profile could be low. However, TDICI has tried to restrict its investment in such companies to 25 percent of its total investment. It has identified a niche where there is not much competition today, and it has built up certain levels of skills in the organisation. TDICI could easily get profitable business if it decided to act as a merchant bank but that is not its objective.

TDICI's major profits are coming from some of the small ventures, not from the bigger companies. It has been able to make profits from smaller businesses. None of the venture capitalists want to get stuck for four years in an unlisted company without knowing what will happen in the future. The failure rate may be high. Thus, TDICI clearly has a niche - may be in terms of priority, commercial rate of return to investors is of paramount importance. If there are opportunities in the market-place for supporting technology businesses, TDICI would in any case, enter those businesses. According to TDICI's management, if the market does not support the technological innovations, whether it has fund or not, cannot get investment.

Through experience, TDICI learnt how to do business. It has clear focus now, a niche: it shall invest in those small- and medium-sized companies, new or existing, which will be able to raise funds from the financial institutions or go public after some time. What were the reasons for the shifting of TDICI's investment focus? They are:

- There is not much Research and Development taking place in the large organised sector companies in India. Hardly any R&D at the national level is taking place. There is process improvement and upgradation, but no product breakthroughs are coming forth. TDICI initially had discussion with organisations like Indian Space and Research Organisation (ISRO) but unfortunately, it could not support businesses emanating from the technology development of these organisations. There is lack of trust between industry and R&D organisations. Industry does not approach R&D organisations and vice versa. There is no compulsion. In its earlier experience, TDICI found that if it defined its business as technology finance, there were lots of problems. It was not getting enough business because it had narrow focus. For example, it turned down a company which had a good spare business in third-party computer maintenance. It was picked up by another venture capital company and is one of the major player today.
- Another major problem is the risk involvement with a technology based innovative project. After all TDICI has to think of its own profitability. Hence it is not prepared to take high risk all the time by investing only in technology based (without track record) projects. From the experience, management has found that the success rate of TDICI with its investee companies is only about 15 percent, in spite of thorough project appraisal before investment.

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TDICI is thus targeting itself to unlisted SMEs. As per the venture capital guidelines (released by the Government of India (GOI) on November 25, 1988), at least 75 percent of investment must be in such companies and 25 percent could be put into primary issues. But as per the new guidelines, which was released in 1996, VCFs have to invest at least 80 percent of their resources in the unlisted companies. So far, TDICI has restricted its exposure to the large companies to 25 percent of the portfolio. There is no focus as regards the sector or technology for such investments.

3.5 Investment Criteria and Risk Assessment of the Project

In the recent years, TDICI has been able to generate a large number of deal, because of its good reputation in the market. However, TDICI is very selective in choosing its investment projects. TDICI accepts only 10 percent of projects which come to it and rejects 90 percent. Although TDICI's investment process is subjective, investment is considered on the following parameters:

Management: TDICI looks for a sound management team whose members have an excellent track record. The integrity, commitment, and enterprise of the management team are important factors in their decision making. TDICI first evaluates the entrepreneur. At this stage, it does not even look at the proposal. If it does not get satisfactory feedback on the entrepreneur, it drops the proposal at this stage. The first thing TDICI checks with people known to the entrepreneur is his competence. It always has a direct interaction with the entrepreneur when he comes up with a proposal. He

should be knowledgeable about the business he is proposing. Another thing which TDICI **looks** for is his integrity. It goes to any extent to check this through his colleagues, **suppliers**, customers, bankers, buyers, etc. Next, entrepreneur's long-term vision is **important** for TDICI since it is going to make its investment for a long period of time.

Market: TDICI generally looks for a large and rapidly growing market opportunity for **its investee** companies. TDICI is not interested in companies which cannot grow. At least **the company** has to be a significant player in a niche market or a moderate to significant **player** in a large market. If the investee company is looking for a niche market, there should be substantial entry barrier. Overall, the main aim is there should be an expected **exponential growth**.

Technological Focus: TDICI also considers the stages of technology. If it is completely **new**, they are very cautious. Because this kind of project could not give expected return in **earlier** period. However they have invested quite successfully in some of the frontier technologies in India. Microland is an example in this regard, which is a value added reseller of Networking Products. If it is a declining stage technology, TDICI investigates its significance in India and other countries with potential markets. For example, in the era of PC technology, terminals for Mini Super Computers and Mainframes are becoming unpopular. But if a single company can tap the world market for this product, it will have a huge potential. Specially if they can set up their production base in a developing

country like India where production cost is expected to be low, they can have a significant influence in the world market.

Competitive Advantage: Long-term competitive advantage that would pose entry barriers to competitors.

Profitability: Potential for above-average profitability (TDICI looks for around 30 per cent after tax return from their investments) leading to attractive return over a four to seven year investment horizon.

After a preliminary analysis, TDICI takes up the detailed evaluation. One important aspect of this evaluation is presentation of the proposal by the promoter to the TDICI executives. The group head, president and the person directly concerned go through the presentation. They try to understand his ideas and ask questions. Then they make a techno-economic evaluation. It takes around 2-3 months in evaluating a project proposal.

TDICI mainly invests in the form of subscription to equity share capital of the company. Exit is planned through sale on the stock markets after the company is listed. TDICI looks for a minimum investment of Rs. 5 million and does not normally invest in excess of Rs. 50 million in any one company.

3.6 Value Addition

TDICI attaches a lot of importance to managerial support, monitoring and follow-up of assisted projects. At the implementation stage, it monitors and assists in the physical and financial progress of the project as well as market development initiatives. TDICI takes special care in the market development of the client's products. It provides help in obtaining potential market contacts. TDICI executives provide the basic management support services, both internally by participating in the meetings of the Board of Directors in their capacity as nominees, and externally by establishing associations with various organisations and agencies.

TDICI also helps its assisted firms in identifying key resource persons. For instance, in one venture an entrepreneur was proficient on the technical side, but lacked marketing skills. TDICI nominated a marketing expert as Director in the entrepreneur's firm. Similarly, in another company a financial expert was deputed to advise and guide the promoter on financial matters. In some other ventures even technical experts have been appointed to catalyse the development activities. TDICI draws resource persons from academia, industry and other sectors and deposes them in the firms with the assent of the entrepreneurs.

TDICI has institutionalised the process of understanding of the problems of entrepreneurs. It periodically meets entrepreneurs to understand their problems through

direct feedback. For example, it organises meetings of owners of assisted companies in **order** to ascertain technical, marketing, managerial or financial problems they face, and to **explore** ways to improve its interaction with them. Such meetings help to build up mutual **confidence**, dispel mistrust and generate several valuable suggestions for TDICI.

4. GUJARAT VENTURE FINANCE LIMITED

Gujarat is a fast growing industrial state - located in the western part of India. Historically, Gujarat has thrived on the principles of entrepreneurship, individual and collective risk taking. This has helped in developing a large number of small- and medium-sized companies within the state along with other large companies. The State Government and its agencies have also taken positive and pragmatic policies over the years to give a thrust to the industrialisation.

4.1 Initial Initiatives and Constraints

The World Bank and Government of India decided to select Gujarat Industrial Investment Corporation (GIIC) Limited as one of the first four agencies for developing venture capital in India. The others being Canara Bank, Andhra Pradesh Industrial Development Corporation (APIDC), Technology Development and Information company of India Limited (TDICI).

GIIC incorporated a new asset management company on 2nd July, 1990, viz. Gujarat Venture Finance Limited (GVFL), in association with Gujarat Lease Finance Corporation

Ltd., Gujarat Alkalies and Chemicals Ltd. and Gujarat State Fertiliser Corporation Limited. While GIIC holds 40 percent of the equity capital of GVFL, the rest of the capital has been contributed by the other three organisations. The GVFL is a fund management company and presently acts as a trustee manager of venture funds, namely, Gujarat Venture Capital Fund-1990 and Gujarat Venture Capital Fund-1995. The company started organising the operations and activities with the mission: *To provide financial assistance and hands on management support to innovative and technology based projects with inherent high risks and promising returns.*

GVFL faced a number of problems in the initial years. In the beginning it was difficult for GVFL to attract entrepreneurs because of its public sector image. Also the company had small capital base which restricted its investment decisions. Developing skilled personnel for the organisation was another problem. It was losing trained executives. Comparatively low salary structure of the company could not attract potential people. GVFL faced problems in raising funds in the initial years as it had to convince its investors without proven track record. In addition, because of its location in Western India, it makes difficult for GVFL to invest in other parts of India.

4.2 Objective of GVFL

GVFL started its operations with the following specific objectives:

- Launching of new product/process based on indigenous/imported know-how/technology.

- Technology innovation leading to improvement in profitability, cost reduction, improvement in quality and energy conservation.
- Commercialisation of indigenous material, components, systems, products based on local resources for import substitution.
- To adapt and modify an innovative process/technology which has been imported.
- Setting up a commercial plant by scaling up process developed at pilot plant.

GVFL did not continue for long in its original objective of patronising frontier technologies. It is now increasingly investing in growth companies to minimise investment risk. The reasons are same as in the case of TDICI's reasons for shifting the investment focus. Modified objectives of GVFL are:

- Nurturing start up companies
- Investing in growth companies
- Supporting new technologies and Innovation
- Supporting first generation entrepreneurs
- Supporting competitive edge of investee company

4.3 Investment Strategy

Like TDICI, GVFL's primary focus is on small and medium size unlisted companies with exceptional growth and capital appreciation potential. However, GVFL actively considers investment in innovative business and technology oriented companies which offer scope

for high returns. GVFL's funds are invested across a wide spectrum of industries and across companies at various stages of growth.

Investments are primarily structured as subscription to equity share capital. Quite often, especially in the case of start-ups or early stage investments, funding is also structured as convertible preference share or convertible loans. Convertible instruments have been useful in providing equity to management teams through performance based conversion (pricing) contracts. But in Gujarat Venture Capital Fund-95 (GVCF-95), GVFL only invested in equity and quasi equity and it did not grant any loan from this fund. From the past experience GVFL learnt that simultaneous investment in debt and equity of investee company's capital structure reduces a VCF's financial return. The salient features of GVFL's investment strategy are listed below:

- Focus on small and medium size unlisted companies with exceptional growth potential.
- Innovative and technology oriented companies which offer scope for high returns
- Investment in India with focus on Western India. GVFL is based in Ahmedabad - the Western part of India
- Co-investment with other VCFs and institutions in other parts of the country
- Start-up and early stage projects
- Equity and quasi equity investments
- Projects with significant ownership
- Investment ranging between Rs. 5 million to Rs. 30 million

4.4 Investment Criteria and Risk Analysis

GVFL's risk analysis process is subjective in nature and it is highly company specific. Here the risk analysis process of GVFL will be discussed with the help of an investee company of GVFL, namely, Permionics (India) Limited. Permionics is a start-up company which has been promoted by a technocrat. The promoter has developed ultra filtration membrane based domestic water purifiers which are being manufactured and marketed under the brand name of "CRYSTAL CLEAR". The membrane modules filter out not only the suspended impurities but also any kind of bacteria and virus. Financial assistance was given largely for prototype development and product launching. GVFL carries out risk analysis of the project before the investment is made.

GVFL considers the following parameters for risk analysis:

Promoter: GVFL first evaluates the entrepreneur. If it does not get satisfactory feedback on the entrepreneur, it drops the proposal at this stage. GVFL checks the competence of the entrepreneur or promoter. It goes to any extent to check this through his colleagues, suppliers, customers, bankers, buyers, etc. Also GVFL has a direct interaction with the entrepreneur when he comes up with a proposal. He should be knowledgeable about the business he is proposing. GVFL has categorised the risk with promoter in the following manner:

High Risk: First generation entrepreneur or executive turned entrepreneur

Moderate Risk: Business experience but not in relevant field

Low Risk: Business experience in relevant field.

Promoter of Permionics was qualified and experienced in related technology. Also he had a good reputation. But he had no experience in consumer marketing. So it can be considered a moderate risk venture in terms of the promoter's risk.

GVFL also looks for a sound management team whose members have an excellent track record. The integrity, commitment and enterprise of the management team are important factors in their decision making.

Market: GVFL generally looks for a large and rapidly growing market opportunity for its investee companies. GVFL is not interested in companies which cannot grow. GVFL has categorised the market risks in the following way:

High Risk: New product; new market to be created.

Moderate Risk: New product to substitute existing product.

Low Risk: Existing product (produced by new technology).

For the product of Permionics, concept awareness was already created by its competitors. So market was already there, but there were strong foreign competitors. Hence, the risk was a moderate market risk.

Technology: Like TDICI, GVFL also considers the stages of technology. If it is completely new, they are very cautious. This kind of project could not give expected return in earlier investments. However, GVFL has invested quite successfully in some of the frontier technologies in India. It has categorised the technology risk in the following way:

High Risk: New Technology; developed indigenously at small scale and not yet ready for commercialisation.

Moderate Risk: Existing process/technology modified at Bench Scale. There may be problem in high scale production.

Low Risk: Proven technology supplied by collaborators. There may be problem of absorption of technology.

In the case of Permionics the technology was developed by promoters on small scale and the technology is closely held with a few companies world-wide. Hence risk was considered high with respect to technology.

Product Risk: Long-term competitive advantage of the product is important that would pose entry barriers to competitors. Analysis of product risk is highly case specific. The purifier of Permionics had certain distinctive advantages, such as low maintenance,

complete purification, price advantage over competitor's product and difficulty to clone. Hence, the product risk was considered low.

Profitability: GVFL investigates project potential for above-average profitability (GVFL looks for an IRR of 35 per cent from its investments) leading to attractive return over a four to seven year investment horizon. It follows the risk-return relationship depicted below:

Overall Risk	Investment	Expected Return
Low		25% - 30%
Moderate		30% - 40%
High		> 40%

For Permionics the overall risk of the project was considered moderate. Hence there was an expectation of 35% internal rate of return.

After a preliminary analysis, GVFL takes up the detailed evaluation. One important aspect of this evaluation is presentation of the proposal by the promoter to the GVFL executives. The group head, president and the person directly concerned go through the presentation. They try to understand the promoter's ideas and ask questions. Then they

make a techno-economic evaluation. It takes around 2-3 months in evaluating a project proposal.

4.5 Value Addition

GVFL has a unique philosophy of “hands on management”. Venture finance companies act as complementary to the entrepreneurs or promoters. Venture capitalists, on the basis of their previous experience, advise the promoters on various aspects such as project planning, monitoring, financial management, arrangement for working capital, public issues etc. GVFL follows this philosophy more closely than any other venture finance companies. However, care is taken that it does not result in de facto management of the company.

GVFL takes an active interest in the working of the approved projects and maintains, for this purpose, panels of renowned management and financial experts whose advice is made available to the assisted ventures. Apart from strengthening the managerial functions of these new ventures, GVFL panels will also include eminent technocrats and scientists for providing technical guidance to the entrepreneurs.

GVFL also believes that a good relationship between the entrepreneur and the venture capitalist is a vital element in a successful venture. Therefore understanding this partnership is a necessary first step for the promoter and venture capitalist. While the promoter brings innovative ideas, technology process and personal commitment, the

venture capitalist adds financial backing and valuable new business development experience. The entrepreneur and the management team are usually the most critical elements in the relationship.

GVFL adds value in the following areas:

- Formulation of systems and procedures, company law matters
- Dealing with the Government agencies
- Market survey and marketing strategy
- Key personnel recruitment
- Monitoring system for implementation of project
- Accounting manual and budget
- Negotiation for technology transfer and tie up. Preparation of terms of reference. Appointment of technical consultant.
- Marketing tie up. Help in product launching and distributor appointment. Help in establishing networks with buyers, suppliers etc.
- Other inputs whenever needed

GVFL takes up the following actions in the process of value addition:

- Each Investment Officer handles maximum five deals so that he can have a closer look to the project
- Periodic visit by Investment Officer. Frequency of the visit depends on the deal stage

- GVFL forms panel for experts to advise assisted companies, which covers -
 - Company Law
 - Management Consultants
 - Accounting Consultants
 - Labour Law Experts
 - Industrial Engineering Experts
 - Technical Consultants
- Guidance at board level by senior GVFL Executives/Experts

5. CANFINA-VENTURE CAPITAL FUND

Financial institutions like IDBI, ICICI, IFCI were the first to enter the venture capital business. They were followed by the nationalised banks such as the State Bank of India. Canara Bank entered the venture capital business in 1989, through its subsidiary - Can Financial Services Ltd. Canfina-VCF is a relatively smaller player in the venture capital industry as compared to TDICI. How did venture capital evolve at Canfina-VCF? Was the process different from the one experienced by TDICI or GVFL?

5.1 Initial Efforts and Context

In 1985, the Chairman of Canara Bank initiated the idea of venture capital. The Bank has been quite active in financing small- and medium-size firms, and it had quite a few technical entrepreneurs in its portfolio. Thus, there existed a context for trying out venture capital and culturally, the bank was geared up to take up this activity.

Mr. Venkatdas was made responsible, as chief executive, for Canara Bank's venture capital business. He is a mechanical engineer and joined the bank with 5-6 years experience as a technical field officer. He has been associated with the credit administration of the small- and medium-size business in the bank (SSIs). He was instrumental in bringing the World Bank's industrial export-credit project to Canara Bank. He presented the scheme on behalf of the Bank to the World Bank. Thus, Can Bank established good rapport with the World Bank. It was at this time that Can Bank came to know about the World Bank's Technological Development fund. In 1988-89, when the World Bank was appraising Can Bank's industrial export-credit project, that the earlier idea of venture financing started taking shape. Canara Bank at the same time floated a subsidiary company, Can Financial Services Ltd. (Canfina), to further the growth and profitability of the bank. The Bank was interacting with the World Bank for a line of credit under their industry-technology development policy (ITP). Canara Bank was able to negotiate a US\$ 5.25 million line of credit with them.

The venture capital concept of Canara Bank shaped up according to the World Bank's thinking. Since Canara Bank had Canfina, it was thought that it could manage the fund. It created a trust, and made Canfina the trustee and manager of the Fund under the Indian Trust Act. In October 1989, the Canfina venture capital (Canfina-VCF) was born. It was started with an initial corpus (to be given in several tranches) of Rs 30 million (approximately US\$ 1 million) given by Canara Bank plus Rs 1 million given by Canfina

- the managers of the fund (the World Bank line of credit came later). Then Canara Bank deputed executives from Canfina to the venture fund. The venture capital activity slowly got started. Meanwhile Canara Bank also got US\$ 5.25 from the World Bank to be invested in the venture capital activity. In fact, the fund was to flow from the World Bank to the Government to IDBI to Canara Bank, and finally to Canfina-VCF.

5.2 Early Phase

The first six ventures were to be evaluated and approved by the World bank. Through this process, Canfina-VCF started understanding the nuances of venture capital investment evaluation. It started progressing slowly but steadily. Canfina-VCF formulated operating guidelines for the Fund as well as for the managers, which then became the investment policy aligned to the government guidelines (unlike TDICI which is not bound by these guidelines). Canfina-VCF was required to get permission from the RBI, the Ministry of Finance, the CCI, and the Department of Economic Affairs to enable the fund listed as a venture capital fund (TDICI, for example, cannot change its name; if a venture capital firm wants to be called venture capital fund, it has to be approved by the government). Canfina-VCF's investment policy is directed by the guidelines. Presently, it is investing 25 percent of funds in non-ventures.

Canfina-VCF now receives ten to fifteen deals each month. Most deals come on their own. When Canfina-VCF was learning the game, its rejection rate was about 60 percent. Today, the rejection rate has gone up to around 90 per cent. Canfina-VCF has now learnt

which project to accept and which to reject. It has become wiser through experience. In the initial phase, there was a tendency to look at the project *per se*, rather than the project's growth path and the management capability and competence of the managing team. Today, Canfina-VCF is dealing with a "company" and not the "project". But it does look into the project cost and equity requirement.

Canfina-VCF does not want to invest 49 per cent in equity alone. Some companies' equity requirements may be more than 49 per cent because promoters are unable to bring insufficient equity. Canfina-VCF also lends in a "package" but when there are other people ready to lend to the enterprise, it generally takes only the equity position. It has both conditional loans and income notes (IN) as the venture capital finance instruments. Ins are meant typically for second-stage financing. For example, an entrepreneur might have started by using his own capital and may not have a problem in terms of cash flow but he needs to grow faster using some technological upgradation. He would obviously need money. He may have diversification plans as well, but basically through value addition using technological development. Canfina-VCF would give him a loan with an initial low interest rate - may be no interest at all in the first year and 10 per cent p.a. afterwards. He also needs to pay a percentage royalty on sales. Royalty is like a reward for equity. What Canfina-VCF is looking for is a total IRR. This instrument is also helpful in financing an entrepreneur's working capital requirement as he may not be able to obtain funds from a bank. This instrument is better than the conditional loan due to some problems encountered with the latter. For example, the interests accumulates and

the entrepreneur can pay only when the cash is generated. Again, whatever the entrepreneur might have accumulated may have to be paid as royalty. Therefore, the entrepreneur is allowed to convert conditional loan into equity if he agrees.

Thus, in the case of Canfina-VCF, it can be concluded that in financing entrepreneurs, it looks at equity or equity-leading routes of financing. It is now shying away completely from conditional loans unless there are equity -convertible. It would like to see that all of its financing converts to equity which can ultimately become an OTC market product (or profitable). That is the reason why its rejection rate has increased. A project may be viable but may not offer a higher return or be incapable of a higher growth or have a low value addition (nothing may be added to reserves).

5.3 Performance Experience

By and large, Canfina-VCF has had mixed experience in its venture capital business so far. Of course, it is too early to say whether or not it has succeeded. It is still in an investment mode. Although it started in 1989, it considers 1990-91 as the first active year for this new business. Some assisted projects have posed problems which made Canfina-VCF more conscious, especially during 1992-93. Mr. Venkatdas states:

Our way of looking is that we analyse the whole thing and then if it works and when (we are) convinced, we grant second-round financing. We withdraw when we think there is a problem. For example, there may be a product at (a) purely development stage - this is an early-stage risk. We know that it is impossible to market the product. The entrepreneur

also could not show that it could work. During this particular stage, we can decide to write off this investment. So we would not put in more finance in spite of the entrepreneur being technically very competent. The product may not be sold. Let us say the project has succeeded, but there may not exist a market segment for which the product is meant, or may be the price is very high. Sometime the problem may be (of) management rather than (of) the product or the market. We do have problem cases. We have not eaten into our corpus in spite of some trouble cases. We have made some profit on after-tax basis.

Canfina-VCF's minimum level of investment has been Rs 1 million; but nowadays, it is looking for a minimum investment of Rs 3-4 million. Processing charges are still unchanged. It has invested in a number of technology-based enterprises. It considers technology as the leading factor for its investment decision.

Canfina-VCF's most successful case is that of a blue chip company where it invested Rs 0.15 million and provided conditional loan of Rs 2.5 million. After two bonuses, Canfina-VCF's equity investment (book value) has become Rs 0.75 million in two years. The company will go public shortly, may be with Rs 80 share value (8 times increase). Canfina-VCF's investment has increased 56b times in three years. It was bargaining for an initial equity of Rs 0.75 million, but the investee company did not give in since the promoters knew that it will perform well. Mr. Venkatdas feels that the entrepreneurs know they are going to succeed, and hence do not want to part with the equity and want to hold on.

Tax is a bothersome thing for Canfina-VCF. For example, TDICI does not pay any tax. In fact, Canfina-VCF's chief thinks that in venture capital there is no tax exemption at all. All those funds coming from the Unit Trust of India (UTI) can get tax exemptions but not those which do not have access to UTI funds.

5.4 Regional Focus and Co-financing

All companies asking to be financed by Canfina-VCF have to have technology. This is not the case with TDICI. Canfina-VCF would like to concentrate on South India. All its investments are in Bangalore, Hyderabad and Madras. It has started an experiment in co-financing Gujarat Venture Capital Co. Canfina-VCF as the lead financier, has cofinanced one unit in Gujarat. Co-financing needs perfect understanding of each others' culture, thinking, etc. by the two or more parties. Unfortunately, there are differences in the venture capital focus and this stands in the way of co-financing. Some venture capital enterprises have a pre-OTC focus. They like bought out deals. For calling it venture capital, it is necessary to know at what stage the Fund does its financing. It (VCF) should act like an investment company or a mutual fund. The focus must be on technology. Once there is an agreement on the venture capital focus, there can be many possibilities of cofinancing.

5.5 Customerisation

There are certain areas where the technology is imported which Canfina-VCF supports, provided there is good potential of customerisation of the product within India. Basically, it supports the financial effort needed to bring the product to the Indian market, adapting it to make it suitable to the Indian context, through the knowledge of the entrepreneurs. Canfina-VCF also assists in creating markets abroad. For example, Electrosonic Instruments, a firm assisted by Canfina-VCF, caters to the domestic market. It is newly developed in the country and has established itself domestically. Canfina-VCF saw its potential in the international market, and gave the company money to go abroad. The firm has tremendous market potential.

5.6 Evaluating Entrepreneurs

Canfina-VCF gathers information about the entrepreneurs from various sources. It tries to ascertain the commitment of the entrepreneur through interaction with people known to him. It insists on an effective team. Canfina-VCF avoids one-man show as well as adamant, rigid, inflexible entrepreneurs. It also avoids those people who show great enthusiasm to go public immediately after venture financing. They may be intending to make quick money from the investors. It checks out long-term commitment of the entrepreneur and his contribution in terms of critical areas of management. Also, it tries to know how the entrepreneurs are going to divide their authority and responsibility later on. They have to identify one of them as the leader.

Technical skills are good, but promoters must have appreciation for management requirements and skills. According to Mr. Venkatdas, if a man is endowed with both Lakshmi (money) and Saraswati (knowledge), he would be successful. He feels that an entrepreneur should be accommodating and have commercial orientation. If he is simply obsessed with technology, without concern for the commercial aspect of his enterprise, he may not succeed. He should be capable of looking at commercial options. He must be a strategist as well.

A number of entrepreneurs do not know the kind (and extent) of risk they are taking. During appraisal, Canfina-VCF executives know they are able to ascertain what risks the entrepreneurs are taking. Some of entrepreneurs do know the extent of these risks. They know all the situations that may arise but are not able to develop a good business plan. For example, a mechanical engineer approached Canfina-VCF with the concept of an auto-rikshaw. His design was good and comfortable from the user's point of view but he was not aware of the risk he was taking. He did not know anything about marketing, operating conditions, production, etc. He did not know anything about the environment. His product was good but Canfina-VCF could not finance him because he did not his market and business.

Canfina-VCF likes entrepreneurs to be ambitious, but they should also be pragmatic. An ambitious person knows his target but Canfina-VCF makes its own analysis. It tries to avoid-ambitious persons.

Canfina-VCF acts quite fast once a proposal is received and if the proposal is to be rejected, the promoter is informed within 15 days. If it has initial interest in the venture, it conducts a detailed analysis. It wants a simple plan but people do come to Canfina-VCF with ideas but without plans. Canfina-VCF executives discuss their ideas with them, and indicate whether they would be interested. They have learned by experience. Today their executives can pick and choose ventures. Canfina-VCF avoids those ventures which may not have growth potential or are expected to face problems. When it becomes interested in a venture, Canfina-VCF asks for a business plan. A lot of information has to be given in this plan.

5.7 Value Addition

Canfina-VCF participates in the management of companies. Its executives attend business committee meetings; they always conduct these meetings as a marketing audit, not merely for finance. The business environment is quite dynamic and so are the strategies; therefore one cannot procrastinate for 10 years and still continue working. Canfina-VCF scans the environment continuously. It looks at the Economic Times or the Financial Express for the fast changing economic and financial scenarios and then makes its assessments about the prospects of the business financed by it. In the meetings,

Canfina-VCF executives discuss product-mix options. They also participate in board meetings. In some companies, they are on the board of directors while in others they are just observers. After some time, the executives are able to know which companies in the portfolio will be able to produce good results. The executives optimise their time and efforts in those companies which are expected to grow fast. They have their usual followup and monitoring, and they talk to the entrepreneurs. They try not to behave like bankers. They act as entrepreneurs themselves. They keep themselves informed of the environmental changes and advise the clients accordingly. The entrepreneurs are not always able to know the rapid changes in the environment. Thus, one of the tasks of Canfina-VCF executives is to keep the entrepreneurs abreast of the environmental changes and discuss the financial implications. They have to condition themselves to ultimately go to the OTC market. For example, there is a company in Canfina-VCF's portfolio which has done extremely well. It has even gone to the export market, and it wants to go public. Even if it offers 20 per cent of its shares to the public, it can get lots of premium money. Canfina-VCF has been educating the company, how it will not lose control even if it goes public. To exit is a real problem in India. If the company has a good book value, the problem is to convert it into market value and still exit. Another problem is the locking period for the venture capital companies. For example, if a VCF has stayed with the company for 3-4 years, nurtured it and brought it to a profitable level, why should it be required to hold on to the investment in the company? In the USA, all biotech companies go the venture capital route when the technology is developed, and

when it takes some shape, they go the IPO route and venture capital firms exit. They do not carry on; they recycle their funds.

Venture capital companies today need to have a different breed of people, feels the chief of Canfina-VCF. According to him, they should be entrepreneurs; they should be given salaries and incentives and groomed properly and should be seen as partners. In the USA, they direct their best efforts to make the enterprises successful. They get management fees and share in the profit. Interest and commitment to the project have to be generated through incentives but since stock options are not allowed in India, employees in VCFs should be given share in the profit. The investment needs nurturing and development over a period of time.

6. CONCLUSION

Since venture capital is a relatively new concept in India, it is facing a large number of constraints, to mention a few - limit on project cost, guideline for surplus fund deployment, lack of awareness about venture capital, restrictive guidelines, no tax incentive to the investor or VCFs, anomalous tax structure (UTI funds like TDICI paid no tax, whereas others paid maximum marginal tax), lack of trained manpower, inadequate prospective deal flow, difficulties in resource mobilisation, problem with exit routes etc. In the midst of these constraints venture capital activities in India is progressing with a considerable pace.

From the case studies discussed above, it can be seen that the process of venture capital development activity is similar at TDICI, Canfina-VC and GVFL. In these cases, the initiative and the impetus came from the chief executives of the parent organisation. These organisations went through the initial constraints of not knowing the venture capital business well and learnt through trial and error and failures and mistakes. They have problem with fund mobilisation, generating deal flows, retaining experienced employees etc. These organisations put heavy weight on human resource development. GVFL in particular faces difficulties in administering its operation due to lack of management personnel.

In due course of time, TDICI, Canfina-VC and GVFL have deviated from their original objective of patronising frontier technologies. They are now increasingly investing in growth companies to minimise investment risk. A similar pattern could be witnessed in develop countries like USA (Bygrave and Timmons, 1992). Their primary focus is now on small and medium size unlisted companies with exceptional growth and capital appreciation potential. However, they actively consider investment in innovative business and technology oriented companies which offer scope for high returns. Their funds are invested across a wide spectrum of industries and across companies at various stages of growth. But GVFL has more regional bias.

These organisations focused on the loan form of assistance (conditional loan and income notes) in the initial years but very soon they realised that venture capital was basically an

equity financing mechanism. Equity financing suits both the entrepreneurs as well as the venture capitalists. Their experience was that it was difficult to administer conditional loan and income note schemes.

In terms of sources of finance or funds there is difference between India and other developed countries. In India majority of funds come from banks and government agencies. It is noticeable that in India, again most of the banks are significantly controlled by government. In developed countries, on the other hand, other sources like insurance companies, pension funds, corporate investors etc. play significant role in the venture capital pool. For example, in USA, pension funds provide more than one-third of the venture capital while the role of government is quite negligible (Bygrave and Timmons, 1992).

As regards investment evaluation, TDICI, Canfina-VC and GVFL, from the very beginning focused on the quality of entrepreneur. They try to collect information about the competence of promoter or entrepreneur from various sources. They also looked at their business plans closely to ascertain the characteristics of market, product and technology. One common feature with regard to the investment evaluation criteria of VCFs in India and other developed countries is that all of them focus their top attention to the entrepreneur's personality and experience (Pandey, 1996). However in terms of the specific traits of the entrepreneurs' personality and experience, the Indian practice differs significantly from that in the USA, Singapore and Japan. For example, amongst the five

criteria most frequently rated as essential in the USA, Singapore and Japan, the entrepreneur's characteristics include sustained intense efforts, familiarity with target market and ability to evaluate and handle risk well (Macmillan et. al., 1985; Ray, 1991; Ray and Turpin, 1993).

TDICI, Canfina-VC and GVFL act as complementary to the entrepreneurs or promoters. They, on the basis of their previous experience, advise the promoters on various aspects such as project planning, monitoring, financial management, arrangement for working capital, public issues etc. Also they help their investee companies in finding out resource persons for different purposes.

TABLE 1. Growth of venture capital in India

	1995	1994	1993
	(Rs million)	(Rs million)	(Rs million)
Investment	5,724	4,258	3,174
	(602)	(488)	(428)
Investment size	9.5	8.7	7.4
Amount of funds	8,281	6,119	4,918

Source: IVCA, The Indian Venture Capital Activity Report, 1995

Note: Numbers in parentheses indicate number of projects

TABLE 2. Financing by Industry

Industry	1995		1994		1993	
	Rs. million	Number	Rs. million	Number	Rs. million	Number
Incl. Products, Machinery	1634.79	169	1436.15	159	853.62	115
Consumer related	572.43	48	446.47	37	307.22	31
Food, Food Processing	472.46	50	335.76	38	234.77	29
Medical	406.49	40	331.16	38	286.71	37
Computer Software	404.95	53	261.55	38	126.76	22
Other Electronics	304.10	38	292.01	35	283.24	48
Biotechnology	256.22	24	142.82	19	118.94	16
Computer Hardware	184.27	24	167.32	20	163.93	29
Tel & Communications	183.83	12	158.65	14	125.53	13
Energy Related	130.36	16	98.76	14	97.80	16
Miscellaneous	1174.65	128	587.39	76	575.29	72
Total	5724.55	602	4258.04	488	3173.81	428

Source: IVCA, The Indian Venture Capital Activity Report, 1995

REFERENCES

- AVCJ. (1994). *The Guide to Venture Capital in Asia, 1994/95*. AVCJ Holding Limited, Hong Kong.
- Bygrave, W.D. and Timmons, J.A. (1985). An empirical model for the flows of venture capital. *Babson College Entrepreneurship Conference Proceedings*.
- Bygrave, W.D. and Timmons, J.A. (1992). *Venture Capital at the Crossroads*. Harvard Business School Press, Cambridge, MA.
- Clarke, R. (1987). *Venture Capital in Britain, America and Japan*. Croom Helm, London.
- Fried, V.H. and Hisrich, R.D. (1988). Venture capital research: past, present and future. *Entrepreneurship Theory and Practice*.
- Fried, V.H. and Hisrich, R.D. (1994). Toward a model of venture capital investment decision making. *Financial Management*, 23(3), 28-37.
- Macmillan, I.C., Siegal, R. and Narasimha, P.N. (1985). Criteria used by venture capitalists to evaluate new proposals. *Journal of Business Venturing*, 1, 119-128.
- Macmillan, I.C., Zemann, L. and Subba Narasimha, P.N. (1985). Criteria used for distinguishing successful from unsuccessful ventures in the venture screening process. *Journal of Business Venturing*, 2, 123-137.
- Pandey, I.M. (1995). *Venture Capital Investment Criteria used by Venture Capitalists in India*. Seventh Annual International Symposium on Small Business Finance. Florida, 24-25 April.
- Pandey, I.M. (1996). *Venture Capital: The Indian Experience*. Prentice-Hall of India Private Limited.

- Pandey, I.M. and Jang, A. (1996). Venture capital for financing technology in Taiwan. *Technovation*, 16(9), 499-514.
- Ray, D.M. (1991). Venture capital and entrepreneurial development in Singapore. *International Small Business Journal*, 10(1), 11-26.
- Ray, D.M. and Turpin, D.V. (1993). Venture capital in Japan. *International Small Business Journal*, 11(4), 39-56.
- Tyebjee, T.T. and Bruno, A.V. (1984). A model of venture capitalists investment activity. *Management Science*, 30(9), 1051-1066.
- Wan, V. (1991). Australian venture capital market revisited. *Technovation*, 11, 327-337.
- Wilson, H.I.M. (1993). An interregional analysis of venture capital and technology funding in the UK. *Technovation*, 13, 425-438.

