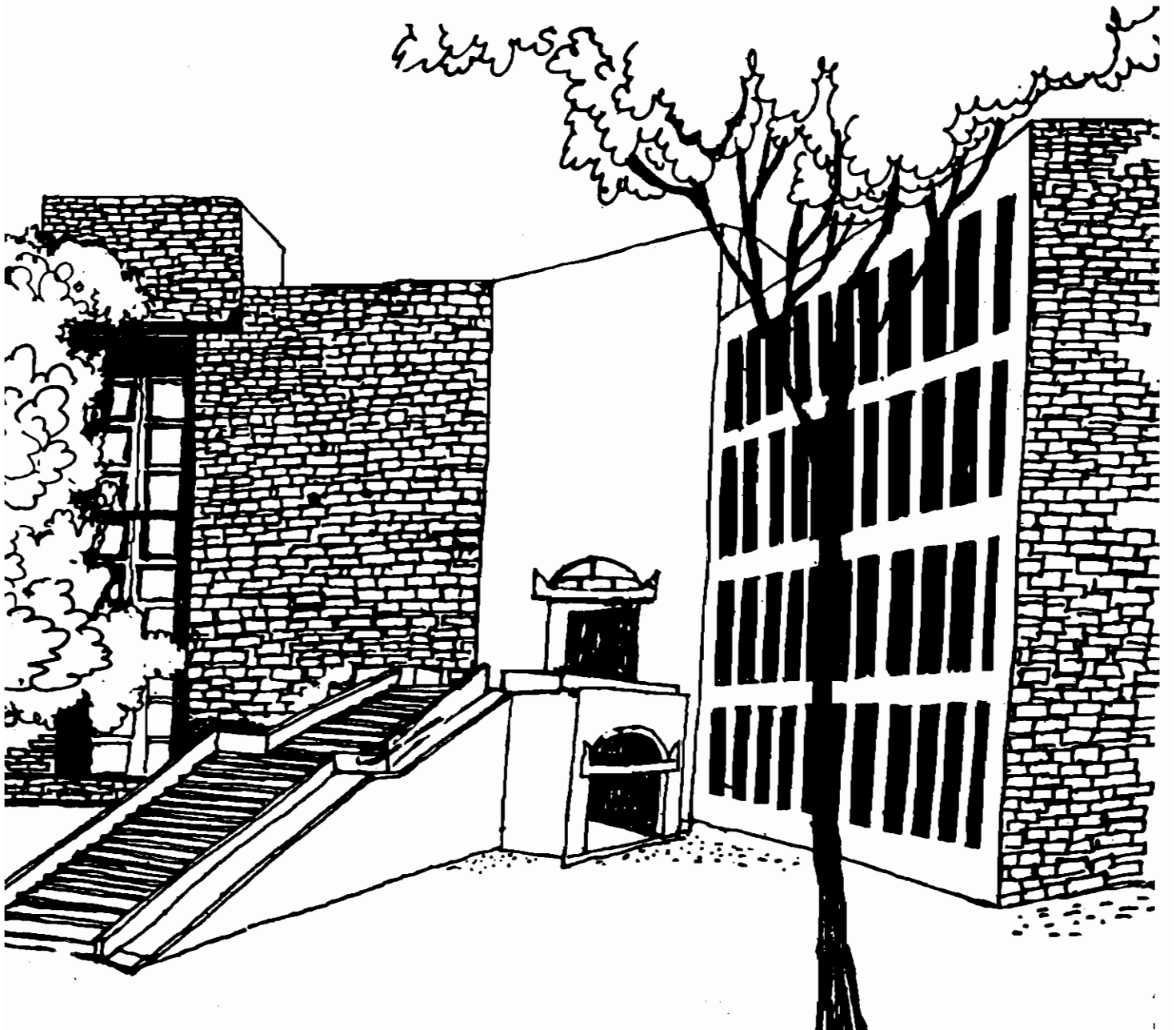





Working Paper



**Venture Capital and
Entrepreneurial Development:
The Indian Experience**

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Preface

The study is a detailed case analysis of the venture capital experience in India. It examines: (a) the strategic role of venture capital in the development of technology and innovative entrepreneurship; (b) the development process of venture capital in a developing country; and (c) the policy initiatives necessary for the success of venture capital. The analysis is based on primary information collected through interviews as well as published material.

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1. Introduction

In this section, we discuss the scope of the study, notion of venture capital and its strategic role. We also provide a brief account of the venture capital activity in the developed and developing countries.

1.1 Scope of the Study

Venture capital has developed in the Western countries on account of the need to provide non-conventional, risky finance for new ventures based on innovative entrepreneurship. There are not many empirical studies of the impact of venture capital. However, a few studies do exist in context of the developed countries. Because of the paucity of information, there is hardly any comprehensive study of the results of venture capital in developing countries. There is thus a need for systematic review of the venture capital experiences in selected developed and developing countries in order to understand the developmental role of venture capital and the process underlying the success of venture capital.

This study is a detailed case analysis of the venture capital experience in India. It is intended to draw lessons and implications for the development of venture capital in developing countries. The study examines:

- * the strategic role of venture capital in the development of technology, innovative entrepreneurship and small enterprises in India;
- * the development process of venture capital by a systematic analysis of venture capital practices and policies in India; and
- * the policy initiatives necessary for the success of venture capital in developing countries based on the Indian experience.

The study is based on primary information gathered through interviews with a number of managers of various venture capital companies and published material. The study is divided into five sections. Section 1 provides background of venture capital and a review of its development in some developed and developing countries. Section 2 explains the context of venture capital in India and its role in the technology and entrepreneurial development. Section 3 examines practices and policies of the venture capital firms (VCFs) in India. Section 4 reviews the policy initiatives necessary for the growth of the venture capital industry in a developing country like India. Section 5 summarises the findings of the study.

1.2 Notion of Venture Capital

Venture capital (VC) is a significant financial innovation in the twentieth century. It is generally considered as a synonym of high risk capital. It is often thought of as "the early stage financing of new and young enterprises seeking to grow rapidly." It usually implies an involvement by the venture capitalist in the management of the client enterprises. It has also come to be associated, especially in the USA, with the financing of high, and new, technology based enterprises. The conventional financiers generally support proven technologies with established markets. But high technology is not a necessary condition for venture financing. According to Pratt (1983):

There is a popular misconception that high technology is the principal driving factor behind the investment decision of U.S. venture capitalist.... Only a small minority of venture capital investments are in new concepts of technology where potential technical problems add a significant amount of risk to the new business development.

There is, however, no doubt that young, high tech companies would look forward to the venture capitalists for making risky capital available to them.

In broad terms, venture capital is the investment of long-term equity finance where the venture capitalist earns his return primarily in the form of capital gain. The underlying assumption is that the entrepreneur and the venture capitalist would act as 'partners'. The true venture capital does not remain just confined to high technology; any risky idea could be financed by the venture capitalist. In fact, venture capital can prove to be a powerful mechanism to institutionalise innovative entrepreneurship. It is a commitment of capital, or shareholdings, for the formation and setting up of small scale enterprises (SSEs) specializing in new ideas or new technologies. The venture capitalist focuses on growth; he would like to see small businesses growing into larger ones.

The main attributes of venture capital can be summarised as follows (Lorenz, 1985):

- * Actual or potential equity participation through direct purchase of shares, options or convertible securities. The objective is to make capital gains by selling off the investment once the enterprise becomes profitable.
- * Venture financing is a long-term illiquid investment; it is not repayable on demand. It requires long term investment attitude that necessitates the venture capital firms (VCFs) to wait for a long period, say 5-10 years, to make large profits.
- * Continuing participation of the venture capitalist in the management of the entrepreneur's business. This hands-on management approach helps him to protect and enhance his investment by actively involving and supporting the entrepreneur. More than finance, venture capitalist gives his marketing, technology, planning and management skills to the new firm.

The venture capitalist's management approach differs significantly from that of a conventional banker or a lender. The banker does not directly get involved in the operation and management of the company. He plays safe, keeps off management, remains passive and insists on collateral. Of course, when the banker's stake is very high, he may get his nominee appointed on the board of the company to safeguard his interests. The venture capitalist is also not exactly like the stock market investor who merely trades in the shares of a company without any relations with or knowledge of its management. In fact, venture capitalist combines the qualities of banker, stock market investor and entrepreneur in one. The following is the most vivid description of the profile of a venture capitalist (Batterson, 1986, p.8):

Venture capitalists are part riverboat gambler, part security analyst, and part entrepreneurial voyeur. There are skeptics and business romantics. Skeptics in that their realism must often temper the optimistic fervor of the entrepreneur. Romantics, in that often they have little real control over operations so must suspend disbelief. This is a business of ambiguity and adversity - ambiguity in that often the venture

capitalist must read between the lines, based on his general knowledge and experience, to derive the real state of affairs for an investment - ambiguity in that the investments are often highly liquid and must be held through good times and bad - ambiguity in that most entrepreneurs have a love/hate relationship with the venture capitalist. They want his money and at times, counsel, but want to be free of limitations and controls. Adversity in that most investments in this risky business go through the valley of the death at least once... . Prior to becoming successful, venture capital investments go many places most reasonable men would rather not be. Creative business development often depends on unreasonable men.

Historically venture capital evolved as a method of early-stage financing, but the notion of venture capital recognises different stages of financing (Exhibit 1.1). It also includes development, expansion and buyout financing for the enterprises which are unable to raise funds from the normal financing channels. VCFs also provide turnaround finance to revitalise and revive sick enterprises (Pratt's Guide, 1988).

A restricted definition of venture capital is followed in India for the purpose of the capital gains tax concession . The approved venture capital firms would be eligible for tax exemption on 60 per cent of the capital gains on equity investments. According to the Government of India (GOI) guidelines (refer to Appendix I) , the venture capital financing be confined to the enterprises fulfilling the following conditions : (a) *size*: total investment should not exceed Rs. 100 million; (b) *technology*: new or relatively untried or very closely held or being taken from pilot to commercial stage or which incorporates some significant improvement over the existing ones in India; and (c) *entrepreneur* : relatively new, professionally or technically qualified, with inadequate resources or backing to finance the project. However, these conditions do not apply if the financial assistance is provided for the revival of sick units. Venture capital excludes financing of enterprises engaged in trading, broking, investment or financial services, agency or liaison work. A venture capital firm in India is required to invest at least 75 per cent of its funds into the venture capital activity, and must be managed by professionals.

Exhibit 1.1 Stages in Venture Financing	
1. Early stage financing	<ul style="list-style-type: none"> * <i>Seed financing</i> for supporting a concept or idea * <i>R & D financing</i> for product development * <i>Start-up capital</i> for initial production and marketing * <i>First stage financing</i> for full-scale production and marketing
2. Expansion financing	<ul style="list-style-type: none"> * <i>Second stage financing</i> for working capital and initial expansion * <i>Development financing</i> for major expansion * <i>Bridge financing</i> for facilitating public issue
3. Acquisition/ buyout financing	<ul style="list-style-type: none"> * <i>Acquisition financing</i> for acquiring another firm for further growth * <i>Management buyout financing</i> for enabling operating group to acquire firm or part of its business * <i>Turnaround financing</i> for turning around a sick unit

In terms of the government policy, the focus of venture capital in India is on providing seed capital and financing for high technology. In fact, the venture capital mechanism, like in the Western countries, should be used for fostering the growth and development of enterprise, and need not be confined only to technology financing. Business enterprises in various sectors need venture capital for financing various stages of development. This broad approach would even help the venture capital firms to diversify their investment across various enterprises - some high tech, some low tech, and thus spread their risks. It does not make a business sense to expect venture capital firms to invest in high tech, high risk start-ups only.

1.3 Strategic Role of Venture Capital

1.3.1 TECHNOLOGY FINANCING

Most developing countries have followed the strategy of building up their basic scientific and technological infrastructure and of importing foreign technology in a regulated manner for promoting technological development. Such approach has benefitted those countries in a limited way; it has generally failed to solve the basic problem of linkages between a country's production system and its research and development system (Jequier and Hu, 1989).

Advances in materials use and improvement in production and productivity requires sophisticated technology. Technological developments are needed to accelerate growth and development and make production system cost effective, efficient and competitive. A focussed strategy and well-directed technology policy guiding the technology institutions would help to exert an important influence in the process of technological development.

Technology transfer is essential for the economic growth of a country. It is a process of harnessing research and development activities in science and technology with the purpose of transferring them into improved production. The following five factors are quite important in relation to the nature of technology transfer (Kozmetsky, 1990): (a) technology is a constantly replenishable national resource; (b) technology generates wealth, which in turn is the key to power - economic, social, and political; (c) technology is a prime factor for domestic productivity and international competitiveness; (d) technology is the driver for newer alliances among academia, business and government; and (e) technology requires new managerial philosophy and practice. We can add sixth dimension: technology development and transfer is a capital intensive, time consuming and high risk activity. It requires innovative mechanisms of financing and committed, skillful manpower.

The Office of Technology Assessment (OTA) of USA has identified twelve emerging technologies, where research has advanced to a considerable extent indicating high probability of technical success of a new product, technique and process and applications that might have high potential of being commercialised in near future (OTA, 1986). These technologies could be broadly classified in four groups: (a) materials, (b) electronics and information system, (c) manufacturing systems and (d) life science application technology. They have potential global markets worth billions of dollars. Similarly, a study by the Ministry of International Trade and Industry of Japan has identified thirteen projects of which 50 per cent are materials related and three have a strong material component. Thus, materials technology is expected to assume significant importance in the economic development of a country. Those countries which could adopt such technology fast would have comparative advantage in the international trade. Yet another area which has great potential for accelerating economic growth of developing countries is biotechnology. For illustrative purposes, we shall briefly

discuss the developments taking place in the fields of biotechnology and advanced materials, and the problems of financing those technologies.

Biotechnology is a field which can revolutionise the growth prospects of developing country. In the context of developing countries, agricultural biotechnology has immense value. Biotechnology could be defined as the application of organisms, biological systems or biological processes to manufacturing and service industries (Coombs, 1986). Alternatively, biotechnology could be considered as commercial exploitation of living organism or their components (Primrose, 1987). Yet another definition is provided by the Office of Technology Assessment of the USA, which defines biotechnology as any technique that uses living organisms, or substances from those organisms, to make or modify a product, to improve plants or animals or to develop micro-organisms for specific uses (OTA, 1989). There are multiple uses of biotechnology techniques, and they have the potential of significantly impacting the economy of a country. They are expected to result in increased agriculture production; improved comparative advantage in production of some commodities, new opportunities for the use of marginal lands and a reduced need for agrichemicals (The World Bank, 1990). Biotechnological techniques can help to improve the tolerance of both crops and animals to specific stresses, pests, and pathogens and to increase the efficiency with which plants and livestock utilize limiting nutrients.

Developed countries have invested substantial amount in the biotechnological research, and expect to reap the benefits of research by the end of this century. Both government and private sector have provided support in this regard. In developing countries, there is little research going on in the area of biotechnology since they lack both capital and skills. The field of biotechnology is fraught with high risk of failure. Because of the considerable investment and high risk, international research and funding agencies will have to support research efforts of the developing countries.

Biotechnology research is quite expensive and the risk of failure of specific projects is quite high. However, if the projects succeed, they can result into substantial payoff. Because of high risk, the normal channels of financing are not available to finance biotechnology projects. Risk financing in the form of venture capital would thus be needed to support biotechnological research and projects.

India spends about 1 per cent of GDP on science and technology research. As in other areas of technology, biotechnology research is mostly funded by public money. India possesses adequate human resources to carry out biotechnology research, but it lacks a well defined policy and programme. There are very few private sector companies and public sector activities dedicated to biotechnology. The cooperation between educational institutes, research and development organisations and industry is at a low key. Also, venture capital finance is available in a limited manner. India also does not have patent protection and environmental laws.

Yet another frontier technology with immense development potential is the technology of advanced materials. What are advanced materials? What technologies are required for their applications? Advanced materials are new materials which are engineered through technology for high performance. They require an appropriate integration of design, manufacturing and application. Examples of advanced materials could include structural composites, engineering plastics, polymers, structural ceramics, carbon fibres, biomaterial, titanium etc. Advanced materials could well be a vehicle for using available technology to access global markets.

Let us take a few examples of advanced materials. *Structural or advanced ceramics* (Ramakrishnan, 1992), processed in clean conditions from pure, homogeneous raw materials have the advantages of high strength and dimensional stability, chemical inertness and wear resistance and retention of these properties at high temperature. Hence they are well suited as raw materials - powders - for thermal spray coatings; consolidated products for use in cutting tools, forming dies, wear parts, bearings, seals, valves, advanced heat engines etc. According to one estimate, global market for structural ceramics is expected to be worth US \$ 24.5 billion by 1995 with Japan sharing 49 per cent, USA 40 per cent and Western Europe 12 per cent. Developed countries spend around 2.5 per cent of GDP on research and development in the area of advanced ceramics. India has vast resources of the raw materials required for the manufacture of advanced ceramics. Unfortunately, limited work is going on in this area in educational institutions and R & D organisations. Significant impacts can be achieved in India through an effective and time bound action plan in selected areas of advanced ceramics (e.g. alumina, zirconia, silicon nitride) with a collaboration between educational institutes, industry and R & D organisations.

Polymers (Nadkarni, 1992) have been steadily replacing traditional materials such as jute, paper, wood, glass, cement, and metal in diverse applications. They are highly versatile since they can be tailor-made to suit specific end use requirements. The major emerging markets for polymers have shifted from conventional packaging to use of polymers as structural materials in engineering applications, membranes for low energy separation process in the chemical industry, polymers for electronics, speciality polymers and products for bio-medical applications etc. India is far behind in the use of polymers, particularly the engineering and speciality polymers sector. For example, even today India does not produce polycetal - an engineering plastic - which was introduced in the West almost 40 years ago. Indian manufacturing capabilities are basically confined to commodity polymers (e.g. LDPE, HDPE, PVC, etc.) and a few engineering polymers (e.g. ABS, Nylon 6, PETP and PBTP). There is enormous market potential in the area of engineering polymers due to their cost-effectiveness in comparison with metals. The manufacturing of high performing engineering plastic would require a deeper understanding of the processing science and engineering.

Electronics is another field where important developments are taking place. India has a rapidly increasing electronics industry which requires a variety of electronics materials (Narayanan, 1992) such as silicon ferrites, piezoelectric material, alumina ceramics, tantalum, selenium etc. In India, electronics materials equal to 40 per cent of the domestic value of production is imported. CEL, a public sector company, is involved in the development and production of electronic components made from materials such as ferrites, alumina, piezoelectric ceramics and thick film materials. Ferrites have found wide applications in TV, telecommunications and industrial electronics. The current demand is estimated at 2,500 MT valued at Rs. 500 million. Piezoelectric ceramics have various uses such as in telephones, electronic buzzers, alarms, watches, gas ignition, filters etc. The current world-wide demand of \$ 105 million is estimated to grow to \$ 272 million by the end of this century. Alumina ceramics have the following applications: substrates for potentiometer bases, heat sinks, housing for rectifiers, mechanical seals etc. CEL has developed and commercialised almost 100 per cent of alumina ceramic components in India.

Composites (Balasubramanian, 1992), ceramics and metal matrix, is one of the advanced materials with an estimated world market of US \$ 23 billion by the late '90s. The main advantage of composites is their ability to tailor properties by varying the reinforcement matrix (resin, metal or ceramic), their ratio and lamination scheme (ply orientation and stacking sequence). In India, there is need to initiate action for the development of very carefully selected composites. Cost effective processing technologies will have to be developed for successful commercialisation of products.

Computers, telecommunications, electronics, informatics etc. are other useful technologies necessary for the faster industrial development of a country. Like biotechnology or any other advanced technologies, advanced materials technologies are capital intensive and highly risky. Thus, technological development requires a more aggressive, proactive financing approach. A number of developing countries, following the experiences of advanced countries, have focussed on the financing of technology through the mechanism of venture capital. Venture capital is a special case of technology financing and promotion. High technology involves high risk and takes a longer period to fructify in the commercial sense. It requires a longer term relationship between the entrepreneur and the lender.

1.3.2 FINANCING OF SMES

The financing of the small and medium size enterprises (SMEs), particularly the small scale enterprises (SSEs), deserves special treatment since it is quite difficult for them to raise funds from the capital markets. This is so because (a) SMEs are high risk ventures; (b) they are relatively less profitable; (c) they do not possess adequate tangible assets to offer as security; (d) they generally have small requirement for funds; and (e) they are not favoured by capital markets because of relatively low profitability and high risk, and inadequate collateral etc. SMEs are also reluctant to raise outside equity because of high transaction costs, fear of loss of control and increased disclosure requirements.

The risk of SMEs can be measured in terms of their default rate. A number of studies have revealed that the default rate has been catastrophically high in the case of new and small enterprises (Rangarajan, 1980; Levitsky, 1983; Little, 1987). In developing countries the default rate has been found to vary between 10 to 60 per cent (Anderson, 1982).

By definition, SMEs are small in size (investment), and therefore, their financial requirements are small. This becomes a handicap to raise equity capital from the capital markets unless special schemes/provisions are made. Most stock markets have tough listing requirements in terms of sales and minimum size of share issues which are beyond the scope of SMEs to satisfy. Even if access to the capital markets is made possible, the transaction cost of small equity issues is quite high. Lack of access to capital markets and high transaction costs make it almost impossible for SMEs to find out outside equity.

It is also not easy for SMEs to obtain loan, or it is available at a high cost. Given that lenders generally perceive that SMEs represent relatively high risk, they would charge a rate of interest which adequately compensates them for the risk involved, else they would be reluctant to provide loans to them. The loan processing cost is not related to the size of the loan; it is usually high in the case of small loans. Further, lenders require collateral for granting loans; most of SMEs are unable or unwilling to provide adequate security.

The general practice of financing small enterprises in developing countries can be summarised as follows (Nanjundan, 1987): 'Start-up capital is provided almost entirely from personal savings, with some help from friends and relatives. As firms grow and become profitable, institutional credit, mainly from commercial banks, may provide working capital finance. The expansion of firms tends to be financed by money lenders, other informal credit markets and retained earnings. Finally, the role of institutional finance and of special credit institutions, as well as credit guarantee schemes, becomes important in the upper ranges of SSEs. The bias of financial institutions towards units of larger size reflects a natural tendency to want to lend where costs are lower and risks less.' As explained later on, the Indian practice of financing SMEs follows, more or less, the same pattern.

Why should emphasis be put on SMEs in an economy? What are their advantages over the larger enterprises? SMEs provide for a highly decentralised production system. Thus their most attractive feature is their ability to create new jobs at a relatively low cost. The cost of creating one job in a large enterprise is 8-10 times higher than in a small enterprise. It has also been noticed in a number of countries, developed as well as developing, that while the big enterprises are losing millions of jobs, the small enterprises are creating them. One argument which may go against SMEs is their lower productivity in comparison to the larger enterprises; the value added per employee is less in the small sector than in the large. All experts in the field of small enterprises do not agree with this view. According to Little (1987), for example: 'the prima facie case for policy interventions in favour of SSEs as in developing economies must rest on evidence that small units on average use factor inputs more productively than their larger counterparts, so that a shift of resources in favour of small units would yield a net increase in output as well as increase in demand for unskilled labour.' SMEs are not created at the cost of the larger ones; smaller enterprises may grow to larger over time. The choice in an over populated poor country (such as India), where substantial unsatisfied demand and unemployment exist, is not between small sector and large sector rather than between to have small enterprises or none at all.

Venture capital is the most appropriate mechanism of financing SMEs. It is an equity or quasi-equity investment in highly potential businesses promoted by innovative entrepreneurs. It also provides managerial assistance and support. Financial engineering, a hall-mark of venture capital, helps to design financing instruments most suitable to the needs of entrepreneurs. The difference between venture capital and conventional financing lies in the norms and methods of financing, in the type of security and in the magnitude of risk involved. For a venture capital firm, security takes the form of intangible assets such as innovative ideas, technical expertise and skills, creative marketing ideas etc. Venture capital is a highly flexible system of financing SMEs. SMEs generally chosen by venture capital firms for investments are the ones which generate better economic results than do large enterprises.

How does venture capital contribute to the economic development? What is its economic impact in terms of sales and productivity improvement, export promotion, tax revenue generation, job creation etc? There do not exist many detailed studies of the impact of venture capital. A comprehensive study in the context of USA, undertaken by the U.S. Government Accounting Office in 1982, reveals the following (Wellons, 1984): 'The experience of 1,332 companies that were started with venture capital backing during the 1970s demonstrate benefits to the Nation's economy and productivity that are disproportionately large when compared with the amounts of capital invested. For example, with \$ 209 million invested to create 72 of these firms, growth in annual sales averaged 33

per cent a year, and in the process, these firms created an estimated 130,000 jobs, over \$ 100 million in corporate tax revenues, \$ 350 million employee tax revenues, and \$ 900 million in export sales. Moreover, most products were productivity enhancing, such as computer related equipment, fiber optics, industrial controls, lasers robots, word processors and numerous others. Yet another major contribution has been in terms of technological innovations leading to increased productivity. The most important source of productivity growth has been the application of new technology to the production of goods and services ... more than half of the net productivity growth during 1947 to 1977 is attributable to technological advances.'

Venture capital has helped in creating several highly successful, excellent companies in USA. Apple started by 21 years old Steven Jobs, and 26 years old Stephen Wozniak, and assisted by A.C. Markkula, a marketing expert, is one of them. Venrock Associate, a venture capital firm, invested \$ 488,000 in Apple which yielded a sales price of \$ 83.6 million ultimately. Tandem computers, a venture capital founded by James Treybig and supported by Kleiner Perkins, is another example. The venture capitalist invested \$ 1 million for Tandem's 40 per cent shares which became worth \$ 12.5 million after 3 years. Other success companies initiated with venture capital assistance include Digital Equipment Corporation, Dysan, INTEL etc. A number of multinational corporations such as General Electric and Xerox have set up venture capital divisions for technological development and financing projects within the company.

In conclusion one may state that SMEs in general and high technology-oriented SMEs in particular are critical for the economic development of a country. A country's economic plan should ensure that : (i) there is an adequate flow of equity finance available to promote small businesses, (ii) technical and managerial support systems are available in the form especially needed for small businesses, and (iii) small businesses have fair access to loan funds (Gill, 1984). Venture capital firms can specialise in promoting SMEs by providing these three services. The experience of developed countries, particularly that of USA, shows that venture capital has catalysed and reinforced the spirit of entrepreneurship and technology orientation. It has been instrumental in promoting entrepreneurship and creative and innovative business ideas. In turn, this has motivated investors and governments to commit resources to new enterprises.

1.4 Development of Venture Capital : International Experiences

In this section, we shall provide a brief review of the development of venture capital in some developed and developing countries. A detailed treatment of venture capital/risk capital in the case of both developed and developing countries is provided by Wall (1986).

1.4.1 DEVELOPED COUNTRIES

In the *United States of America*(USA) venture capital has contributed immensely to the growth of the economy. It has made significant contribution for the growth of the computer industry. It has also helped in the implementation of very large scale integration technology. While VC was instrumental in the development of American economy, its institutionalisation did not begin until after World War II. Prior to that, it was a common practice for wealthy individuals, syndicates organized by investment bankers or by a few families to make venture investments. The institutionalisation process was facilitated by the following factors:

- * Formulation of American Research and Development Corporation (ARDC) in Boston in 1946.
- * Passing of Small Business Investment Company (SBIC) Act in 1958 as a vehicle of small business financing.
- * Substantial tax incentives provided to investors investing their funds in VCFs.

ARDC, started by George Doriot, was the first successful venture capital firm. Its first investment worth \$61,400 was in Digital Equipment Corporation, which grew phenomenally in terms of sales, number of employees and market worth of its shares. Doriot's philosophy was to build creative men and their companies; for him capital gains were reward of this philosophy, not a business goal. The objective of his company was to 'seek out creative men with a vision of things to be done; help breathe life into new ideas and processes and products with capital - and with more than capital - with sensitive appreciation for creative drive.'

The creation of SBICs as a means of small business financing in 1958 gave the real impetus to the development of venture capital industry in USA. They proved to be very effective VCFs during the sixties and seventies. Even today, when the large venture capital organisations dominate the US venture industry, SBICs, in their new and modified form, are the major source of its growth.

The venture capital industry in USA has been growing ever since its inception. Its growth was accentuated after 1978 when the capital gains tax was reduced from 49 per cent to 28 per cent. The rate was brought down to 20 per cent for individuals in 1981. These reductions resulted into substantial return to investors, and the venture capital industry was able to attract capital as their securities were readily accepted by the investors. This coincided with the emergence of the very large scale integration which reduced the cost of computer chips manifold and led to a boost of the computer industry.

Although the venture capital finance is made available to all enterprises in USA, yet, over the years, the high technology business have received large funds. Most of the venture capital investments in U.S. are confined to high technology, high risk and rapidly changing businesses. Substantial venture capital has been invested in the fields in information, communication, genetic engineering, medical electronics, biotechnology and artificial intelligence. In volume terms, USA dominates the venture capital business with a pool of about \$ 30 billion in 1991, having increased from \$16.3 billion at the end of 1984 (OECD 1986). Three main reasons can be cited for the significant growth of venture capital in USA (OECD, 1986a):

- * a very favourable attitude by the public at large towards entrepreneurship, success as well as failures;
- * a very dynamic financial markets illustrated by the existence of an efficient stock exchange, a tradition of company shares held by the public and a competitive banking system;
- * government intervention limited essentially to acting on the major framework conditions including the individual taxation system.

The venture capital firms in USA can be categorised in four main groups (Clark, 1987): (a) private venture capital firms (PVCFs); (b) small business investment companies (SBICs); (c) subsidiaries of finance corporations; and (d) subsidiaries of non-finance corporations. PVCFs include family firms and institutionally funded independent private partnerships and are most dominant source of venture capital. They account for about 60 per cent of venture capital industry's capital; and they are most experienced and sophisticated investors. Institutionally-funded private firms are generally organised as limited partnership where venture capitalist, in his capacity as general partner, is responsible for the management of partnership. For their management, general partners are compensated in the form of an annual management fees - generally 2.5 - 3 per cent of the capital invested and a percentage - quite often 20 per cent - of the net long-term capital gain.

SBICs, created under SBIC Act 1958, have access to government loan in addition to private committed capital. They are of two types: equity-oriented SBICs mostly providing equity capital and debt-oriented mostly providing loan. Equity-oriented SBICs account for about 8 per cent of the venture capital. Subsidiaries of finance and non-finance corporations account for about 17 per cent of the venture capital.

In USA, the expansion-stage financing is much higher than the seed stage or the later stage of acquisition or buyout financing. This indicates the interest and objectives of the venture capitalists in associating with a business/product which has been successfully developed and pretested. Also, their goal is to make large financial return.

In *Europe*, venture capital started in the eighties. A number of European countries now have venture capital firms which are members of the European Venture Capital Association (EVCA) founded in 1983. In spite of these developments, about three-fourths of the venture capital investment in Europe is confined to three countries: U.K., France and the Netherlands.

A number of factors can be attributed to the slow growth of venture capital in Europe. For example, it is suggested that 'financial institutions, equity markets and company law have all evolved differently in these countries, with the result that venture capital along United States - or United Kingdom - lines has scarcely developed' (OECD, 1986). The government policy in USA has been to create a climate conducive to risk taking and entrepreneurship, and deregulating markets and reducing taxes rather than providing special incentives for the financing of SMEs as was the case in a number of European countries.

The United Kingdom has the largest venture capital industry outside USA; it accounts for about two-thirds of total VC investments in the European Community (OECD 1986). In the past, the growth of new businesses in Britain had been hampered by the "equity-gap". The need has been for a steady and growing supply of VC to finance entrepreneurial talent (Lorenz, 1985).

The venture capital industry had invested only £ 10 million in 1979 whereas the amount increased to £ 284 million in 1984. It has made significant contribution in creating hundreds of new enterprises and in catalysing the spirit of entrepreneurship. There are estimated to be well over hundred venture capital firms in U.K. having provided venture funds to thousands of companies. In 1988, for example, funds worth Rs.37,000 million to over 1,500 companies was provided by the U.K. venture capital industry (Cottrell, 1989). The following reasons are attributed for the rapid growth of the UK venture capital industry (Mason, 1987):

- * The demonstration effect of the high profitability of venture capital in USA (e.g. the flotation of Apple Computer).
- * The establishment of regional venture capital organisations such as Investors in Industry (3i).
- * The establishment of Unlisted Securities Market (USM) and the Business Expansion Scheme (BES). BES is designed to motivate private investors to invest in shares of private, unquoted companies through large tax exemptions.
- * The growth in the number of management buyouts, which has created a demand for equity finance.
- * The increased involvement of merchant banks, providing venture capital to small, growing companies with a view to obtaining future fee earning work from them.
- * The "bandwagon" effect.

Historically, the small firms in U.K. have received equity finance from the investment trusts. But in the post-war periods, investment trusts started investing in large quoted companies at the cost of small risky companies. The most important source of equity finance for new firms during the 1960s and early 1970s was Investors in Industry or 3i. 3i was established in 1945 by the Bank of England and the major clearing banks with the purpose of supplying long-term finance to growing firms. About two-thirds of 3i's financing goes to small firms. They provide finance in the form of loans and equity investments. 3i is not venture capital in the sense it is understood in USA. 3i depends on interest or dividend for its return rather than only on capital gains. 3i has excellent pool of management, and a large number of its managers have joined venture capital firm.

It was the latter part of 1980 that a large number of private venture funds emerged in U.K. A number of factors, such as tax incentives, establishment of unlisted securities market (USM), encouragement to investment trusts etc. - contributed to this development.

U.K. is an excellent example of a country where a number of tax incentives have been initiated specifically to provide impetus to the venture capital investment. In fact, it has been found in U.K. that investors are motivated more by the potential tax breaks rather than by the quality of investments. It is estimated that only 2 per cent of the BES total investments is invested in the high tech sector, and 6 per cent in young or very young start-up companies (OECD, 1986).

U.K.'s Unlisted Securities Market (USM) was established in 1980 with highly flexible rules to admit start-ups. It operates on the same basis as the regular stock market, but with liberal regulations for trading the shares. For example, USM requires 10 per cent of a company's shares to be offered in the primary issues before the shares can be traded; in listed market the requirement is 25 per cent. The establishment of USM boosted venture activity since it made much easier for entrepreneurs and venture capitalists to realize their capital gains. The U.K. experience has, however, shown that most businesses which obtained the USM listing were at the larger end of the SME scale. This necessitated to introduce a Third Market in 1987 for smaller companies, and with even easier listing requirements than required by USM.

Yet another policy change in U.K giving encouragement to venture capital was liberalisation of rules regarding investment trusts and investment companies in 1981. It was made easier for these companies to invest in unlisted securities which encourage a large number of them to enter into the venture capital business.

In *France*, Societes Financieres d'Innovation (SFI), with the fiscal advantage of setting 50 per cent of their new investments against taxable income, were established in 1972. They were not highly successful. This lack of success could be attributed to the SFI's failing to attract the right sort of managers, and failing to appreciate the importance of a direct involvement in the management of the supported companies (Teixeira de Costa, 1983). French government has recently provided more tax incentives to revitalise the VC industry, which has led to the establishment of Fonds Commun de Placement a Risque in 1983. Investors receive tax-exempt capital gains at the end of five years.

VC is a fast developing concept in France, with a number of genuine VC funds now in existence - mostly owned or supported by banks. Three of these funds are long standing with long experience of over 10 years; there are about 40 other sources of small company risk capital (Lorenz, 1985). The creation of the 'Second Marche' and development of financial instruments such as warrants and options have helped the growth of VC industry. Expansion capital dominates the French venture capital industry, accounting for some 65 per cent of investment in recent years.

The *Netherlands* has a fast growing venture capital market, with some 25 private venture capital funds and 20 other small business risk finance funds now established. Like in France a number of the funds are owned or supported by banks. Government provides a lot of encouragement to the venture capital industry. 'A special measure introduced by the government in 1981 to help provide risk capital for the small-business sector is the *particuliere participatie maatschappijen* (PPM Scheme). PPMs are small-company investment funds where up to half the risk is indemnified by the government. PPMs can invest up to 40 per cent of their total investments outside the rather complex rules of the scheme (Lorenz, 1985).' Government has established a number of PPMs which are giving a great boost to the VC environment. The establishment by the Amsterdam Stock Exchange in 1982 of the Parallel Market (a second tier market with lenient listing requirements) has given the industry a further encouragement to the venture capital industry.

In *West Germany*, company resources generally come in the form of loans. Companies are mostly privately owned, of which, almost 75 per cent are family-owned. The family-owned companies are quite reluctant to raise equity capital from the market, hence significance of equity as an instrument of finance has been limited. But this attitude is changing now. Also, because of loans not being available on account of recession, many companies gave away the conservative attitude and raised equity capital. Since the period of 1983-84 a number of companies have gone public, and also, a number of venture capital companies established (Lorenz, 1985).

There are some other developed countries where the venture capital activity is picking up. For example, *Switzerland* has a small venture capital industry. The banks have played particularly important role in the supply of venture capital. However, they do not regard their venture investments as permanent. *Austria* has set up Equity Participation Funds to invest in SMEs, and individuals are allowed to offset up to 40,000 schillings per year against income tax. *Australia* introduced a scheme similar to the BES in UK in 1984. It allows investors

in venture capital companies to deduct 100 per cent of the investment from their income for tax purposes.

Japan is a developed country outside the Western countries which has some sort of venture capital activity. However, unlike European countries, Japan has not adopted the US model of venture capital. Three reasons can be attributed for this (Clark, 1987): (a) The large manufacturing companies in Japan have the ability of adopting technologies fast. They are capable of attracting the best talent from academic institutions as well as capital. Since they provide tough competition to small enterprises, they could not grow fast. (b) Traditionally, large firms in Japan guarantee life-time employment to young people attracted from schools and universities. Seniority is given utmost regard and importance, and thus, reward and promotion are according to seniority. Small enterprises find it difficult to attract talented people since they are unable to promise employment till retirement. (c) Japanese are averse to the contractual business relations. Thus it is difficult to form partnerships between strangers for the purpose of realising capital gains. They believe in long relationships, and therefore, do not accord social sanction to the buying and selling of shares for capital gains.

Small enterprises have, however, assumed importance in Japan in the recent years. The rapid technical changes has given new hope and scope to small businesses. Both capital and labour markets are no more so hostile to them. Venture capital is needed by small enterprises to finance their risky projects. In 1974, the Ministry of International, Trade and Industry (MITI) of Japan founded a Venture Enterprise Centre (VEC) which also collects information about venture business. In Japan there is a strong relationship between 'venture' and 'advanced technology'. 'Venture' connotes scientific and technical effort and success more than commercial risk and reward. Thus the proliferation of small, rapidly growing advanced technology companies is a recent phenomenon in Japan.

MITI in 1963 created Small Business Investment Companies - inspired by the US SBIC Act of 1958 - to provide equity capital for small enterprises. Unlike in US, where SBICs are private companies operating on commercial basis, Japanese SBICs are subject to number of restrictions and thus, their investment has remained very small. Also, Japan until recently has followed a rigorous stock exchange listing requirement. This inhibited small companies from growing fast and go public.

The ten largest venture capital firms in Japan are affiliated to huge securities houses or banks. Their investment policy is conservative. Bankers also lack will and incentive to set up enterprises at their own.

1.4.2 DEVELOPING COUNTRIES

Venture capital is not widespread in developing countries. Only a few of them have made serious attempts to establish venture capital firms. These VCFs have been generally set up by development banks as subsidiaries or separately managed funds. Examples include Brazil where the state-owned National Development Bank has established a venture capital subsidiary, BNDESPAR and India where Industrial Development Bank of India has set up a Venture Capital Fund. In few developing countries, commercial banks have also established VCFs. In Philippines a number of VCFs are closely affiliated to commercial banks. A similar situation exists in India and Argentina.

Private sector VCFs are generally absent in developing countries. They have, however, come up in few countries with the support of International Finance Corporation (IFC) since 1978. Some examples are SOFINNOVA in Spain, VIBES in Philippines, Brasilpai in Brazil, IPS in Kenya, KDIC in Korea and SEAVI in South East Africa. IFC has been instrumental in setting up these VCFs although its equity participation has been limited. IFC's support has provided impetus for establishing private sector VCFs, but it is not a necessary condition for their successful establishment (OECD, 1986). Private sector VCFs have come up in countries such as Korea, Taiwan and Malaysia at their own initiatives. Korea is a noteworthy example where a number of companies have originated with the support of Korea Technology Advancement Corporation (KTAC) venture capital group which was set up in 1974 with the objective of investing in high-tech businesses, particularly by commercialising the R & D results from the Korean Advanced Institutes for Science and Technology.

Foreign venture capital firms are almost non-existent in the developing countries. Taiwan is an exception which has been able to attract foreign VCFs since the initiation of venture capital in 1983.

The development of venture capital in developing countries suffers from a number of factors. A significant aspect is the paucity of funds. Development banks and commercial banks - promoters of VCFs in developing countries - lack entrepreneurial approach. They are risk-averse and sceptical towards equity investment. It is also unlikely that they have the flexibility and managerial skills needed for venture financing. Some researchers have noticed in their studies the inefficient performance of the government-sponsored VCFs in first round financing. Further, a number of developing countries do not provide enough incentives for the development of venture financing. There are countries which discriminate against VCFs as their tax laws favour debt against equity. Furthermore, the aspect of disinvestment is important to venture capital since investors aim at making capital gain by selling off equity. But, unfortunately, the capital and money markets in most developing countries are either non-existent or ill-developed or non-functioning. The governments of almost all industrialised countries supplied and still supply some form of financial assistance as a source of venture capital. They also provide a number of tax incentives, and a number of them have created second stock market with easy listing requirements.

Perhaps, the most difficult aspect is the lack of the environment of entrepreneurship and risk-taking. It is a societal phenomenon, and cannot be helped merely by tax and other incentives. Entrepreneurship should be encouraged and rewarded. 'In a general sense, government and societies should not discourage an investor's ability to profit and accumulate wealth' (OECD, 1986) The government role is crucial in creating right commercial, financial and social environment for venture capital to be successful. In fact, based on the experience of developed countries, OECD (1986) has identified three areas where the government action is required for the development of venture activity: tax policy, disinvestment avenues and attitudes towards risk. We shall later on discuss these aspects of venture capital in detail in light of the Indian experience.

2. Development of Venture Capital in India

The development of venture capital is a recent phenomenon in India. It is still in a nascent stage, and requires promotional efforts as well as policy initiatives for a fast growth. In this section, we explain the need for venture capital in India in the context of the significance of small scale enterprises, the structure and growth of the venture capital industry and the missions and objectives of the venture capital firms (VCFs).

2.1 Context : Need and Relevance

The venture capital system as practised in the industrialised countries - particularly USA - does not exist in India. In USA, given its highly progressive industrial environment and entrepreneurial culture, it is normal for an entrepreneur or inventor of a new product/process to set up a company to produce and market the product by obtaining finance through the sale of the company shares to the venture capital firms which are readily willing to share the risk in return for future gains. In India, risk financing of this type in a significant way has yet to pick up. Of course, there do exist a large number of financial institutions which provide conventional finance to the business firms. This sort of traditional financing primarily caters to the projects based on proven or established processes/technology with minimum investment risk; it is security oriented and asset-based; it involves fixed and uniform repayments of interest and principal; and it follows fixed norms of financing, e.g. debt-equity ratio, promoter's contribution, security margin etc. The existing financial institutions are quite conservative in their approach. An incident explains this attitude (Kulkarni, 1986): In the beginning of seventies, an enterprising engineer developed an oxdrawn power tiller called 'BAISEL', appropriate for the Indian condition. This 3 hp implement was priced at Rs.15,000 against the competitor's imported model of 13 - 15 hp priced at Rs.40,000. But when he approached a state-level finance institution for financial support, his request was rejected after considerable deliberation and delay. On account of the engineer's persistence over years and the financial assistance made available by some charitable, social organisations, BAISEL was a success in mid-eighties. The same financial institution was now ready to finance it (after its success) after causing an undesirable delay of 14 years. A number of people in India feel that financial institutions are not only conservative, they have a bias for foreign technology, and they do not trust the abilities of entrepreneurs. For example, witness the following observation (Kulkarni, 1986): "If one examines the history of successful, technology-based Indian companies one finds most of them have had foreign collaborations for technology. Because of such a track record, financial institutions have a bias. This factor certainly works against locally developed technology..... Even if a lending institution is fully convinced of the merits of a locally developed product, it may still have serious reservations regarding the entrepreneur's ability to manufacture and market the product on a scale so as to make the venture financially viable. The institution being basically risk averse, would also have reservations concerning the entrepreneur's ability to mobilise human resources as well as financial resources for working capital'.

Given such a conservative attitude on the part of that financial institution, a different financing mechanism, such as the venture capital, is needed to provide funds to entrepreneurs particularly those in the small scale enterprises (SSEs) which have the disadvantage of size.

In India, the growth of small scale enterprises (SSEs) has been one of the most encouraging features of its industrial economy. It has recorded a significant increase in the number of small scale units (from 0.42 million in 1973-74 to 1.83 million in 1989-90), value of

production (from Rs. 72 billion in 1973-74 to Rs. 931 billion in 1989-90, at current prices), value of exports (from Rs. 3.93 billion in 1973-74 to estimated Rs. 41 billion in 1989-90), employment (from 3.97 million in 1973-74 to 11.96 million in 1989-90), and investment (from Rs. 22.96 billion in 1973-74 to over Rs. 100 billion in 1989-90). The small scale sector contributes about 50 per cent of the manufacturing sector's gross value of output and value added. Its exports represent about 25 per cent of India's total exports.

A number of institutional sources of finance for SSEs have been developed in India since independence (Exhibit 2.1). These include banks and special finance institutions such as Industrial Development Bank of India (IDBI), Industrial Finance Corporation of India (IFCI), State Finance Corporation's (SFCs), State Industrial Development Corporation's (SIDCs) and the recently constituted Small Industries Development Bank of India (SIDBI). The financial assistance includes lending for capital investment and working capital and equity participation. In general, banks are the main suppliers of working capital loans and term loans. There has been phenomenal increase in absolute terms in the bank credit to the small scale sector (from Rs. 10.17 billion at the end of December 1974 to Rs. 155.5 billion at the end of March 1990). However, there has been a decline in the percentage share of SSEs in the credit made to the priority sector. Also, the credit made available to them has stayed merely at 13 per cent of the all credit (or 26 per cent of the all industry credit) while they have been contributing over 50 per cent of total industrial production.

Exhibit 2.1 Financing of SSEs in India		
Source of finance	Financing scheme	Form of financial assistance
1. Commercial banks	* Normal lending * Priority sector lending * Differential interest rate scheme.	Working capital loans and term loans
2. Cooperative banks	* Lending to SSI units organised on cooperative basis	Working capital loans
3. RBI/DICGC	* Credit guarantee scheme/small loans guarantee scheme	Guarantee of loans
4. IDBI	* Refinance * Rediscounting of machinery bills * Special capital assistance for SSI in backward areas * Seed capital * National equity fund	Term loans Rediscounting (loan) Soft loan Equity/loan Equity
5. IFCI	* Risk capital	Bridge loan
6. SFCs	* Term lending * Special capital scheme	Term loans Equity/soft loan
7. SIDBI	* Refinance	Term loans
8. NSIC/SSIDCs	* Hire purchase facilities	Hire purchase (loan)

Exhibit 2.2 Salient Features of Major Risk Financing Schemes	
Scheme	Features
A. Assistance provided by Risk Capital Foundation	<ul style="list-style-type: none"> * Basically for technologists and professionals * Limit of contribution to 50% of promoter's contribution subject to a ceiling of Rs. 1.5 million * Only public limited companies are eligible * No interest is charged on such loans but a nominal service charge is levied * Repayment will be out of dividends and the period for repayment is fixed according to the facts of each case
B. Seed Capital Scheme of IDBI	<ul style="list-style-type: none"> * Project cost upto Rs. 30 million and project should be in small (including ancillary) or medium firms * Assistance will not exceed Rs. 1.5 million per project * Debt-equity norm of 2:1 is stipulated * Free of interest loans and nominal service charge * Assistance is provided through SIDCs/ SFCs * Policy of being lender of last resort for financial requirements
C. PACT Scheme of ICICI	<ul style="list-style-type: none"> * For advancement of commercial R&D and only for an Indo-US joint venture * R&D venture should have potential of commercialisation in 3 years * Limits of contribution to US \$ 500,000 and project cost not exceeding \$ 1 million * Assistance in form of conditional grant to cover cost of proposals and the feasibility expenses

In addition to the bank finance, special financing schemes are available for seed capital, rediscounting bills arising out of sales of indigenous machinery, supply of capital equipment on hire purchase basis and for assistance in rural and backward areas. Until 1981, the Reserve Bank of India (RBI) had been supporting lending to SSEs through a credit guarantee scheme. Now a similar scheme, the small loans guarantee scheme, is being operated by the Deposit Insurance and Credit Guarantee Corporation (DICGC) - a fully owned subsidiary of Reserve Bank of India (RBI).

As regards risk finance to SSEs, the institutional arrangements to provide equity capital are the Risk Capital Foundation of the IFCI, the seed capital scheme and the national equity scheme of the IDBI, and the programme for advancement of commercial technology (PACT) of the Industrial Credit and Investment Corporation of India (ICICI). These schemes provide for either direct equity participation or loan to bridge the equity gap. A comparison of the risk foundation, the seed capital and PACT schemes brings out their limited scope (Exhibit 2.2). Being sponsored by the Government-owned/controlled institutions, they are bound by certain norms which act as constraints, often when financing is needed quickly to deserving entrepreneurs wanting to operate in the risky industries. For example, the financial assistance under the IFCI's risk foundation scheme has been mainly in the traditional industries like textile, iron and steel and chemicals. These are not high growth or high technology sectors where product innovation would play much role.

In spite of an elaborate institutional system of financing for small or new entrepreneurs, they have to meet a substantial part of their financial needs from their personal savings and support from friends and relatives. The financing of SMEs in India has the following drawbacks:

- * The equity capital provided under various schemes is inadequate; all of them have tough conditions and upper limits.
- * The financing is generally confined to low tech, low growth sectors with minimum investment risk.
- * The financing institutions are very conservative and they apply norms at every stage.
- * The project appraisal takes a long time (six months or so) due to elaborate documentation process. Because of such delays, a number of entrepreneurs lose interest in the projects and also, the economics of the projects change.

One significant demand of SSEs has been for the creation of an apex institution to provide and monitor credit for SSEs. It was felt that such an institution would make credit more easily available and apply more meaningful norms which are now applied across the board for both large and small sectors. The government set up such an institution - Small Industries Development Bank of India (SIDBI) in April 1990, as a subsidiary of IDBI.

It would appear from Exhibit 2.1 and the above description that the conventional financial markets (institutions and instruments) are not able to cater to the financial needs of SSEs in India. These are, however, essentially sources of loan funds, which are not suitable for new enterprises seeking start up funds or existing enterprises wanting long-term expansion or diversification. The use of loan funds would lead to high debt/equity ratios which further exacerbates the riskiness of the enterprise. Many enterprises require long term and permanent finance in order to be able to expand or start up.

The conventional industrial finance in India is not of much help to new, emerging enterprises. They are unable to offer collateral in terms of tangible assets, rather it is contained in technical know-how or new idea. In case of new enterprises, oriented to new technologies or products or processes, sufficient finance should be available for the entire duration to enable initial negative cash flows to be covered and subsequently positive cash flows to be realised. Also, the new enterprise would require development finance to enable them to pass from the start up phase to the expansion phase. As explained earlier, venture capital is a financing mechanism befitting the requirements of the small and medium-size enterprises. It needs necessary impetus from policy makers for a sustained, large scale development.

2.2 Structure and Growth

The notion of venture capital is catching up in India after its introduction in the budget for the year 1986-87. A 5 per cent cess was levied on all know-how import payments to create a venture fund by IDBI. ICICI also started venture capital activity in the same year. Today, there are about a dozen venture capital companies in India which have made investments of about Rs. 1,000 million in over 200 firms. The venture capital firms can be divided into the following four groups :

- * Those promoted by the all-India developmental financial institutions such as Technology Development and Information Company of India Limited (TDICI) by ICICI, Risk Capital and Technology Finance Corporation Limited (RCTC) by IFCI and Risk Capital Fund by IDBI.

- * Those promoted by the state level developmental financial institutions such as Gujarat Venture Finance Limited (GVCL) by GIIC and Andhra Pradesh Venture Capital Limited (APVCL) by APSFC.
- * Those promoted by the public sector banks such as Canfin and SBI Caps.
- * Those promoted by the foreign banks/private sector financial institutions such as Indus Venture Capital Fund, Credit Capital Venture Fund and Grindlay's India Development Fund.

The following provides a brief profile of some of the prominent venture fund companies in India:

IDBI's Venture Fund : IDBI's venture capital fund was started in 1986. For its venture financing, IDBI considers projects requiring funds between Rs. 0.5 to Rs. 25 million. The promoter's stake should be at least 10 per cent for ventures below Rs. 5 million and 15 per cent for those above Rs. 5 million. The assistance is provided in the form of unsecured loans, involving minimum legal formalities. Interest at a concessional rate of 9 per cent (increased from 6 per cent) will be charged during the period of development of technology - the pilot plant and trial production. Once the product is accepted in the market, the interest rate will be 17 per cent. IDBI's venture capital fund had sanctioned upto March 31, 1991 Rs. 348 million to 52 projects in diverse fields, viz. chemicals, computer softwares, electronics, biotechnology, nonconventional energy, food products, refractories and medical equipments. Of the sanctioned assistance, the disbursements had been Rs. 202 million.

ICICI's Initiatives : ICICI introduced a more innovative and flexible venture capital fund for financing technology. ICICI was among the first institutions which initiated venture capital operations in India. It started venture capital in 1986 by providing finances for the development and commercialisation of viable indigenous technologies. The financing scheme was devised to finance such projects from the stage of product/process development upto the stage of market acceptance. ICICI provided a total assistance of Rs. 55 million to nine companies under venture capital upto March 31, 1988. Besides, ICICI also approved an aggregate assistance equivalent to about Rs. 40 million to twelve projects under the PACT fund. For providing a focussed and concentrated attention on technology financing, ICICI felt the need for designing a separate scheme for financing technology in India. Therefore, it floated a new company, Technology Development and Information Company of India Limited (TDICI) in 1988.

TDICI was incorporated on January 5, 1988 and became operational from July 1, 1988. It started with an authorised capital of Rs. 200 million to be increased to Rs. 400-500 million. Besides ICICI, the equity capital will be contributed by IDBI, World Bank, KFW, ADB, CDC and DEG to the extent of about 60 per cent; the remaining 40 per cent will be provided by about 1000 small, medium and large industrial companies in India. TDICI's schemes and services include the following :

- * Technology venture financing.
- * Technology information and technology plus techno-managerial guidance and support.

- * Administrative service of the Programme for Advancement of Commercial Technology (PACT) and Programme for Acceleration of Commercial Energy Research (PACER) programmes of the Government of India.

The focus of TDICI's venture capital scheme is on the development and financing of indigenous technology. It will also support innovative and market-oriented services which have high tech element. 'While most proposals will be picked up by TDICI from the prototype or pilot plant commercialisation, TDICI will also (very selectively) fund 'grass roots' R & D efforts requiring 'technology seed capital' - for prototype and product/process development' (Sudarsan, 1988). To complement and extend its technology venture financing, TDICI has placed a lot of emphasis on technology information and consultancy services. 'The technology support service comprise (without being confined to) guidance in marketing (including export marketing guidance for individual technology venture projects), business management advice for first generation technocrat entrepreneurs and financial management guidance for small/medium scale entrepreneurs. The nature of support envisaged would not be usual one-time, one-shot consultancy, but rather, a 'hand-holding' form of support to the entrepreneur, till the new technology starts fruitfying in the market' (Sudarsan, 1988). TDICI would not finance basic research nor would it finance pure technology import. It would focus on the wide area between the basic research and proven technology.

TDICI provides venture funds for projects upto Rs. 25 million with concessional finance or participation. The instruments of financing include : (a) conditional loan, (b) conventional loan, and (c) equity participation. Conditional loan does not carry an interest charge. It is linked to the level of sales generated by the project on commercialisation. In the event of failure of the venture, the company is required to repay only a part of the principal amount. Conventional loan, which may or may not be secured, carries a rate of interest not exceeding the normal rate of lending. TDICI may participate in the equity, retaining its investment for 5 to 8 years. After the venture succeeds, the investment may be sold either to the promoter or others through a stock exchange.

TDICI's first venture capital fund of Rs. 200 million was subscribed to equally by ICICI and UTI under the new "Venture Capital Units Scheme" (VECAUS I) of UTI. Under VECAUS I, TDICI sanctioned financial support of Rs. 200 million to 40 projects. These 40 projects covered a wide variety of technology such as computer hardware and applications of software, computer integrated manufacturing systems, tissue culture, enzymes, pharmaceuticals, veterinary biological, chemicals, food and feed technology, environmental engineering, renewal and nonconventional sources of energy, and innovative services. TDICI's second venture fund, VECAUS II, of Rs. 1,000 million has been contributed by UTI, ICICI, other financial institutions and banks, World Bank, corporate sector etc. By August, 1991, TDICI had provided financial assistance of Rs. 499 million to 101 projects in a variety of industries such as computers, electronics, bio-technology, medical, non-conventional energy etc. (Exhibit 2.3). Many of these projects are start-up companies initiated by first generation technocrat-entrepreneurs.

IFCI's Risk Capital: IFCI is in a way oldest in the venture capital business. It had sponsored in 1975 Risk Capital Foundation (RCF), which has been converted into a company known as Risk Capital and Technology Finance Corporation Limited (RCTC) in January 1988. It has an authorised capital of Rs. 250 million and a paid-up capital of Rs. 500 million. IFCI continues supporting it through the grants and loans available under the Interest Differential Funds.

In its new role, RCTC, apart from providing assistance in the form of risk capital, is expected to provide finance for high tech projects in the form of venture capital for technology upgradation and development. Finance for technology is extended to viable proposals and projects which are capable of completion within a short period emanating from units in the corporate and cooperative sectors, industrial associations and trusts. Preference is given to units with proven track record in innovation and having the requisite technological and managerial strengths. Also, assistance is considered for new venture for development and utilisation of innovative technologies.

Exhibit 2.3				
Ventures Financed by TDICIC (cumulative upto September 6, 1991)				
Industry	No. of	% age	Amount (in million)	% age
Software	14	14%	51.8	10
Hardware	7	7%	48.7	10
New Services	7	7%	39.8	8
Chemicals	8	8%	40.1	8
Special Materials	10	10%	35.9	7
Bio Technology	6	6%	31.4	6
Diagnostics & Vaccines	4	4%	32.5	7
Fisheries	3	3%	25.5	5
Electrical	4	4%	24.4	5
Drugs & Pharmaceuticals	6	6%	29.0	6
Food/Feed	4	4%	34.7	7
Mechanical Equipment/Systems	9	9%	21.2	4
Electronics	5	5%	23.5	5
Others	3	3%	16.6	3
Telecom	5	5%	15.0	3
Non Conventional Energy	2	2%	10.8	2
Environmental Engineering	2	2%	9.4	2
CAM	2	2%	8.9	2
Totals	101	100%	499.2	100

Since the inception of Risk Capital Foundation and upto March 31, 1991, RCTC had sanctioned assistance of Rs. 282 million to 360 first generation entrepreneurs. The disbursements had been of Rs. 244 million. Under its Technology Finance and Development Scheme, RCTC, upto March 31, 1991, had sanctioned assistance of Rs. 154 million to 25 projects. Of the cumulative disbursements of Rs. 54 million, the disbursements in the year 1990-91 amounted to Rs. 46.4 million.

Like TDICI, RCTC's assistance comes in the form of short-term conventional loan or interest-free conditional loans allowing profit and risk sharing with the project sponsors, or equity participation.

Gujarat Venture Finance Limited (GVFL): GVFL was promoted by the Gujarat Industrial Investment Corporation (GIIC) Limited in July 1990 to provide venture finance. The total size of fund is Rs. 240 million, contributed by GIIC, IDBI, World Bank, banks, SFCs and private corporate bodies. The extent of financing would range between Rs. 2.5 million to Rs. 20 million. GVFL provides venture financial assistance in the form of equity and quasi equity (viz. conditional loan and income notes) instruments. GVFL visualises its role as a catalyst to commercialise new technological developments and innovative products, and a partner sharing risk and rewards and would provide management support to the entrepreneurs. It has so far provided an assistance of Rs. 24 million to projects in the areas of chemical, consumer product and food processing. GVFL has a number of proposal under consideration in the areas of biotechnology, software, chemical, plastic, energy conservation and surgical instruments.

Venture Capital Funds of Commercial Banks : State Bank of India (SBI), Canara Bank and Grindlays' Bank and many other banks have also launched venture capital funds. SBI's merchant banking subsidiary, SBI Capital markets (SBI Cap), set up a venture capital fund for "bought out deals". SBI Cap invests in the equity shares of new and unknown companies. Canara Bank has also set up a venture capital fund through its subsidiary, Canbank Financial Services (Canfina). The Canbank Mutual Fund has also planned to start more venture fund schemes. Yet another bank which has started a venture capital fund is the Grindlays Bank. Under its India Investment Fund, it provides venture capital assistance to high risk projects.

Private Sector Venture Capital Funds : A few private venture capital funds have also been established in India. Indus Venture Capital Fund (IVCF) is one of such funds. IVCF has been established with a capital of Rs.210 million contributed by several Indian and international institutions and companies. The investment of the fund will be managed by a separate company, Indus Venture Management Limited. The company will provide both equity capital as well as management support to the entrepreneurs. The company has chosen to invest in the following areas: speciality chemicals, health care products, electronics and computers and novel type of higher quality sophisticated consumer products. The company will not invest more than 10 per cent of its fund in one project, and would take upto 50 per cent of the project's equity.

The other private sector venture capital companies include Grindlays Bank's venture fund, Credit Capital Venture Fund (CCVF), Twentieth Century Finance Company (TCFC) etc.

Most of venture capital funds in India have been promoted by banks and financial institutions which have wide experience in lending. In spite of this, their risk taking behaviour may vary from each other. Risk taking behaviour of VCFs may be influenced by the size of the fund and the nature of venture capital organisation. It is expected that funds promoted by the financial institutions and nationalised banks are likely to take more risks because of their missions of development and social responsibility. Private funds are likely to emphasise commercial operations and profit. Thus, they may follow a prudently cautious approach towards risk-taking. As regards private venture funds, many entrepreneurs fear that they may be acquired once they become successful. Besides, they are also apprehensive of the representation of the venture capital firm's personnel on the board of directors leading to close supervision and control of the entrepreneurs' operations.

VCFs in India provide different services such as managerial consultancy, technical support and information, equity participation, etc. Some of them, particularly those associated with the central or state-level financial institutions and nationalised banks, assist the entrepreneur in obtaining term loans and working capital. This gives them an edge over new entrants in private sector. The support provided by VCFs in India, in varying degree, include preparation of a business and financial plan, formulation of marketing plan and strategy, technical advice, assistance in resource identification, recruitment, organisation structuring etc.

There is significant variation in the size of venture capital funds in India. The minimum size of a venture capital fund to avail capital gain tax concession is Rs. 100 million. The Grindlays' Bank has the smallest venture fund of Rs. 120 million. TDICI has the largest venture fund in the industry. Some VCFs, independent of size, have cost advantages over others. The government has favoured some funds in terms of payment of tax. For example, TDICI's venture fund is contributed in part by the Unit Trust of India and therefore, its profits are tax exempt whereas other funds have to pay taxes on their capital gains. Similarly, incomes from TDICI funds have been exempted from income tax, and dividends declared out of the fund qualify for tax exemption under Section 80M of the Income Tax Act.

At present, there are a few players in the venture capital industry and most of them operate at low scale of activity. Thus the industry does not witness much competition and rivalry. For the time being, there is enough business for all funds to survive and expand.

The following are some other characteristics of the venture capital industry in India:

- * *Difference in size of firms:* TDICI, the first real venture fund in India, is a mega company with the total size of its funds exceeding Rs. 1200 million whereas Grindlays' fund is only Rs. 120 million. Similarly, GVFL's fund is only Rs. 240 million.
- * *Expensive funds :* The total interest/dividend cost of the funds is very high and risks are high. However, currently many funds invest a large part of their money in non-venture capital financing to take care of their high cost of funds. The cost of funds is expected to increase in future, and therefore, competition is also expected to be high in future. Interest rates have already risen quite high and inflation rate is also high.
- * *Differences in focus:* The nature of players in the market is very diverse. There are players like financial institutions to develop the market, banks partly to develop market and partly to increase their average return on funds and the private sector funds mainly interested in high returns. This diversity causes low degree of competition in the various segments of the industry.

The government policy has not been so far highly encouraging for the fast growth of the venture capital industry in India. The Government guidelines have the following weaknesses:

- * The requirement of the minimum size of the fund to be Rs.100 million could restrict entry of very specialised, smaller funds.
- * A company to start a venture fund needs to seek the Government approval. At times, delays are caused in obtaining permission due to bureaucratic process.

- * The approved venture capital funds are required to be managed by professionals like bankers, managers and administrators, and persons with adequate experience of industry, finance, accounts, etc. This could act as a constraint for entrepreneurs who are not professionals.
- * There is hardly any incentive for the private sector to enter the venture capital business and individual investors to invest in the equity of the venture capital firms. Private sector promoters can set up venture capital funds, with maximum equity of 20 per cent, only in collaboration with the public financial institutions, commercial banks, foreign financial institutions and banks etc. There are no special tax benefits for investors investing in VCFs.
- * Any restriction on foreign investment or investment by Non-Resident Indians (NRIs) would deter the growth of venture capital, particularly, the foreign venture capital funds. The guidelines restrict foreign equity to 25 per cent, and NRIs are allowed to invest upto 74 per cent on non-repatriable basis and upto 25 - 40 per cent on a repatriable basis.
- * The maximum debt/equity ratio of 1.5:1 allowed for a venture capital fund would restrict the size of a new fund.

2.3 Objectives and Activities

What are the objectives of the major VCFs in India ? The objectives of major VCFs in India are summarised in Exhibit 2.3. VCFs in India have confined their operations to high technology businesses. This most significant, but limited scope of venture capital has been influenced by the Government guidelines which make tax concessions available only for investment in high technology businesses. The major players in the venture capital industry are public-owned development banks and commercial banks. Therefore, within high technology ventures, their focus is likely to be more on development oriented projects. Being public institutions, their concern in providing risk capital is employment, export, import substitution, energy saving, pollution control etc. India has a few private sector VCFs. They have clearly stated their objectives in commercial terms. VCFs in India so far do not seem favourably inclined to finance development of a new product/process from the laboratory stage. They are, however, ready to finance prototype projects or pilot plants which are ready for commercialisation.

Given the special developmental requirements of the developing countries like India, venture funds need focussed prioritisation and financing at various stages. Venture funds in India lack in this regard. Some of the limitations are as follows:

- * *Lack of prioritisation of thrust areas:* VCFs in India have not prioritised high tech, thrust areas for venture financing. The prioritisation of thrust areas may facilitate development of technological speciality and expertise by VCFs.
- * *Lack of regional focus:* VCFs, even the state-level institutions, lack regional focus. A regional focus could lead to concentrated efforts and specialisation and could help in taking full advantage of the regional benefits.

- * *Lack of full range financing:* All funds offer funding for early stage activities, viz. seed capital and start-up financing. However, all start-up companies do not get venture capital because of the perceived high risk. Similarly financing for expansion and rehabilitation of sick units is lacking in spite of the concessions available under the Government guidelines.
- * *Lack of focus on entrepreneurial development:* The focus of VCFs in India is on technology financing, and rightly so for making Indian industry globally competitive. But given the needs of India in terms of high production and productivity and employment, VCFs should adopt a more broad approach in financing and supporting novel ideas of entrepreneurs, which may not necessarily be high tech in nature.

Exhibit 2.3 Objectives of Venture Capital Funds			
VCF	Objective	Target activities	Target entrepreneurs
1. IDBI Venture Capital Fund (March 1987)	To provide financial assistance for attaining commercial application of indigenous technology or adapting imported technology for wider domestic application	<ol style="list-style-type: none"> 1. Setting up pilot plant based on lab processes developed in labs in the country. 2. Technological innovations leading to substantial quality upgradation, reduced material consumption, reduced energy consumption, cost reduction or improved competitiveness. 3. Adaptation/ modifications of improved processes/ products suitable to Indian conditions. 4. Cost of studies, survey, and marketing, marketing promotion, training etc applicable to above. 	Existing and new units
2. IFCI's RCTC (Jan. 1988)	<ol style="list-style-type: none"> 1. Provide risk capital to first generation entrepreneurs for setting Industrial projects. 2. To provide finance for technological development for advancement, promotion, transfer adaptation and commercialisation of technology. 	<ol style="list-style-type: none"> 1. Setting up of pilot plants, demonstration scale plants and studies, R&D activities, specialised training, prototype manufacture and evaluation, proving of quality and market acceptability etc. 2. Meeting expenditure of national/international consultants for substantial product/process/technology improvement and innovation. 3. Sponsored commercial R&D programmes. 	Applicants with a proven track records in innovation and having the requisite technological and managerial strengths.
3. TDICI (1988)	Development and financing of indigenous technology	Prototype or pilot plant commercialisation; to fund grassroots R&D efforts for prototype and product/process development on very selective basis	New or established entrepreneurs
4. PACT (April 1985)	To accelerate the pace and quality of technological innovations for products having application in industry, agriculture, health, energy and other areas beneficial to the development process in India... primary thrust is on market-oriented R&D activity.	<ol style="list-style-type: none"> 1. Activities that involve development, through R&D of an innovative product or process which promises tangible benefit to the Indian economy. 2. Activities that have the capability of significant commercial potential. 3. Activities that do not relate to defence/armament, surveillance, weather modification or absorption related equipment and services. 	A team of companies, one from India and one from the US, having access to R&D and manufacturing facilities and a demonstrated capability in selling its product.

Exhibit 2.3
Objectives of Venture Capital Funds

VCF	Objective	Target activities	Target entrepreneurs
5. Gujarat Venture Finance Ltd. (1990)	Venture financing	<ol style="list-style-type: none"> 1. Commercialisation of new/untried technologies resulting in lower cost of production. 2. Technological innovations leading to improvement in profitability, cost reduction, improvement in quality and energy conservation. 3. Skill intensive industry utilising local talent. 4. New product/process based on indigenous or imported knowhow/technology. 5. Projects/schemes resulting into the development of export market or import substitution. 6. Adaptation/modification of imported innovative process/technology. 7. Setting up a commercial plant by scaling up of the process developed at a pilot plant. 8. Innovative service not conventionally in use with a very high return. 	Both new and existing companies.
6. Canbank Venture Capital Fund (August 1989)	Financial participation in ventures with technological innovations and high-tech content promoting high return to the fund.	<ol style="list-style-type: none"> 1. Commercial exploitation of lab proven technologies. 2. Evolution of new process or product. 3. Technological upgradation leading to energy conservation, lesser material consumption, cost reduction, and improved international competitiveness with innovative indigenous technology. 4. Adaptation of imported technology suitable to India. 	<ol style="list-style-type: none"> 1. Relatively new, but not affluent, professionally and/or technically qualified entrepreneurs. 2. Experienced but whose track record demonstrates good performance in terms of technical, managerial or marketing capabilities.
7. India Investment Fund	Intended for non-resident Indians, taking advantage of the immense opportunities becoming available to India for selected investment in new technology based businesses.	Investment in new technology based projects.	Those established companies which have share listing of which plan to obtain a listing within three months from the date of receiving investment and are engaged or diversification.

Exhibit 2.3 Objectives of Venture Capital Funds			
VCF	Objective	Target activities	Target entrepreneurs
8. Credit Capital Venture Fund * (Jan. 1990)	To take advantage of investment opportunities in the area of venture finance and investment in primary markets.	Thrust areas for investment : ancillary units and small export-oriented units.	All enterprises with good investment potential.
9. Indus Venture Capital Fund * (1991)	To invest in the equity of ventures as defined in the GOI's venture capital guidelines	Speciality chemicals; health care products; electronics and computers; and consumer products	Individuals with a combination of professional skills, entrepreneurial spirit, ability to innovate and persevere and integrity in dealings

Note: Dates given in parentheses indicate date of commencement
 * Private sector venture financier

3. Practices and Policies of VCFs in India

The most important aspects of the operations of a venture capital firm are its project appraisal system, methods of providing financial and managerial support, disinvestment mechanisms, and marketing and promotional efforts. The success of VCFs would depend on the soundness of policies and practices developed in each of these areas. The experience of VCFs in India in this regard are documented below.

3.1 Project Appraisal

Project appraisal is the most crucial aspect of a VCF's operations. Out of hundreds of the project proposals that come to a VCF, only a few, say 10 per cent, would be funded. Venture capitalist requires extraordinary skills of judging projects and entrepreneurs. The evaluation of the man behind the project is the first step in the appraisal of a project. As Doriot has put it (Wilson, 1985): 'A cardinal rule in evaluating an investment is to look first at the quality of individuals involved. What, look for, more than mere genius, is resourcefulness. A man comes in here and says he invented the pencil. I say okay. What I want to know is whether he can improve the pencil'. Once the credentials of the entrepreneur have been established, the technical aspects of the projects are evaluated. A venture capitalist can get the potential of the project appraised from the inside or the outside experts. The services of experts can also be hired for evaluating the market and technical risks of the project. The advantage in getting projects appraised by the outside experts is that the venture capitalist get most objective and unbiased opinion.

What are the practices of Indian VCFs in appraising ventures? Like their counterparts in developed countries, the venture capitalists in India focus on the evaluation of both the entrepreneur and the project. The following stated criteria for selection of projects by an Indian venture firm is a testimony of this (Indus Venture Capital Fund):

The selection of a project will depend on our assessment of the individual as well as the project itself. We will be looking for individuals with a combination of professional skills, entrepreneurial spirit, ability to innovate and persevere and above all integrity in his dealings with others.

The project should involve new but preferably proven technology or products..... All projects should have a sustainable competitive advantage in terms of quality, performance and costs over alternative substitute products.

The appraisal practices of a few VCFs in India are discussed below:

Canfina VCF requires a comprehensive proposal from the applicant company for consideration of its screening committee. The proposal would include information about the project in terms of cost, technology, market estimates etc., promotor and in case of existing companies, past financial performance. Exhibit 3.1 contains the proposal details sought by Canfina VCF. Similar information is called for by most VCFs in India. After initial clearance by the screening committee, the proposal is subjected to an elaborate and exhaustive scrutiny with promoters and is supplemented by site visits. The technical appraisal is entrusted to experts in the field, wherever necessary.

Exhibit 3.1
Information Needed for Appraising a Project Requiring Venture Capital
(Example of Canfina VCF)

1. Brief *history of the company* and its associated companies.
2. Detailed *bio-data of the promoters*, by personnel and their responsibilities.
3. In the case of existing companies *performance highlights* for the immediately preceding three years and estimates for the current year (audited statements to be included).
4. *Details of the project* including cost of the project and means of finance.
5. *Projected financial statements* for five years including fund flow statements.
6. *Technology details* of the project giving a detailed description of the manufacturing process bringing out clearly the innovative content.
7. *Details of market study*, existing and projected demand and supply, competitors in the field, price fixation vis-a-vis those of the competitors and any market advantages enjoyed.
8. Details of all *government clearances* and the necessary approvals/certificates from appropriate authorities.
9. Methods of *effluent treatment* and clearance from the Pollution Control Board.
10. Details of *utilities* like power, water, fuel etc.
11. *Schedule for implementation* of the project and the progress made so far.

IDBI-VCF also expects a preliminary profile of the proposal detailing information about the nature of the product/process, development content in the process, cost etc. After determining *prima facie* eligibility of the proposal, IDBI-VCF sends an elaborate application form which the applicant is required to fill in and submit to its technology department for detailed appraisal. After the project has been appraised, it is sent to the screening committee for its recommendation. The proposal may be referred to a group of experts for advice, whenever it is considered necessary. A complete application takes two-to-three months for processing.

Like IDBI-VCF, IFCI's RCTC also wants the preliminary information and project profile. While the techno-economic evaluation is carried out by RCTC itself, independent experts are sometimes invited to assist in other aspects of the evaluation process. RCTC encourages promoters to discuss personally with them issues even at the stage of project formulation.

PACT scrutinises proposals through a two-tier system. The application is initially reviewed by the PACT Division and the technical specialists belonging to a particular skill area. Later on the qualifying proposals are placed before the screening committee for their approval. Technical evaluation is carried out with the help of Indian and/or American experts. Technical feasibility of the innovation is a must and initial feasibility is expected to justify incremental investment of significant commercial returns.

As is evident from examples above, the project evaluation by VCFs in India includes the following two steps :

- * *Preliminary appraisal:* The applicant is required to provide a preliminary profile of the project to establish a *prima facie* eligibility. Promoters are also encouraged to have a face to face discussion to clarify issues.
- * *Detailed appraisal:* Once the project has crossed the qualifying hurdle through initial evaluation, the proposal is evaluated in a great detail. A lot of focus is placed on techno-economic evaluation. Most of the VCFs involve experts for the technical appraisal, whenever necessary.

The project evaluation process in India, after receiving the information about the project, starts with a detailed evaluation of the promoter's background. The focus is on his technical abilities, entrepreneurial skills, manufacturing and marketing capabilities and experience. After ascertaining the commitment of the entrepreneur, the project itself is evaluated in terms of its technological, manufacturing and marketing viability. Help from the external experts is taken in this regard. A thorough analysis of the riskiness of the project is made. Generally, a venture capitalist in India evaluates four types of risk : market, product, technology and entrepreneurial. Market risk is a consequence of several factors, unexpected competition, problems of marketing channels etc. In case of new or untried ideas product risk is expected to be high. Technically sound products can fail on a commercial scale. Technological risk arises when technology is too complex. It may be an imported technology and there may be problems of foreign technology assimilation and management. The main reason for entrepreneurial risk is lack of demonstrated managerial capabilities. New, innovative entrepreneurs have bright ideas without experience. (See Appendix II for a case study on project evaluation).

In developed countries, such as USA, a lot of importance is given to the evaluation of the entrepreneur/management. The venture capitalists check the applicant's credentials from the potential customers, key suppliers, bankers, auditors, previous employers etc. In addition to technical skills, the traits which they look for in the applicant include marketing expertise, financial planning and control skills, leadership and motivation. There are certain characteristics and skills which an entrepreneur should possess to be successful. The Institute of New Enterprises Development (INED) in Belmont, Massachusetts, (USA), has identified a number of key characteristics and necessary skills required to be successful entrepreneur from the point of view of venture capital investment. These characteristics and skills are summarised in Exhibit 3.2.

The evaluation of the entrepreneur assumes far greater importance in India, specially in view of the fact that the philosophy of "hands-on management" has not been seriously accepted and practised. Managers of some VCFs in India feel that they could tolerate technical or market failure in the product but certainly not the management failure. They consider a fair assessment of the commitment of the entrepreneur to the venture as being at least as important as evaluating the project itself.

The evaluation criteria abroad differ depending on the nature of the funds requirement such as early-stage financing, expansion financing, management buyouts, and mergers and acquisitions. Since the Indian venture capital industry is in its early stage of development, it is too early to happen this in India.

Exhibit 3.2
Key Characteristics and Skills Required to be Successful Entrepreneur

- * *Drive and Energy Level.* Success as an entrepreneur demands the ability to work actively for long hours with less than the normal amount of sleep.
- * *Self-confidence.* You need self-confidence - a belief in yourself and your ability to achieve goals and a sense that events in your life are self-determined.
- * *Long-Term Involvement.* You have to be able to commit yourself to projects that will see completion in five to seven years and to work toward goals that may be quite distant in the future. This ability implies a total immersion and concentration on the attainment of distant goals.
- * *Using Money as a Performance Measure.* Money, in the form of salary, profits, or capital gains, should be viewed as a measure of what you are doing and have done, not as an end in itself.
- * *Persistence Problem Solving.* You must have an intense and determined desire to complete a task or solve a problem.
- * *Setting Challenging but Realistic Goals.* You need the ability to set clear goals and objectives that are challenging, yet realistic and attainable.
- * *Taking Moderate Risks.* Entrepreneurial success implies a preference for taking moderate, calculated risks, where the chances of winning are not so small as to make the effort a gamble, nor so large as to make it a sure thing, but which provide a reasonable and challenging chance of success.
- * *Learning from Failure.* You have to use failures as learning experiences, and you need to understand your role in causing the failures so that you can avoid similar problems in the future. You should be disappointed but not discouraged by failures.
- * *Using Criticism.* You need the demonstrated capacity to seek and use criticism of your performance so that you can take corrective action and do better next time.
- * *Taking Initiative and Seeking Personal Responsibility.* You need the desire to seek and take initiative and to put yourself in situations where you are personally responsible for the success or failure of the operation. You should be able to take the initiative to solve problems or fill leadership vacuums, and you should enjoy situations where your impact on a problem can be measured.
- * *Making Good Use of Resources.* Can you identify and use expertise and assistance that are relevant to the accomplishment of your goals? You cannot be so involved in the achievement of your goals and in independent accomplishment that you will not let anyone help you.
- * *Competing Against Self-imposed Standards.* Do you tend to establish your own standard of performance, which is high yet realistic, and then compete with yourself?

INED has also developed a list of 43 key management skills broken down by such key areas as marketing, engineering and research, operations, financial administration, management skills, personnel, and legal and tax areas.

3.2 Methods of Venture Financing

A pre-requisite for the development of an active venture capital industry is the availability of variety of financial instruments which cater to the different risk-return needs of investors. They should be acceptable to entrepreneurs as well. In developed countries innovation is of financial instruments is a distinct feature of venture capital.

Venture finance, conceptually being risk finance, should be available in the form of equity or quasi-equity (conditional or convertible loans). A straight or conventional loan, involving fixed payments, would be unsuitable form of providing assistance to a risky venture. However, the requirement for this kind of assistance could still arise in a few cases, particularly during the second stage of financing after the venture has taken off.

Venture capital is typically available in three forms in India : equity, conditional loans and income notes. Conventional loan is also quite popular source of funds made available by VCFs in India. All VCFs in India provide equity but generally their contribution does not exceed 49 percent of the total equity capital. Thus the effective control and majority ownership of the firm remains with the entrepreneur. When a venture capitalist contributes equity capital, he acquires the status of an owner, and becomes entitled to share in the firm's profits as much as he is liable for losses. VCFs buy shares of an enterprise with an intention to ultimately sell them off to make capital gains.

A conditional loan is repayable in the form of a royalty after the venture is able to generate sales. No interest is paid on such loans. In India, VCFs charge royalty ranging between 2 and 15 percent; actual rate depends on other factors of the venture, gestation period, cost-flow patterns, riskiness and other factors of the enterprise. Some VCFs give a choice to the enterprise of paying a high rate of interest (which could be well above 20 per cent) instead of royalty on sales once it becomes commercially sound. Some funds such as RCTC recover only half of the loan if an enterprise fails.

A unique way of venture financing in India is income note. It is a hybrid security which combines the features of both conventional loan and conditional loan. The entrepreneur has to pay both interest and royalty on sales, but at substantially low rates. IDBI's VCF provides funding equal to 80 - 87.5 per cent of a project's cost for commercial application of indigenous technology or adapting imported technology to wider domestic applications. Funds are made available in the form of unsecured loan at 9 per cent per year during development phase and 18.5 per cent per year after development. In addition to interest charges, royalty on sales could also be charged.

A few venture capitalists, particularly in the private sector, have started introducing innovative, financial securities. The 'participating debenture' introduced by TCFC is an example. Such security carries charges in three phases : In the start-up phase, before the venture attains operations on a minimum level, no interest is charged. After this, low rate of interest is charged (10 percent) upto a particular level of operation. Once the venture starts operating on full commercial basis, a high rate of interest (2 - 3 percent) are required to be paid. A variation could be in terms of paying a certain share of the post-tax profits instead of royalty.

VCF in India can easily try partially convertible debentures and cumulative convertible preference shares (CPP). CPP could be particularly attractive in the Indian context since CPP shareholders do not have write to vote. They are, however, entitled to voting if they do not receive dividend consecutively for two years. Both convertible debenture and convertible preference share require an active secondary market to be attractive securities from the investors' point of view.

In the Indian context both venture financiers and entrepreneurs favour a financial package which has a higher component of loan. This is so because of the promotor's fear of loss of

ownership and control to the financier and because of the traditional reluctance and conservatism of financiers to share in the risk inherent in the use of equity. Canafina VCF is an example of this attitude : Out of the total 51 venture projects for which funds of Rs. 354 million were sanctioned as of November 30, 1990, 41 projects were granted debt of Rs. 346 million and remaining 10 projects equity of Rs. 8 million. The venture financing mechanisms like conditional loans or income notes are quite expensive as compared to conventional loans once a project becomes successful. They involve substantial cash outflows from the entrepreneurs' point of view. What he needs is a financing method which does not burden him with cash flow problems.

In developed countries, like USA and UK, the venture capital firms are accustomed to using a wide range of financial instruments. They include deferred shares (where ordinary share rights are deferred for a certain number of years); convertible loan stock (which is unsecured long-term loan convertible into ordinary shares and subordinated to all creditors); special ordinary shares (with voting rights but without a commitment towards dividends); preferred ordinary shares (with voting rights and a modest fixed dividend right and a right to share in profits) and so on. Venture capital funds abroad also provide conventional loans, hire-purchase finance, lease finance and even overdraft finance, but the overall financial package is always tilted in favour of equity component.

3.3 *Managerial Support and Monitoring*

The distinctive feature of venture financing is that VCFs not only provide finance but also managerial assistance to the entrepreneurs. They may follow various practices of providing managerial support to entrepreneurs. The *hands-on style* is a form of supportive and direct involvement. It is generally practised through the VCF's representation on the assisted firm's board. It also entails close and regular discussion between the venture capital fund manager and the entrepreneur on problems of technology, marketing and general management. The venture capitalist helps a great deal in shaping the strategies, policies and practices and business plan of the entrepreneur's firm. He also assists in affecting prudent financial discipline. Some venture capitalist may choose to act passively. Under such hands-off, style he does not participate in management of the firm. He bases his assessment of the management on the evaluation of financial reports, which the entrepreneur sends to him periodically. A venture capitalist may choose to follow a middle approach between the hands-on and hands-off styles of management. He may identify key decision areas such as capital investment, appointments of key personnel etc. on which he may like entrepreneur to consult him. He can also specify the kind of information which the entrepreneur has to regularly furnish to him.

Whether or not a venture capitalist is directly involved in the management of the assisted firm, he has to develop a sound monitoring system. It is needed not only to safeguard the capital of the venture capitalist, but also to help in improving the worth of investment through timely actions. New entrepreneurs require continuous monitoring and support because of their managerial inexperience. Monitoring becomes easy and more effective if the venture capitalist also takes active participation in the management of the enterprise.

Is the Indian venture capitalist an active collaborator or a passive financier ? To answer this question, let us observe practices of some major VCFs. The venture capital fund of IDBI employs three different management supportive and monitoring mechanisms. They are : (a)

monthly progress report, (b) periodic visit to the unit, and (c) discussions with the promoters. It has constituted an evaluation committee to perform this function.

IDBI-VF expects its assisted enterprises to submit periodic reports, which are scrutinised to determine the project progress. The actual physical progress is ascertained through visits and discussions of IDBI-VF officials with the entrepreneurs. On the spot visits and discussions help a great deal in knowing the problems of the entrepreneurs, and accordingly providing them appropriate advice and guidance. IDBI-VF is generally very concerned about delays in the project implementation. Therefore, it very closely monitors time and cost over-runs. Managerial assistance and supervision requires close interaction with entrepreneurs. For this purpose, IDBI-VF has assigned the work of follow-up and advice to technical consultancy organisations (TCOs) of the states where the entrepreneurs are situated.

TDICI accords a lot of emphasis on 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 academics, industry and other sectors and deposes them in the firms with the assent of the entrepreneurs.

TDICI has institutionalised the process of understanding the problems of entrepreneurs. It periodically meets entrepreneurs to understand their problems through direct feedback. For example, in 1989-90 it organised a meeting of owners of assisted companies in order to ascertain technical, marketing, managerial or financial problems they were facing, 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.

GVFL plans to take an active interest in the working of the sanctioned projects and to maintain, for the purpose, panels of renowned management and financial experts whose advice will be available to the assisted ventures. Apart from strengthening the managerial function of these new ventures, GVFL panels will also include eminent technocrats and scientists for providing guidance to entrepreneurs.

The newly constituted Indus Venture Fund (Indus-VF) in the private sector has introduced venture capital in India on the pattern of the developed countries such as USA. The lead promoter of this fund is Mr. T. Thomas, who retired as Director of Unilever plc, UK. Indus-VF would participate in the management of the assisted firms through its representation on their boards. In some cases it would directly participate in the management of the assisted firms on a regular basis. Since it views itself as much a partner in management as a financier, it would be very carefully choose ventures for financing.

To facilitate its role as a management partner, Indus-VF has created a management company, which would consist of a group of skilled managers trained in project evaluation and management. Such a two-tier system provides maximum flexibility to both managers and investors to the fund. For example, if investors realise that the management company has failed to perform satisfactorily, they can wind-up the company. Similarly, if the group wants to float another fund, it would be able to alter the composition of investors without changing the management structure. The management company would operate under the supervision of the Board of Directors of the venture fund.

The strategic, managerial role of the venture capitalist has been very succinctly summarised by Indus-VF in the following words (Indus Venture Capital Fund):

It is the ambition of many talented people in India to set up their own ventures if they could get adequate and reliable support. Financial institutions provide loans and some of the equity. But they are not in a position to, nor is it their role, to provide management support which is often what the entrepreneur needs most.

Our mission as a Venture Capital Management Company is to provide such support along with capital from Indus Venture Capital Fund. The support function will cover all the key areas of management viz. marketing, technology, finance and human resources development. Our unique strength is our cumulative experience as successful Business Manager, as distinct from financiers.

To Indus each investment is more than a financial transaction. It is a commitment to the success of the Venture and the Entrepreneur. Indus is a partner and not a financier.

All venture capitalists in India do not favour their active participation in the management of the assisted enterprises. They see their role confined to providing strategic advice to the entrepreneurs. Mr. Roger Cottrell of the Grindlays' Bank is one of them. His views are summarised as follows :

.... contrary to facts often put forward in articles in the Indian press, they (venture fund managers) will not provide day to day guidance in the fundamentals of business management. If the venture capitalist does not believe that the entrepreneur (or more accurately the assembled team) has the onus to run a successful business and to cover all the key areas of production, marketing, finance etc., he will simply not put his money on the table: The venture capitalist, running a portfolio of investments, *can rarely contribute more than strategic development advice* to the management team. He cannot devote time to teaching a technocrat manager the detailed aspects of running a business. Such a heavy involvement with fragile management would be prohibitively expensive in terms of human resources and the potential rewards would rarely justify the effort. So venture capitalists do not expect to tutor and prop up inadequate management. In fact, in most instances, the venture capitalist will adopt a passive role to his investment : one of *eyes-on but hands-off*. This is certainly the approach of the majority of the players in the market.

The management support by VCFs in India is not total and continuous; it is generally provided at the start-up stage. The relationship between the venture capital financier and the entrepreneur India is not yet that of partners; it is still a relationship of a lender and a

borrower. Most entrepreneurs do not want any interference from the venture capitalists. Venture funds like TDICI and Indus-VF realise the poor quality of management in small enterprises, and therefore are wedded to hands-on management approach. A number of the new private sector entrants including CFC, TCFC, Indus etc. also consider management participation as necessary.

3.4 Disinvestment Mechanisms

The objective of a true venture capitalist is to sell off his investment at substantial capital gains. But most venture funds in India aim to operate on commercial lines along with satisfying their developmental objectives. Public sector venture funds invariably have some developmental objectives and they would also like to disinvest their holdings at adequate return with a view to recycle funds. Thus far no venture fund in India has disinvested its holdings. Probably VCFs are waiting for the full operation of OTC Exchange for trading in unlisted securities. A venture capital is generally not in a position to realise his investment before five to seven years. Since most of the venture funds in India have been started recently, there would hardly be any projects in a stage to be divested.

What are the disinvestment options available to Indian venture funds? The disinvestment options generally available to venture capitalists in developed countries are the promoter's buyback, public issue, sale to other VCFs, sale in OTC market management buyouts etc. A few of them are effectively feasible in India. In USA, the venture capital industry since its inception had access to well developed, efficiently functioning capital markets, and later on, to well developed over the counter (OTC) stock market. The stock markets and OTC markets in a number of European countries and a few developing countries is a recent phenomenon. So far, they have been using other avenues for disinvestment. These avenues, although help to produce significant profits to investors, yet they are considered second-best in comparison to the stock market disinvestment.

The most popular disinvestment route in India is promoter's buyback. This route is suited to the Indian condition because it keeps the ownership and control of the promoter in tact. The obvious limitation, however, is that in a majority of cases the market value of the shares of the venture firm would have appreciated so much after some year that the promoter would not be in a financial position to buy them back. In India, the promoters are invariably given the first option to buy back equity of their enterprises. For example, RCTC participates in the assisted firm's equity with suitable agreement for the promoter to repurchase it. Similarly, Can-VCF offers an opportunity to buy back the shares of the assisted firm within an agreed period at a predetermined price. If the promoter fails to buy back the shares within the stipulated period, Can-VCF would have the discretion to divest them in any manner deemed appropriate. SBI Capital Markets ensure, through examining the personal assets of the promoter and his/her associates, that buyback would be a feasible option. GVFL would make disinvestment, in consultation with the promoter, usually after the project has settled down to a profitable level and the entrepreneur was in a position to avail of finance under conventional schemes of assistance from banks or other financial institutions.

The benefits of disinvestment via public issue route are improved marketability and liquidity, better prospects for capital gains and widely known status of the venture as well as market control through public share participation. This option has certain limitations in the Indian context. The promotion of the public issue would be difficult and expensive since the first generation entrepreneurs are not known in the capital markets. Further, difficulties will be

caused if the entrepreneur's business is perceived to be unattractive investment proposition by investors. Also, the emphasis by the Indian investors on short-term profits and dividends may tend to make market price unattractive. Yet another difficulty in India until recently was that the Controller of Capital Issues (CCI) guidelines for determining premium on shares took into account the book value and the cumulative average EPS till the date of the new issue. This formula failed to give due weightage to the expected stream of earnings of the venture firm. Thus the formula would underestimate the premium. The Government has now decided to abolish the Capital Issues Control Act, 1947 and consequently, the office of the Controller of Capital Issues (*Economic Times*, 28 May 1992). The existing companies are now free to fix the premium on their shares. The public issue form of investment can involve high transaction costs because of the inefficiency of the secondary market in a country like India. Also, this option has been rendered far less feasible for small ventures on account of the higher listing requirement of the stock exchanges. In February 1989, the Government of India raised the minimum capital for listing on the stock exchanges from Rs. 10 million to Rs. 30 million and the minimum public offer from Rs. 6 million to Rs. 18 million.

An active secondary capital market provides necessary impetus to the success of venture capital. VCFs should be able to sell their holdings, and investors should be able to trade shares conveniently and freely. In USA, there exists a well-developed OTC market where dealers trade in shares on telephone/terminal and not on an exchange floor. Such mechanism enables new, small companies to enlist on the OTC markets which are not otherwise eligible to be listed on the stock exchanges, and provides liquidity to investors. The National Association of Securities Dealers Automated Quotation System (NASDAQ) in USA daily quotes over 8000 stock prices of companies backed by venture capital.

The OTC Exchange in India has been established in June 1992. The Government of India had approved the creation of Exchange under the Securities Contracts (Regulations) Act in 1989. It has been promoted jointly by UTI, ICICI, SBI Capital Markets, Canbank Financial Services, GIC, LIC and IDBI. Since this list of market makers (who will decide daily prices and appoint dealers for trading) includes most of the public sector venture financiers, it should pick up fast, and it should be possible for investors to trade in the securities of new small and medium size enterprises.

The other disinvestment mechanisms such as the management buyouts or sale to other venture funds are not considered to be appropriate by VCFs in India.

3.5 Promotion Strategies

A number of chief executives of the venture capital firms feel that there is inadequate flow of applications for venture financing. This is so in case of both the public sector venture funds such as SBI Capital Markets and Canbank Financial Services as well as the private venture capital firms like Twentieth Century Venture Capital (TCVC). However, initially when the first venture funds were floated by TDICI and IDBI, the response of applicants was fairly encouraging. One reason for not-a-very-overwhelming flow of applications could be that the concept of venture capital in India is new and it has yet to be fully understood or appreciated by the entrepreneurs. The concept of venture capital, as an avenue for risk finance, being distinct from the conventional financing methods needs to be understood in the proper perspective. There seems to be a mistaken notion that it is yet another financial support, such as the seed capital support, available to the technocrat-entrepreneurs. Consequently, the entrepreneurs approach VCFs for financing all types of projects. What is

therefore needed is promotional efforts by these funds not only to increase flow of applications, but, more importantly, to popularise the generic idea of the venture financing. Do the venture capital funds in India have a proactive strategy for identifying ventures and attracting entrepreneurs ?

The promotion efforts of VCFs in India could be classified into five categories as discussed below:

- * *Contacting R & D organisations* : A large number of industrial undertakings have recognised in-house R & D facilities as well as there exist a number of national and other labs. These R & D organisations have been generating a number of innovative ideas which could be converted into commercial processes and products. VCFs could contact these organisations for obtaining information on their R & D activities which could be passed on to the prospective entrepreneurs. For example, IDBI-VCF has been in constant touch with about 500 industrial undertaking having R & D set-ups.
- * *Conducting seminars and industrial meets*: The purpose of organising seminars and industrial meets is to present salient features of VC schemes to the prospective entrepreneurs. IDBI-VCF and TDICI have conducted number of such seminars and meets in different regions of the country. It also interacts with numerous industry associations, such as Confederation of Engineering Industry (CEI), government and semi-government agencies as well as other VCF institutions. CEI and other institutions have also been organising workshops on TDICI in various cities to educate their members and others about TDICI's venture financing schemes for new and existing risky hi-tech business.
- * *Creation of information services*: TDICI offers a technology information service in a large number of areas of science and technology (such as agriculture, computers, bio-technology, engineering etc.). For this purpose, TDICI maintains an online access to over 300 international databases in USA, Europe and South-East Asia.
- * *Promotion of entrepreneurial activities*: RCTC, along with other financial institution, provides support for industrial potential surveys, particularly in non-industry districts, consultancy services through technical consultancy organisations (TCOs) and for entrepreneurial development programmes. Similarly, Infrastructure Leasing and Financial Services Ltd (ILFS) has plans to develop first-generation entrepreneurs with managerial skills by establishing an institute in Pune. ILFS also intends to set up science and technology entrepreneurs' parks (STEPS) as done by IFCI. A number of VCFs feel that without promotional efforts of this kind the concept of venture capital, as is popular in the developed countries, will not take roots in India.
- * *Marketing thrust*: TCVC is of the opinion that a major marketing effort is required for the concept of venture capital to really take off in India. The various VCFs will have to join hands to put special marketing efforts in developing and educating venture capital market in the initial stage. Highly professional executives would be required for this purpose. TCVC depends on merchant bankers and the chartered accountants for the purpose of liaising with prospective entrepreneurs.

There are a large number of other developmental strategies available for promoting venture capital for entrepreneurial development, which VCFs in India could attempt in future. They are described below :

- * The concept of *venture fairs* as practised in developed countries like USA, can be tried (Henderson, 1988, p.355). They are like industrial conferences where members of the venture capital industry gather to listen to entrepreneurs about their new ideas and business propositions. How do these fair work ? Participating entrepreneurs put formal applications indicating their business plans for presentation in the fair. Applications are reviewed to select truly high quality investment opportunities. The venture capitalists attend group sessions in which each entrepreneur gets an opportunity to present his project. Subsequent to these public presentations, venture capitalists sign up for longer and more detailed presentations by the entrepreneurs they express a particular interest in.
- * *Venture capital clubs* could be started to increase interaction between venture capitalists and entrepreneurs. This would help in generating new business ideas which could be scrutinised in detail and financed if found suitable (Henderson, 1988, p.356).
- * Yet another method of popularising venture capital is to establish *venture capital networks* (VCNs) as in USA (Henderson, 1988, p.253). Such networks aim to develop a more efficient information base for organising a system that matches entrepreneurs with private investors in the informal market. A typical VCN is intended to provide a listing service to facilitate flow of information; it does not act as a broker or investment advisor. Data on venture opportunities and investor preferences are compiled in two separate databases. As new entries are made in these databases, they are compared in an attempt to match venture opportunities and investor requirements. As and when compatibility is found, investors are furnished summary information on the venture. If additional details are sought the entrepreneur and the investor are introduced to each other and they proceed independently from this juncture onwards.
- * A *national venture capital association* on the lines of the British VentureCapital Association or the European Venture Capital Association can be set up in India to take up the task of representing the interests of the numerous stake-holders in the industry and of promoting it on a collaborative basis.

All of these promotion options may not be feasible in India immediately. However, they need to be kept in my mind by the venture capitalists and policy makers, and attempt them as soon as an opportunity arises. It is important to note that the task of marketing venture finance is very difficult for at least two reasons : First, it is an intangible service, and to convince customers about its utility is not easy. Second, it is targetted to new technocrats/ entrepreneurs whose managerial credentials are not yet proved. Thus, the risk is high. In spite of these difficulties a conscious marketing thrust and promotional efforts are needed for the progress of the venture capital industry in India.

4. Policy Interventions for Venture Capital Development

We can derive important lessons from the experiences of the developed countries and the Indian experience so far to design policies for accelerating the pace of growth of the venture capital industry in developing countries like India for a fast and sustained entrepreneurial development. The current venture capital environment in India differs from that prevalent in the developed countries at least in the following three ways:

- * The scope of venture capital operations in India is restricted to providing finance for seed capital, high-tech projects and for turning R & D into commercial production. This focus is certainly most desirable in a developing country like India. However, VCFs abroad provide assistance under a variety of situations, ranging from supplying seed capital to financing expansions, buy-outs, mergers and acquisitions etc. They also do not necessarily equate high-risk with high technology projects. Thus fiscal and other incentives for venture finance are available for all risky ventures in the developed countries.
- * The innumerable financial instruments with different mix of risk and return characteristics available abroad enable the venture capitalist to tailor-make flexible financial packages to the entrepreneur's needs. Because of the paucity of financial instruments in India, such flexibility is not available.
- * The growth in venture capital abroad has been largely contributed by the private sector funds. Till recently, however, the Government policy in India did not encourage the participation of the private sector in venture capital. Even now, the share of private funds in venture capital is quite negligible.

As shown by the experience of the developed countries, the following policy measures are needed to provide needed boost to the venture capital industry in India.

4.1 Fiscal Incentives

Fiscal incentives have been found to play a central role in the growth of venture capital in the developed countries. For example, in U.S.A. the reduction of the capital gains tax rate from 49 per cent to 28 per cent and later on to 20 per cent gave an unprecedented boost to the development of venture capital. Tax incentives could be provided to the venture capital companies, new and small businesses, or investors investing in equity shares. In India, preferential tax treatment is available to VCFs which finance eligible enterprises. What is needed is to give tax incentives both to the institutions and individuals investing in venture capital firms. This would encourage establishment of more venture capital firms in the private sector. Investors investing in SMEs can be provided additional tax incentives. In a number of developed countries, investors can deduct from their taxable income part of the cost of investment in the equity shares of specified VCFs. In some countries, such as the U.K., investors are provided income tax relief if they invest in qualifying, unquoted companies or in new companies. Investors are also charged capital gains tax at lower rate, and are allowed to set off losses on sale of shares against income tax. Some countries, like Australia, have removed double taxation on dividends. A number of countries also provide tax incentives to small and medium enterprises in the forms of capital cost allowance, deduction of R & D expenditure, tax reliefs on profits etc. Most countries also make government finance available to VCFs.

A number of tax concessions have been made available to equity investors in India in recent times. This has helped to activate the capital markets. In the budget of 1992-93, the government has increased the exemption limit for income tax from Rs. 22,000 to Rs. 28,000 and has brought down the maximum margin tax rate to 40 per cent from 50 per cent. Similarly the long-term capital gains will be taxed at a lower rate of 20% (earlier the taxable capital gains were added to the tax payer's overall taxable income) in case of individuals. These changes are expected to boost equity investment. However, the government has withdrawn certain tax incentives (e.g. those available under sections 80L, 80CCA and 80CCB) which would have adverse effect on capital market investments. The following are some suggestions regarding the tax incentives to encourage venture capital in the country:

- * Section 80 CC should be restored, and a separate deduction should be extended to investments in VCFs. The benefits could be extended to shares acquired through private placement. A maximum percentage of share holding could be prescribed so that the facility is not abused.
- * The dividends paid to the investors of VCFs should be exempt from tax. The dividends are declared out of profits which have been taxed and if they are taxed again this tantamounts to double taxation.
- * The long term capital gains are taxed at a concessional rate of 20 per cent. They should be completely or substantially exempt from tax, provided proceeds realised at disinvestment are reinvested in a new venture.
- * The benefits of Section 80 HHC of the Income Tax Act should be extended for 50 per cent of the profits earned on venture capital investment. This would encourage private sector companies to establish venture capital funds.
- * Venture capital joint stock companies should also be given the tax benefits available for companies in which the public are substantially interested, as defined in Section 2(18) of the Income Tax Act.
- * Section 43 A of the Companies Act provides that when 25 per cent or more of the share capital of a private company is held by one or more public companies, the private company shall become a deemed public company. In order to encourage investment by VCFs like TDICI in new enterprises, the section should be amended suitably such that the company can retain its private ownership.
- * Foreign venture capital investment should be encouraged.
- * Listing guidelines for VCFs should be relaxed. They should be allowed to issue even 20 per cent to 30 per cent of the shares to the public, soon after profits are made (as compared to a minimum of 60 per cent requirement at present). Possibly this would be an important feature of the proposed OTC market.
- * The formation of limited partnerships is not permitted in India. The Indian Partnership Act should be amended to permit the formation of limited partnerships, and the fiscal benefits available at least for the purpose of venture capital business such partnerships also.

- * Non-voting shares should be introduced. This will eliminate the fear of the entrepreneur's apprehension of being owned and controlled by VCFs.

4.2 Exit Route

The secondary stock markets are a great help to investors in disinvesting their equity holdings. They reduce transaction costs and provide liquidity. Following the example of the USA, a number of European countries have recently set up secondary markets to promote venture capital. However, most of the countries have tough requirements for listing of companies in the regular stock exchange. Generally, the large companies with demonstrated performance over a long period of time are allowed the stock exchange entry. SMEs are not allowed listing on the regular stock exchanges. To facilitate the fund raising activity of SMEs, a number of countries such as U.K., Japan, France, Netherlands, Sweden etc. have introduced second tier markets in which listing requirements are much less restrictive and less expensive. A number of these markets are functioning successfully. In some places, the smaller companies within SMEs face lot of difficulties in obtaining listing. U.K. introduced in 1987 a Third Market for smaller companies with even easier listing requirements than required by the USMC (second market).

A large number of developing countries do not have the second markets, and therefore, SMEs are unable to raise capital from the capital markets. Developing countries should aim at developing organised markets for smaller companies once the regulators and investors have acquired enough experience of trading in the shares of larger companies. Until such time, they can help SMEs by creating OTC markets.

Most developed countries have the OTC markets. NASDAQ market in USA is the largest OTC exchange in the world. UK also has a smaller OTC market which is operated by licensed security dealers. Yet another successfully operated OTC market is that of Sweden which was started in 1982. An OTC market worth examining by developing countries is that of Singapore's Stock Exchange of Singapore Dealings and Automated Quotation System (SESDAQ) which was established in 1987. It provides a market for new, growing enterprises to raise equity capital. SESDAQ has based its listing requirements on the UK's USM, and its trading arrangements on the USA's NASDAQ.

The existing secondary markets in India have restrictive listing and operating requirements for the small and medium size enterprises; hence they are not conducive to the development of venture capital. In India the OTC market which is expected to cater to the trading needs of small and medium size enterprises, has just started functioning since June 1992. In the absence of proper disinvestment facility in the stock markets, venture capital in India has taken the form of quasi-equity investment or modified loan. Venture capitalists avoid riskier ventures when mechanism to make capital gains are not available.

In 1989, the Government of India approved the creation of an Over-the-Counter-Exchange of India (OTCEI) under the Securities Contracts (Regulations) Act, which has started functioning since June 1992. OTCEI is promoted by development banks (ICICI and IDBI), investment corporations (UTI, LIC and GIC) and commercial banks (SBI and Canara Bank). The aim of OTCEI is to provide SMEs an easy access to the capital markets. It is a ringless, electronic exchange extending listing service to entirely new set of companies. Companies with issues share capital of Rs.3 million to Rs.250 million can be listed on the OTCEI. Companies with issued capital of Rs.3 million to less than Rs.30 million should make a minimum public issue

of 40 per cent of their capital or Rs.2 million, whichever is higher. Companies with issued capital of Rs.30 million and upto Rs.250 million should satisfy the listing requirements and guidelines currently applicable on other stock exchanges. The venture capital companies are required to make a minimum public offer of only 20 per cent of their issued capital. The hire purchase, finance or leasing companies are not eligible to be listed on the OTCEI.

In India, so far the Controller of Capital Issues (CCI) used to determine the premium on shares when they are issued to investors. The CCI guidelines for valuation of shares failed to consider the future earning potential of a venture. In fact, the premium on shares of the venture capital-assisted firm should be market oriented. The government's decision to abolish the office of the Controller of Capital Issues will now pave the way for the OTC market to function on the basis of market forces. The OTC market guidelines should enable VCFs to make an easy exit. The interests of both the entrepreneur and VCFs should be appropriately protected. Criteria for size of shares issue, amount of premium, kind of scrips that can be traded on this market, etc. should be framed keeping in mind the need for the rapid growth of the venture capital industry. As in other developing countries, the OTC market in India has been promoted by government owned development bank and investment corporations. They would act as market makers. There can arise a conflict of interest if they take shareholdings in the client companies. One way to avoid this is to disallow them from buying and selling shares for their own portfolios.

For the purpose of disinvestment, companies should be allowed to repurchase their shares. Section 77 of the Companies Act, which prohibits a company from buying its own shares. It should be suitably amended to allow the assisted companies to buy their own shares in certain circumstances (especially when the venture capitalist is unable to disinvest his holding in the ordinary course). This would give VCFs an easy exit route and the entrepreneur an assurance that he will continue to own the company.

The stock option scheme for managers/promoters is yet another mechanism for the development of venture financing. In case of new venture this would inculcate more commitment and motivate managers and promoters to achieve high performance. Also it would help the promoter to steadily increase his stake in the venture vis-a-vis the venture capitalist. Thus he can acquire enough shares through stock options to retain control while the venture capitalist makes his exit by disinvesting his holdings. Such schemes do not exist in India.

4.3 *Organisational Issues*

The experience of developed countries has shown that the private sector venture capital companies encourage entrepreneurship. In the regulated economies both large private as well as public sector financial institutions are found to have strategies to promote entrepreneurship. Likelihood of their success increases when they adopt flexible structure such as the fund plus management company or limited partnerships. Decision making by highly structured systems could stifle initiative, creativity and innovativeness. Further, VCFs need experienced and competent managers, full with initiative, drive and vision, who could identify potentially sound ideas and innovative and visionary entrepreneurs. Unfortunately, such managers are not easily available, particularly in a developing country like India. Management schools and institutes in India need to develop special training programmes to train venture capital managers. More than knowledge, it is the risk-taking and entrepreneurial attitude which needs to be inculcated in those managers.

The objective of a venture fund should be to promote innovation and enterprise, and hence protecting the entrepreneur's interest is of paramount significance. Both the private and public venture funds do have the danger of focussing more on profits rather than the economic and entrepreneurial development in developing countries. They may be tempted to make capital out of various tax benefits given by the government and plan to utilize only a part of their funds for innovative ventures. The terms like "high tech" and "high risk" in the government guidelines are not clearly defined. In fact, TDICI's first venture capital fund was devoted to hi-tech projects due to the definition of venture capital under the government guidelines. However, due to their unfavourable experience, they decided to shift focus on commercial viability in their second fund. If the ambiguity in the government guidelines and policies continues, then the growth of venture capital in India could be deterred. What is needed is not merely a one time permission and incentives for setting up a venture fund, but a mechanism of continuous prudent monitoring, evaluation and control of the venture capital industry.

Yet another aspect which needs attention of the policy makers is that venture capital cells could be established in research laboratories like ISRO. These cells should be managed by experts from VCFs, apart from the scientists and technologists. The chief advantage of any such set up would be in terms of the management consultancy and on-line financial help that these institutions would be able to render to the emerging in-house entrepreneurs or outsiders. There are examples of scientists and engineers in research labs who developed new processes/products, and could arrange funds and other resources to set up enterprises to commercially exploit such products/process. Unfortunately, such examples are not too many. Scientists/engineers working in research organisations should not only be encouraged to become entrepreneurs but they should also be provided with financial and other assistance.

The idea of business incubators akin to those existing in USA be attempted in India. These incubators are organisations that support and finance small business start-ups and expansions by providing inexpensive administrative services, management and marketing assistance, business library etc. apart from professional services such as loan packaging, financial planning, legal assistance and so on. In general, everything that contributes to reduction of the firm's cost of operation during the initial stages of the life cycle comes under the purview of their activities (Henderson, 1988, p.349).

In developing countries like India, the government has a very critical role to play in encouraging the entrepreneurial spirit and a favourable attitude towards venture capital. U.K. and Japan are the examples of the appropriate government actions and efforts for providing right environment for the development of enterprise culture and venture financing. The government should be aware of the obstacles which it may have to face in bringing about the attitudinal change (Wellons et.al., 1986, p.34) : 'Entrepreneurs may welcome or resist external shareholders, provide or withhold adequate information on their company; bankers, lawyers, and educators may favor or frown upon entrepreneurs. The business community may like or abhor equity-participation schemes for employees or managers; entrepreneurs and investors may accept or avoid risk'.

4.4 Focus on SMEs and Sick Units

Venture capital is one important aspect of the development strategy for small businesses. There must exist an overall supporting environment for the growth of small and medium businesses. This should include infrastructure facilities, advisory and training services,

guarantee schemes, concessional funding, managerial and marketing support etc. Moreover, the bureaucratic barriers should be removed. Within the broad guidelines and regulations, anyone should be free to start a business. The recent policy announcement by the government regarding small scale industries seem to be a step in the right direction since it provides for substantial infra-structural, managerial and financial support for small enterprises. VCFs should be encouraged through appropriate tax and other incentives, to provide financial and managerial support to SMEs. Additional incentives can be given to VCFs in case they assist high-tech SMEs. The scope of VCFs should be broadened to include service sectors where SMEs have predominant presence. Thus, VCFs can play a role in the development of tourism, publishing of specialist books, health care markets etc.

VCFs should be encouraged through special fiscal and other incentives to play a role in rehabilitation and turnaround of sick companies. It has been estimated that about 100 industrial units become sick every day in India, of which 82 per cent are non viable, about 10 per cent are in doubtful category and at best 8 per cent are viable. One important cause of this problem is the non-existence of an exit policy. The present laws require that any unit employing more than 100 workers cannot be closed down without prior Government permission (which is rarely given). The problem would be aggravated since the liberalisation and deregulation process would make the entry of firms much easier if exit remains practically impossible. Sick units add tremendous cost. The minimum wage that a sick will pay is Rs.1,500 or more per month without much productivity. The amount of funds locked up in these sick units is colossal. A venture capitalist can salvage the locked up funds and give a big boost to the economy if laws facilitate the acquisition of the sick units. Unlike the conventional financier, he can assume risk, and provide managerial and financial support to potentially viable sick units. The government should provide additional tax benefits and other incentives to VCFs for the rehabilitation of sick enterprises.

4.5 Institutional Linkages and Role of Financial Institutions

To ensure that VCFs play an effective role in the technological development, they should provide an institutionalised linkage between educational institution's and industry, and between R & D institution's and industry. A lot of useful research is done in India. Most of it is carried out by national laboratories. They are, unfortunately, not commercially oriented; they lack managerial and marketing expertise; they do not have finances. Thus technology developed by them remains unutilised. Private sector conducts research for its captive use. Industry is not aware of the research done or technology developed by educational and R & D institutions. In some areas, technology developed is not what the industry needs, or what is useful to the country. Thus there is a gap between educational and R & D institutions, on the one hand and industry on the other. New technologies are risky, and even if the industry becomes aware of its availability, they may not try it. They would need commitment from research institutions that technologies would work. Still they can fail. Therefore, they need some kind of financial safety. VCFs can play a role. They can institutionalise the coordination between educational and R & D institutions and industry and provide financial support and assume risk. They should spot out entrepreneurs, spot technology and support it. More than technology or product, they should search for the person; if the person is good, product would prove to be good. Korea is a good example of the institutional mechanism of bringing managerial and financial support and technologies together. In Korea a number of companies have originated with the support of Korea Technology Advancement Corporation (KTAC) venture capital group, set up in 1974, with

the objective of investing in high-tech businesses, particularly commercialising the R & D results from the Korean Advanced Institute for Science and Technology.

Venture capital is a financial innovation for financing technology. But it is generally restricted to small scale sector. The need of India is to influence the process of technological development in all sectors and at every level. Thus all financial institutions (FIs) in India, particularly the development banks(DBs), must orient their role towards the promotion and financing of advanced technology (Jequier and Hu, 1989).

Financial institutions comprising development banks, commercial banks and other lending institutions, have a critical role to play in building up linkages between production system and R & D system as they are the basic instruments of allocating resources to the production systems. Because of their role in the process of technological development, FIs could be treated as technological institutions. Any organisation, which, through its functions and activities, exerts an impact on technological promotion, innovations and financing or on the development of a country's technical capabilities, is a technological institution. Unfortunately, FIs are not aware of their technological role. They consider the technological functions to be incidental to their main functions of financial intermediation and project finance. In spite of such perception, FIs have a major indirect influence on a country's production and technical systems. Their technological role is affected through project finance, and thus begins at the project identification stage and continues throughout the project's life cycle. Development banks form a highly unified system, or network of FIs in developing countries. They have generally provided industrial finance, and helped in building their country's industrial structure. They readily provide finances to projects which appear 'good' in terms of formal evaluation. This approach need not necessarily lead to a technologically competitive and efficient production systems. DBs do not go out, spot good ideas, get them into concrete shape, help in assembling and organising the ingredients and assist in the implementation of the project and in the management of the enterprise. They have generally focussed on projects rather than the entrepreneurship. This has tended to result into a short-term approach to the technological development. If DBs have to play a catalyst's role in the technology development, they should do the following (Jequier and Hu, 1989):

- * They need to develop technological capability to assess and evaluate technological trends in all sectors. This capability should be proactive.
- * They should have an active policy for searching for technologically more attractive ideas and enterprises, promoting and supporting them. Project appraisal must contain a detailed comparison of technological alternatives. They should shift their focus of project appraisal from security and balance sheet analysis to cash flow analysis based on the detailed understanding of the technological and economic characteristics of the borrower's business. They should develop a long standing relationship with clients rather limiting focus to projects alone. They need to develop strong capabilities to provide continuous technological advice and support throughout the different stages of the project cycle.
- * They need to pay adequate attention to pre-project and post-project efforts as well as show concern for the industrial growth and development of the country. They will have to put more focus on technological dimensions of the project.

- * They would have to devise equity-based methods of financing technology for a continuing and long-term relationship.
- * They should develop activities to develop and implement a long-term vision of specific industries and sectors. They can provide major information and judgemental inputs into the government's policy-making process and play a role both as initiators and executors of a country's technology policy.

There is urgent need to strengthen linkages between government policies and the policies of VCFs and other financial institutions in the field of science and technology. This would help to feed research and development efforts into the production system. This could be done through the participation of FIs in the formulation of national technology policies and by a representation of science and technology agencies on the board of FIs. Closer linkages between the financial system and the science and technology system could lead to emergence of a new type of national technology policy based not exclusively on research institutions, but also on FIs.

In this section, we summarise the main findings and conclusions of the study.

5.1 *Role of Venture Capital*

A venture capital firm is a financial intermediary, and thus, it adds value to the economic system by resolving the problems arising out of information asymmetry, regarding the value of the firm, between the entrepreneur and the prospective investors. In cases with extreme information asymmetry, the markets do not clear, i.e. market failure obtains (Akerlof, 1977). In the context of venture capital, one way to reduce this information asymmetry is to signal entrepreneurs assessment of the market value of a firm by increasing his share in the firm. This may not be an appropriate solution, specially in developing countries, for the entrepreneurs may very often be having limited wealth. Such a constraint would limit both the kind and the size of projects that could be undertaken. A venture capitalist by providing start-up financing enlarges the range of the projects that can be undertaken in an economy. Also, when he decides to accept or reject a project, he provides useful signals as to the quality of the projects. Such a signal is the end result of the evaluation process. Depending on the effectiveness of the evaluation process, a venture capitalist helps to distinguish the potential performers from the non-starters or non-performers (Lam, 1991).

Yet another way in which a venture capitalist adds value is by providing the firm with access to the capital markets - loans as well as equity. Since a new firm lacks credibility due to absence of previous track record in the capital market, the venture capitalist signals quality of the firm by his investment at the initial stage, and also the evaluation by a venture capitalist lends credibility to the information provided by the entrepreneur to the market. This helps reduce the perception of the riskiness of the firm by the market, and, thus, adding value in the form of reduced capital cost and large credit or equity investment.

Further, it may be argued that it is in the venture capitalist's interest to increase the level of information in the market, for it would help him get a better price for his dis-investment. That is, if the market has no or little information about a firm's future earnings or earning capacity, the investors would be willing to pay a very small premium to the venture capitalist. Thus it would be desirable for the venture capitalist to gather and process the information, and also to release this information to the market over a period of time (much before his dis-investment). This would also help the firm to raise resources (funds, materials, men) at lower costs.

Thus venture capital provides a real economic service for the development of enterprise in an economy. It is specially suited to small and medium size enterprises, and particularly those engaged in high technology, high risk businesses.

5.2 *Socio-economic Scenario*

The US type venture capital will take some time to develop in India. The slow growth of the Indian economy and weak industrial base do not provide sufficient space for small companies with innovative products and ideas to grow. The size of the market is quite vast in India as well as there are plenty of niches to fill. But the purchasing power of people is low. Also, the customers are less demanding, less sophisticated, and less quality-conscious. The low standard of education, the lack of confidence caused by the weak industrial base, and general

entrepreneurs. Except in case of a few communities, there is a general antipathy to commerce and industry. Most people prefer public service, rather than starting their own businesses. Thousands of young people join Universities instead of obtaining technical or commercial or industrial education. The University education system is so lopsided that neither does it turn the students as intellectuals nor does it prepare them to become entrepreneurs. For example, the engineering students are not equipped with knowledge of economics, accounting, finance etc., and finance and accounts students hardly have any understanding of engineering or physical sciences. Thus the social and educational systems in India are not fully geared to entrepreneurship.

In spite of various economic and social obstacles, India does have a reasonably developed small scale industry. Government policy provides a lot of encouragement through fiscal incentives and concessions for the growth of small enterprises. There do exist institutional mechanisms for the supply of finance to SSEs. In practice, SSEs, particularly the high risk, new enterprises face innumerable impediments in raising finance. Also, because of the lack of managerial and marketing skills, a large number of SSEs become sick every year. The cult of entrepreneurship has not widely spread in India. Well qualified engineers and scientists with management qualifications from prestigious management schools prefer to undertake finance and marketing careers in large Indian and multinational companies. Venture capital, a recent phenomenon, is seen as an institutionalised mechanism of providing finance and managerial support to those engineers, scientists, technocrats or others who would like to take risk by trying out new ideas.

In India a far reaching liberalization of the economy has taken place recently. Finance markets have been substantially deregulated, and are in the process of being deregulated further. The significant changes which would have serious implications for the growth of venture capital include partial removal of foreign exchange control, relaxation in foreign investment controls, deregulation of interest rates, partial convertibility of currency, permission to foreign banks to start business in India, and approval for private sector to enter into venture capital business. Yet another factor which would give a boost to venture capital is the OTC market which has just started functioning.

5.3 Status of Venture Capital

The Indian venture capital industry with its brief history is dominated by public sector financial institutions. A few private sector venture capital firms have been set up recently. A present, there are about a dozen venture capital funds in India who have provided venture finance of over Rs.1000 millions to about 200 ventures. VCFs in India are not pure venture capitalists. They pursue both commercial as well as developmental objectives. Venture finance is made available mostly to high tech ventures. A large number of high tech ventures financed by VCFs are in thrust areas of national priority such as energy conservation, quality upgradation, advanced materials, biotechnology, reduced material consumption, environment protection, improved international competitiveness, development of indigeneous technology etc. Yet another feature of venture financing in India is it is not readily available for development of prototypes or setting up of pilot plants at the laboratory stage.

In India, venture finance is available in three forms : equity, conditional loan and income notes. The repayment of conditional loans is linked to the venture's sales turnover in the form of royalty. Income note is a hybrid security. A low rate of interest is payable initially,

and once the venture takes off commercially, interest is payable at a high rate. Indian VCFs also make conventional loans available to the entrepreneurs. Equity or quasi-equity form of venture financing is less popular in India. Financial packages are mostly weighted in favour of loan. This phenomenon may be attributed to the entrepreneurs' fear of losing ownership and control of the venture to the venture capitalists. Also, the most venture capital funds in India have been initiated by the traditional financial institutions who are generally reluctant to share in the risk inherent in the use of equity. For a healthy development of the venture capital industry in India, the availability of varied financial instruments is essential. This would provide a lot of flexibility for tailor-making the financial packages according to the risk-return requirements of the entrepreneurs. A few VCFs have recently introduced financial instruments such as participative debentures, partially convertible debentures and cumulative convertible preference shares. The success of venture capital in US and UK is attributed to an extent to the availability of a rich spectrum of financial instruments. These consist of ordinary shares, deferred shares, preference shares, preferred ordinary shares, convertible loan stock, warrants, hire-purchase, leasing, overdraft finance etc. Any financial package, however, would have a high component of equity.

VCFs in India follow an elaborate procedure of project evaluation. The information which they seek from the entrepreneurs include history of the company (if it is in existence), background of entrepreneurs, project cost, proposed means of finance, projected financial statements, technology, findings of market surveys, implementation schedule, details of statutory compliances, management structure etc. They make detailed appraisal of both project and the entrepreneur. Outside experts are involved in this process. Since venture financing is high risk business, VCFs in India make a meticulous evaluation of risk : product risk, market risk, technology risk and entrepreneurial risk.

For monitoring the assisted-ventures, VCFs in India require a regular flow of information. They also have rights to be consulted on key decision such as capital investment, appointment of key personnel, expansion, diversification etc. Generally VCFs in India appoint their representatives on the assisted-firms' boards. A number of VCFs provide direct management help to the entrepreneurs. However, the general practice of management involvement lies between hands-on and hand-off approaches. Roger Cottrell (1989) of the Grindlays' Bank argues that the policy needs to be one of "eyes-on but hands-off".

India has enormous need for the development of technology and entrepreneurship for a faster economic growth. Venture capital is the most appropriate method of financing technology-oriented enterprises. The venture capital industry in India is yet in a nascent stage. A proper marketing thrust with appropriate promotional efforts would be needed to accelerate the growth of venture capital. The concept of venture capital in its proper perspective needs to be clarified and popularised. Entrepreneurs in India think that venture capital is yet another form of seed-capital or conventional finance. The promotional efforts made by VCFs include seminars, industry meets, workshops, information services, interaction with R & D organisations, industry associations and Government agencies. Technical Consultancy Organisations, Science and Technology Entrepreneurship Parks, Entrepreneurship Development Programmes and the like represent the long-term endeavours of the public financial institutions to create greater awareness of venture capital in India.

Some more promotional efforts which VCFs in India can attempt in future are venture fairs, venture clubs, a national-level venture capital association and venture capital networks.

Although these ideas are new in the Indian context, the policy makers and industry leaders should explore their potential for promoting the venture capital industry.

5.4 Policy Issues

Effective policy interventions are needed for accelerating the growth of venture capital in India. The government needs to pay immediate attention to the introduction of tax incentives and creation of disinvestment mechanisms for small and medium enterprises and venture capital firms.

It need scarcely be said that a venture capitalist seeks to maximise his return in the form capital gains through disinvestment. A public sector venture firm would also like disinvest for the purpose of making funds available to other projects. The common options available to venture capitalists for disinvestment in the developed countries are promoter's buyback, public issue of shares selling off holdings to another venture fund and sale in the OTC market. All venture funds in India without exception provide for the buy-back option to the promoters. This option has practical limitation since the promoters do not have adequate financial capabilities, and companies are prohibited to buyback their shares. Regarding the option of a public issue, the small, unknown new companies find it difficult to get full subscription of their shares at attractive prices.

Since a venture fund usually offloads its shares at high capital gains when the project has reached a stage where finances for subsequent development/expansion would be easily available from banks and other conventional sources of finance, the alternative of selling holdings off to another venture fund may defeat the entire purpose of disinvesting viz. redeployment of fund in other ventures by VCFs. The most effective disinvestment route is the sale of shares in the over-the-counter market. In 1989 the Government of India approved the creation of an Over-the-Counter Exchange of India (OTI) under the Securities Contracts (Regulations) Act, which has started functioning now.

Disinvestment through the OTC sale is the most seriously considered option for managers of venture funds. In the developed countries like USA and UK, the unlisted securities market (USM) or the OTC market is the most popular form of disinvestment. The Government of India must create situation and design policies appropriate for the smooth functioning of stock exchanges in general and the OTC exchange in particular. In developed countries, VCFs employ many other disinvestment mechanisms such as management buyouts, sale of small companies to large companies etc. These alternatives do not seem to be feasible options in the present Indian environment.

A significant part of the growth in venture capital enterprises abroad has been attributed to funds managed by the private sector. Till recently, however, Indian Government policy restricted or indirectly discouraged participation by the private sector. With appropriate minimum regulations, private sector should be encouraged to enter the venture capital industry. Both private sector promoters and individual investors investing their funds in VCFs must be given enough tax benefits so that they are able to earn a return higher than what is available from the less risky investments and ventures.

On the basis of the experiences of developed countries, a case may be made for fiscal measures and economic and legal reforms for the development of the venture capital industry in India. These proposed changes deal primarily with the Companies Act and the Income Tax

Act. Special reference may be made to the stock option schemes, companies purchasing their own shares, exemption from double taxation, further relief from long-term capital gains, intercorporate loans and investments, deemed public companies, liberalised outlook towards foreign investments, stock exchange listing guidelines, limited partnerships, technology imports and so on. The Narasimham Committee on the Financial System has focussed on the future scope of venture capital and the policy reforms needed for its growth in the following words (Narasimham, 1992):

..With increasing deregulation and the emergence of technocrat entrepreneurs and with the insistence by financial institutions of greater promoter contribution to investment financing, the scope for venture capital business in the country is considerable now and will be more so in the future. While Government has recognised the potential of venture capital companies to give commercial support to new ideas and introduction and adoption of new technologies, the guidelines issued by Government in this regard laying down eligibility criteria with regard to the size of the investment, technology and the background of the entrepreneurs are so restrictive and indeed unrealistic in that they have come in the way of the growth of this business. The committee believes that to create conditions for the sound and orderly of venture capital business the present guidelines need to be reviewed and amended to widen the scope of eligibility criteria and impart a measure of flexibility to the operations of venture capital companies. An important aspect of venture capital business is connected with the divestiture of their investment. A reduction in the tax on the long term gains made by venture capital companies also needs to be considered in view of the high degree of risk inherent in the business. The committee also suggests that there should be equality of tax treatment irrespective of the form of organisations and between venture capital institutions and mutual funds.

5.5 Conclusion

Venture capital can play a more innovative and developmental role in a developing country like India. It could help the rehabilitation of sick units through people with ideas and turnaround management skills. A large number of small enterprises in India become sick even before the commencement of production. Venture capitalists could also assist small ancillary units to upgrade their technologies so that they could be in line with the developments taking place in their parent companies. Yet another area where VCFs can play a significant role in developing countries is the service sector including tourism, publishing, health care, etc. They could also provide financial assistance to people coming out of the universities, technical institutes etc, who wish to start their own ventures with or without high-tech content, but involving high risk. This would encourage entrepreneurial spirit. It is not only the initial funding which is needed from the venture capitalists, but they should also simultaneously provide management and marketing expertise -- a real critical aspect of venture capital in developing countries. VCFs can improve their effectiveness by setting up venture capital cells in R & D and other scientific organisations, providing syndicated or consortium financing and acting as business incubators.

In sum, venture capital, by combining risk financing with management and marketing assistance, could become an effective instrument in fostering development of entrepreneurship and transfer of technology in developing countries. The experiences of developed countries and the detailed case study of venture capital in India, however, indicate that the following elements are needed for the success of venture capital in any country:

- A broad-based (and less family based) entrepreneurial tradition and societal and government encouragement for innovations, creativity and enterprise.
- A less regulated and controlled business and economic environment where attractive customer opportunities exist or could be created for high-tech and quality products.
- Existence of disinvestment mechanisms, particularly, an over-the-counter stock exchange catering to the needs of SMEs.
- Fiscal incentives which render the equity investment more attractive and develops 'equity cult' in investors.
- A more general, business and entrepreneurship oriented education system where scientists and engineers have knowledge of accounting, finance and economics and accountants understand engineering or physical sciences.
- An effective management education and training programme for developing professionally competent and committed venture capital managers; they should be trained to evaluate and manage high tech, high risk ventures.
- A vigorous marketing thrust, promotional efforts and development strategy, employing new concepts such as venture fairs, venture clubs, venture networks, business incubators etc. for the growth of venture capital.
- Linkage between universities/technology institutions, R & D organisation's, industry, and financial institutions including venture capital firms.
- Encouragement and funding of R & D by private and public sector companies and the government for ensuring technological competitiveness.

Appendix I

Venture Capital Guidelines¹

In his budget speech for 1988-89 the Finance Minister declared, "It has been decided to formulate a scheme under which Venture Capital Companies/Funds will be enabled to invest in new companies and be eligible for the concessional treatment of capital gains available to non-corporate entities." Such Companies/Funds would be required to comply with the following guidelines.

A 1.1 Establishment

- * Funds, Companies or Schemes wishing to undertake venture capital finance activities may be established using the term "Venture Capital" if they come within, and agree to abide by, these guidelines.
- * Approvals would be given for the establishment of the Venture Capital Companies/Funds by the Department of Economic Affairs (Ministry of Finance) or such authority as may be nominated by the Government and applications for such approvals should be made with a suitable explanatory note and details of the proposal and addressed to CCI/Joint Secretary (Investments) in the Department of Economic Affairs.
- * Applications for the issue of capital by companies should be made under the Capital Issues (Control) Act to the CCI. Composite applications for approval to establish the Fund and for the issue of capital can also be made.
- * All India Public Sector Financial Institutions, SBI and other scheduled banks, including foreign banks operating in India, and the subsidiaries of the above would be eligible to start Venture Capital Funds/Companies, subject to such approval as may be required from the Reserve Bank of India in respect of banking companies. Joint ventures between them, or non-institutional promoters and then would be permitted but the equity holding of such promoters shall not exceed a total of 20% and must not be the largest single holding.

A 1.2 Management

- * It is required that the Venture Capital Funds/Companies are managed by professionals such as bankers, managers and administrators and persons with adequate experience of industry, finance, accounts etc. If established by subsidiaries of banks/institutions or in-house schemes they should maintain their independence and an arm's-length relationship. They would however be free to draw upon the professional expertise and infrastructure of the parent organisation in the interests of their shareholders and clients and minimising costs.
- * No person would be permitted to be the full time Chairman/ President, Chief Executive, MD or Executive Director or a whole-time Director of a VCC/VCF if he holds any of the above positions in any other company, except that he may hold such a position in an assisted company by virtue of his position in the VCC/VCF.

1. Released by the Office of the Controller of Capital Issues, Department of Company Affairs on November 25, 1988.

A 1.3 Venture Capital Assistance

- * It is intended that Venture Capital assistance should go mainly to enterprises where the risk element is comparatively high due to the technology involved being relatively new, untried or very closely held and/or the entrepreneurs being relatively new and not affluent though otherwise qualified; and the size being modest. For successful units the possibility of high returns would exist, but the projects would initially find it difficult to raise equity from the market, especially when public issues are no longer readily available for small, greenfield companies. The assistance should be mainly for equity support though loan support to supplement this may also be done.

Venture Capital assistance, therefore, should cover those enterprises which fulfil the following parameters :

- * *Size:* Total investment not to exceed Rs. 10 crore (Rs 100 million).
- * *Technology:* New or relatively untried or very closely held or being taken from pilot to commercial stage or which incorporates some significant improvement over the existing ones in India.
- * *Promoters/entrepreneurs:* Relatively new, professionally or technically qualified, with inadequate resources or backing to finance the project.

Investment in enterprises engaged in trading, broking, investment or financial services, agency or liaison work shall not be permitted. Further investment in assisted units for their expansion or strengthening or investment for the revival of sick units would be permitted as part of venture capital activities and the above parameters will not apply. The recipient venture should be established as a limited company and must employ professionally qualified persons to maintain its accounts.

- * The VCC/VCF should invest at least 75% of its funds into venture capital activity as explained in para 3(i).
- * During the first 12 months any permissible investments may be made (including leasing upto 15% of the funds) but a level of 30% should be reached for venture capital activity by the end of the second year, and 60% by the end of the third year, and 75% by the end of the fifth year of operations.

The balance amounts may be invested in any new issue, by an existing or a new company, of equity, CCPS, debentures, bonds or any other securities approved for this purpose by the CCI. A part of this may also be employed for leasing but this should not at any stage exceed 15% of the total funds deployed, including in the first year. Activities such as money market operations, bill rediscounting, broking, portfolio investments and fund management, financial services and consultancy, intercorporate lending would not be permitted to VCC/VCF. Specific approval of CCI should be taken for activities not prohibited but also not included in the permitted list above.

A 1.4 Size

The minimum size of a VCC/VCF would be Rs. 10 crore (Rs. 100 million). If it desires to raise funds from the public, the promoters share shall not be less than 40%.

A 1.5 Capital Issues

- * Funds may be raised through public issues and/or private placements to finance VCF/VCCs.
- * Foreign equity upto 25% multilateral/international financial organisations, development finance institutes, reputed mutual funds etc. would be permitted, provided these are management- neutral and are for medium to long-term investments.
- * NRI investment would be permitted upto 74% on a non-repatriable basis and upto 25%/40% on a repatriable basis.
- * An application should be addressed to Ministry of Finance, Investment Division, North Block, New Delhi with a copy to Chairman, Securities Exchange Board of India for foreign/NRI participation in capital issues.

A 1.6 Debt-Equity Ratio

The debt-equity ratio may be a maximum of 1 : 1.5.

A 1.7 Underwriting Listing

- * The VCC/VCF may be listed according to the prescribed norms. Its issue may be underwritten at the discretion of the promoters.
- * For assisted units also listing guidelines would apply. Investment by widely held VCF would be treated as public participation for this purpose.

A 1.8 Exit

Pricing of the shares at the time of disinvestment by a public issue of general offer of sale by the VCC/VCF may be done by them subject to this being calculated on objective criteria like book value, profit earning capacity etc and the basis is adequately disclosed to the public.

A 1.9 Eligibility for Tax Concession

The preferential tax treatment would be available to the approved Venture Capital Company/Fund only in respect of financing of such assisted units as are eligible to be treated as Venture Capital units as defined in paragraph 3. For this purpose, the unit seeking equity support from the VCC/VCF should obtain a letter of eligibility from IDBI/ICICI or any such agency that may be nominated by the Government.

Appendix II

Project Evaluation Process : A Case Study¹

A 2.1 Case History

The case of Electrovision Ltd. is used to illustrate the process of project evaluation by VCFs in India. The venture, Electrovision Ltd., was in the joint sector and the product, microwave ovens, was, at that point of time, neither manufactured nor marketed in India. The venture was to be jointly promoted by the Himalaya Rashtra State Electronics Development Corporation (HRSEDC) and Mr. G. Of the total equity of Rs. 8.8 million, the promoters had approached Delta Venture Capital Ltd., for equity assistance of Rs. 3.2 million (i.e. 35.68%). Electrovision Ltd had been incorporated in April 1988, and it was granted venture capital funding by Delta a year later, i.e. in April 1989. The project was located in a category "C" district of Himalaya Rashtra.

The Board of Directors of Delta Venture Capital Ltd., prior to their final approval of the project, considered the following points:

Promoters Background: With regard to HRSEDC the following factors were examined :

- * Their previous experience in the field of electronic appliances, consumer durables and high-tech products in general.
- * Their experience with joint ventures and collaborations.

Several facts were quoted here : HRSEDC had been manufacturing and marketing a range of black and white TV sets since November 1986. They had set up a joint venture for the manufacture of heavy duty electronic printers, photo facsimile equipment, minicomputer modules etc. They had also formed a joint venture for manufacturing aluminium electrolytic capacitors, and had a collaboration with Fujitsu Ltd and Furakawa Electronic Co Ltd for manufacture of fibre optic communication systems.

With regard to Mr G, his age, educational and business background, his experience in the field of kitchen appliances, and details of firms in which he had interests were examined. Mr. G was 35 years old and has degrees in Engineering and Management to his credit. He had 12 years of business experience and had been associated with a well-known brand of kitchen equipment firm for eight years.

Electrovision Ltd. had a seven-member Board of Directors. The Chairman and two Directors represented HRSEDC, Mr G was the Managing Director while two of the other three Directors were Professors at IITs.

Technology of the Product: Microwave ovens were introduced in developed countries in the 1960s and their technology was well established. Electrovision wanted to pioneer this product in India. The critical element of such an oven is a magnetron that emits microwaves having a frequency of 2450 Mhz, and Electrovision planned to import it from Toshiba, Japan. An expert group constituted by the Department of Science and Technology

¹ This case study is authored by Mr Prasanjit Sarkar and Mr Pankaj Sangal. To maintain confidentiality, names of the company, VCF and persons involved have been disguised.

(DST), Government of India, had concluded that with regard to other components the technology had been developed indigenously utilising resources and expertise available in Electrovision and that it was suitable for commercial production. The technical advisor to Delta had opined that the project had a good chance of success contingent on : (a) achieving reliable quality and efficient after-sales service, and (b) being the first to introduce the product in the Indian market.

He also drew special attention to the need for controlling the microwave leakage which could be hazardous to human health. The Government of India Committee, however, had tested a prototype of the Electrovision oven and had found the emissions to be within the permissible limits.

Project Cost and Means of Finance: The total cost of the project was estimated at Rs.28.3 million of which imported plan and machinery accounted for a little over Rs.2.4 million. The means of finance were as follows :

Sources of Finance	Amount	
	Rs. million	percentage
Equity share capital		
HRSEDC	2.45	8.7
Mr G & Associates	2.40	8.5
Private placement by Directors	0.81	2.9
Delta Venture Capital Ltd.	3.14	11.1
Sub-total	8.80	31.2
Term loan		
Hindi Rashtra Audyogik Vikas Nigam	8.50	30.0
Delta Venture Capital Ltd.	9.50	33.6
Sub-total	18.00	63.6
Central Subsidy	1.50	5.3
Total	28.30	100.0

As can be seen, debt was almost two-thirds of the total cost. HRSEDC and Mr.G made equal equity contribution. Delta contributed one-third of equity.

Market Projections: In 1988 Electrovision had commissioned a well-known research organisation to conduct an exploratory study on the demand for microwave ovens in the country. The findings were purely qualitative in nature. Subsequently in December 1988, they engaged yet another marketing research organisation to do a sample study of 300 housewives each in Bombay and Bangalore. The study arrived at a figure of 31,500 pieces as the annual potential demand in the top 12 cities/towns of India. Three of these (Bombay, Delhi and Bangalore) were classified as "A" class markets and the other nine as "B" class. The assumption was that in the "A" class of markets 5% of those households with a monthly income exceeding Rs. 3,000 would be potential buyers of microwave ovens. The corresponding adoption rate for "B" class markets was taken as 3%.

Electrovision also hoped that with the entry of competitors in due course (especially those with Japanese collaborations) the potential market would expand further. They had also contacted the Indian Railways to seek potential orders for microwave ovens for their

catering service and hoped to make an entry into other institutional markets apart from the household sector assessed above.

Profitability Estimates: Based on sales estimates of 8,000, 15,000, 19,500 and 24,000 pieces respectively in the first four years, Electrovision had made projections of their financial performance. Some relevant indicators are provided below :

Year	I	II	III	IV
Cash profit (Rs.'000)	13.71	59.83	68.77	69.99
Net worth* (Rs.'000)	95.10	133.32	176.08	206.66
EPS (Rs.)	0.00	4.34	5.36	4.48
Book value per share (Rs.)	10.81	15.15	20.01	23.48
* Includes capital subsidy				

Exit Routes: Delta Venture Capital Ltd. considered two routes of disinvestment. The first was sale in the proposed OTC market. Using the existing CCI guidelines for pricing a new issue (viz. mean of cumulative average of the EPS, till the date of proposed issue capitalised at 12% and book value per share on the date of proposed issue), the exit price at the end of each of the first 4 years would be Rs. 5.40, Rs. 16.62, Rs. 23.48 and Rs. 31.43 respectively. It was granted that the OTC market could initially be characterised by lower P/E ratios than the stock exchanges. Delta Venture Capital Ltd. considered in particular disinvestment at the end of the third year. Under five different scenarios (comprising five different disinvestment prices each less than Rs. 23.48 obtained above), the annualised yields were computed, as given below :

Disinvestment price (Rs)	Net yield per annum (%)
16	18.97
17	21.40
18	23.74
19	25.99
20	28.16

In the event of an exit price of Rs.23.48 (calculated as per CCI guidelines) the annual yield would be 32.91%. The second exit route was buy-back by the private sector promoter. Delta Venture Capital Ltd. considered executing an agreement jointly with Mr. G, his uncle, father and mother, whereby they would repurchase the equity holdings in three convenient lots at the end of the third, fourth and fifth years. They called for details to be furnished regarding the net worth of the latter at the time of the appraisal.

Eligibility: Delta Venture Capital Ltd. felt that the project would qualify for venture capital assistance because the technology had been developed indigenously for the first time in India, and the project was an appropriate case of R & D work being commercialised. Thus, Delta Venture Capital Ltd., approved financing in the form of direct subscription to 314,000 equity shares of Rs. 10 each.

A 2.2 Analysis of the Case

Venture capital assistance essentially involves investment in ventures which are considered too risky to be eligible for conventional sources of finance. This high risk may arise due to

- * market risk
- * product risk
- * technology risk
- * entrepreneurial risk

Market risk is derived as a consequence of several factors significant among which are indifferent response from the buyers in terms of poor acceptance (which may result from incorrect assessment of the need for the product), unexpected competition (which may step in if the idea appeals to many entrepreneurs as being commercially lucrative), inadequate support from the trade channels or intermediaries (who may not be equally enthusiastic about the idea) and so on.

Imported microwave ovens were already in use in India. Electrovision had commissioned two market research projects and the second of them had arrived at a reasonable demand estimate of 31,500 per year from the household sector alone even prior to advertising and sales promotion or market development efforts. Electrovision hoped to make a dent in the institutional market as well by being the first to introduce this product and by capitalising on the Government customers using the HRSEDC contacts. The prior experience of Mr. G and HRSEDC in the field of kitchen appliances and other consumer durables meant that they would be having some familiarity with the network of dealers through whom the oven would be marketed. Besides, the outcome could be expected from the entry of competitors: they would be sharing the costs of initial market development and creating awareness about the suitability of microwave ovens to the Indian style of cooking. Thus this component of risk was not excessively overwhelming.

Product risk is generally inherent in products/process when they are based on untried new ideas. Ventures based on entirely new ideas or concepts can fail when they produce products on a commercial scale although the product development at the R & D stage may have been proper. In case of Electrovision, the prototype, apart from the magnetron, was developed by HRSEDC and Mr. G with the technical assistance of IITs. They had also developed the "manufacturing technology" for assembling the ovens on a commercial scale. They planned to phase their production over the first four years gradually increasing the utilisation of capacity (only 8,000 pieces in the first year and 15000, 19500 and 24000 pieces thereafter). The microwave leak had been tested and other safety features incorporated into the design of the ovens. All this had already been done by Electrovision to take care of the product risk.

Technological risk may arise when the technology may be too complex to fructify. The technology involved may be entirely new at least to the country in question and hence may not be attuned to the specific requirements of the local environment. The technology for microwave ovens was well established in the West where they had been in the market for nearly three decades. The most critical element, i.e. the magnetron, was perhaps the only one where technical capability of Electrovision was suspect but here again there was no real risk since the company proposed to import it from one of the most reputed Japanese manufacturers. The Board of Directors of Electrovision included technologists from IITs

and HRSEDC. The technology for the components other than the magnetron developed indigenously by Electrovision had already been endorsed by an expert group of the DST.

Entrepreneurial risk arises because ventures are usually small or medium-sized and their promoters are not likely to have adequate personal financial resources or any demonstrated managerial experience or calibre. In many cases, the aspirants are first generation entrepreneurs who have an innovative technical idea but no prior business expertise. The credentials of HRSEDC in the field of consumer durables and hi-tech products as well as their experience with joint ventures and collaborations was established. Mr. G's educational and business background and his experience in the field of kitchen appliances were also adequate. Thus this risk also was low.

Thus risk analysis indicates that the project was a medium to high risk category venture. Since it was not a conventionally used and traditionally familiar product in India, it was considered to be fit for venture financing and not for conventional financing.

Bibliography

- Akerlof, G.A. (1977), "The Market for Lemons : Quality Uncertainty and Market Mechanism", *Quarterly Journal of Economics*, August, pp. 488 - 500.
- Anderson, D. (1982), "Small Industry in Developing Countries: A Discussion of Issues." *World Development*, Vol 10, No 11.
- Balasubramanian, N. (1992), "A Perspective on Composite Materials". Paper presented in National Seminar on Perspectives on Advanced Materials and Finance held in Bombay, 18 January.
- Batherson, L.A. (1986), *Raising Venture Capital and the Entrepreneur*, Prentice-Hall.
- Clark, Hodney (1987), *Venture Capital in Britain, America and Japan*. Croom Helm.
- Coombs, J. (1986), *Macmillan Dictionary of Biotechnology*, The Macmillan Press, London.
Economic Times, (1992), 8 May.
- Cottrell, Roger L.(1989), "Venture Capital: Myths and Realities", *Fortune India*, December 1-5.
- General Accounting Office, (1982), *Government-Industry Cooperation Can Enhance Venture Capital Process*. GAO, USA
- Gill, D. (1980), *Venture Capital in Selected Countries*. IFC, June.
- Henderson, J.W. (1988), *Obtaining Venture Financing : Principles and Practices*, Lexington Books, Massachusetts.
- Indus Venture Capital Fund* (A publicity brochure).
- Jequier, N. and Yao-Su Hu (1989), *Banking and the Promotion of Technological Development*, Macmillan.
- Kozmetsky, George, (1990), "Technology Innovation in the Coming Economy", in *Capital Raising and Financial Structure*, edited by R.L. Kuhn, Dow Jones, 1990.
- Kulkarni, A.D. (1986), "Venture Capital and its Relevance in India", *Economic Times*, June 19.
- Lam, Swee Sum (1991), "Venture Capital Financing : A Conceptual Framework", *Journal of Business Finance and Accounting*, Vol.13, No.2, pp. 137 - 149.
- Levitsky, J. (1983), *Assessment of Bank Small Scale Enterprises Lending*. World Bank Industry Department, Mimeo.
- Little, I.M.D. (1987), "Small Manufacturing Enterprises in Developing Countries." *The World Bank Economic Review*, Vol 1, No 2, pp. 203-235
- Lorenz, T. (1985), *Venture Capital Today*, Woodhead-Faulkner, Cambridge.

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on Advanced Materials and Finance held in Bombay, 18 January.

Nanjundan, S. (1987), "Small and Medium Enterprises: Some Basic Development Issues." *Industry and Development*, No 20, pp. 1-50.

Narayanan, V.S.M., (1992), "Electronic Materials Industry - Prospects and Challenges : An Indian Experience". Paper presented in National Seminar on Perspectives on Advanced Materials and Finance held in Bombay, 18 January.

Narasimham, M., (1992), *The Financial System*, Nabhi Publication, New Delhi.

OECD (1986), *Venture Capital: Context, Development and Issues*. OECD.

Office of Techology Assessment (1986), *Technology, Public Policy and the Changing Structure of American Economy*, Washington D.C.

Office of Technology Assessment (1989), *New Developments in Biotechnology: Patenting Life*, Washington D.C.

Pratt, *Guide on Venture Capital*, (1983), USA.

Primrose, S.B. (1987) *Modern Biotechnology*. Blackwell Scientific Publications, Oxford.

Ramakrishnan, P., (1992), "Structural Ceramics". Paper presented in National Seminar on Perspectives on Advanced Materials and Finance held in Bombay, 18 January.

Rangarajan, C. (1980), *Innovations in Banking: The Indian Experience. Impact on Deposits and Credit*. Domestic Finance Studies 63, World Bank.

Sudarsan, P. (1985), "TDICI and Its Role." Workshop on TDICI, September.

Teixeria de Costa, R. (1983), *The Role of Non-Bank Financial Institutions in the Development of Capital Markets: The Contribution of Capital Venture Companies*. International Conference on Capital Market Developments, Cairo, May, mimeo.

Wall, P. (1986), *Venture Capital Activities in Selected Countries: Another Look*. IFC, mimeo.

Wellons, P., Germidis D. and Glavanis B. (1986), *Banks and Specialised Financial Intermediation in Development*, Development Centre, OECD, France.

Wellons, P.A. (1984). "Competitiveness in the World Economy: The Role of the U.S. Financial System." *Harvard Business Review*.

Wilson, John W. (1985), *The New Venture*. Addison Wesley.

World Bank (1990), *Agriculture Biotechnology : The Next "Green Revolution" ?* The World Bank, Washington, D.C.

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