Report of the committee on

Technology Innovation and Venture Capital

Government of India
Planning Commission
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Content

Introduction

In recognition of the fact that new technology is the driver of growth in the emerging environment of a knowledge-based society, the Planning Commission constituted, vide Order No. 20(23)/DP/PC/2005 dated 14 September 2005, the "Committee on Technology Innovation and Venture Capital". The Committee was to:

- examine innovation and technological dynamism in both the modern and traditional sectors,
- examine the relationship between research, entrepreneurship and financial markets,
- examine the policy environment for venture capital,
- make recommendations, which would lead to basic industrial research and development being converted into new ventures,
- suggest policy changes to encourage the flow of venture capital for facilitating start-ups and new ventures,
- consider any other related issue that the Committee may decide.

2. The initial members of the Committee were:

1.	Shri Nitin Desai, Former Finance Secretary, GOI & Under Secretary General UN.	Chairman
2.	Shri Nandan Nilekani CEO, President a nd MD, Infosys Technologies Ltd.	Member
3.	Shri Saurabh Srivastava Chairman, Indian Venture Capital Association.	Member
4.	Dr. Rajiv Lall, MD & CEO, Infrastructure Development Finance Corp.	Member
5.	Prof. N. L. Sarda Member, Society for Innovation and Entrepreneurship (SINE) IIT, Mumbai	Member
6.	Shri Shrawan Nigam Adviser, Planning Commission	Member-Secretary

3. The membership of the Committee was enlarged on 21 December 2005 to include

7. Shri Parag Saxena
   Managing Partner and CEO,
   Invesco Private Capital, USA.
8. Shri Romesh Wadhwani
   President and Chairman,
   Wadhwani Foundation, USA.

4. The membership was further increased on 24 January 2006 to include

9. Dr. Arvind Virmani,
   Principal Adviser, Planning Commission.
10. Prof. Rafiq Dossani..
    Stanford University, USA.

5. The Committee held its first meeting on 17 October 2005, after which the discussions were via email. The second and final meeting was held on 14 April 2006, to decide on the issues that should go into the Report. Shri Wadhwani was not able to participate in the deliberations.

6. The Committee wishes to place on record its appreciation for the useful inputs it received from Ms. Asawari Desai, associate of Prof. Rafiq Dosssani. It is also grateful to Shri C.K.G. Nair, Director, and other staff of the Planning Commission who provided valuable support.

7. In this Report, the recommendations have been made with the understanding that the recommendations of earlier Committees set up by the Government of India on venture capital, have covered the over-all field. Therefore, this Committee has made recommendations only for facilitating venture capital for promoting new technology ventures. It is expected that implementation of the recommendations would lead to an increased flow of VC funds for commercialisation of technology ventures, particularly those emanating from incubation centres of universities and R&D centres.

1
Innovation and Capital Markets

1.1 Technical progress is the key driver of growth and development. Growth accounting exercises that seek to separate the contribution of input expansion and productivity increase have shown that the latter accounts for a substantial part of output increases, both at the micro and the macro level. Hence public policies to promote research, innovation and access to technology are at least as important as human resource and capital market development for promoting growth.

1.2. Technological progress involves improvement in skills, better capital equipment and the introduction of new products, processes and business methods. It requires investment in education and research and in technology extension. It is embedded in the processes of human and material capital accumulation and cannot be dealt with separately from them.

1.3 In a developing country like India, much of the know-how will come from what is known as enterprises catch up with what is already available. Even here a certain technological capacity is necessary to adapt technologies to local conditions. Moreover there are sectors like agriculture and health where established technologies may not be adequate for local needs and conditions. This has been recognized in India and a large network of publicly supported research institutions has been built up and enterprise level R & D supported with fiscal incentives.

1.4 Expenditure on R & D was about 0.74 per cent of GNP in 2004-05, about three-quarters in the public sector and the rest in the private sector and higher education institutions. Apart from public funding of research, there are a variety of fiscal incentives for private sector R & D and a modest programme for public support for innovation. However the public and private expenditure on R & D in India which amounts to a little less than $ 4 billion a year pales into insignificance in the light of a global total which is of the order of a trillion dollars.

1.5 With the opening of the economy to greater domestic and international competition, Indian industry has to move to the frontiers of known technological options. At this point continued technical progress can no longer be based on catching up with what is already available but will require a capacity to innovate and bring innovations to the market. More generous funding, a stronger result orientation and better inter-connection between public research institutions and corporate R & D will help, but will not be enough. In a market economy the role of the capital market is crucial and what matters most are the instruments and institutions available to the prospective entrepreneur for sharing in the risks of potential failure and the rewards of success from innovation.

1.6 India has a strong capital market. Over 10000 companies are listed though shares in only a quarter of these are regularly traded. In 2005-06, over Rs. 30,000 crore was raised from primary issues, about a third of this by 55 IPOs. Private savers are willing to invest in equity and there are over 7 million share depository accounts and over Rs 200,000 crore invested in mutual funds. Measured in terms of the number of transactions the NSE and the BSE are the third and fifth largest exchanges in the world. The establishment of SEBI and major reforms in the stock exchanges have resulted in a trading system that is modernised. Clearly the system is well designed for medium and large companies.

1.7 However, many enterprises cannot go to the capital market and raise finance through the issue of publicly traded debt and equity. This disability may be on account of scale – some enterprises may be too small to bear the cost of a public issue. It may be because the field of activity is too risky even for the adventurous market player, as for instance in film production. It may be because the field of activity has tended to operate in an unincorporated environment, as is the case with real estate development. The particular focus of this report is on one such class of enterprises – technology start-ups.

1.8 Technology start-ups are often small to start with and involve new products, processes and business models. The class of enterprises is quite wide as the definition of technology includes not only what comes out of the institutes of technology but also those involved in healthcare, life sciences and related services, new products and new processes, new forms of distribution or retailing and consumer related products. The new business models or products and services may be such with which the capital market is not familiar

1.9 Venture capital for technology innovation is a special type of financing arrangement. It is different from other institutional capital because its provision is customized to the needs of the receiver and the skills of the provider and requires close, ongoing, face-to-face interaction, i.e., it is not an arms-length transaction with standardized templates for contracts and lender-borrower relationships.

1.10 Venture capital funding is special; but it must be seen as part of a spectrum of funding that an enterprise may tap at different stages of its life cycle. An enterprise financed by a VC fund may have obtained some initial funding from family and friends or from an angel investor. It may at a later stage be financed by a private equity fund. At some stage in its life cycle it will receive funds from banks and development finance institutions. It could in time graduate to a point at which it obtains resources from a stock or bond flotation. The effectiveness of a venture funding system depends on this entire range of options for capital finance. Thus without an adequate system of funding at the very early seed stage the deal flow for venture capital may be sparse. At the same time the availability of early stage venture funding will depend on the exit options made possible by strong private equity funds and a healthy stock market.

1.11 Technology ventures can go through several stages of maturation, each one with a different type of financing requirement. One can distinguish the following stages in most cases:

Seed financing: to the technologist/entrepreneur to prove a concept

Start-up financing: for product development and initial marketing to a few customers.

First stage financing: to initiate commercial production and marketing.

Second stage financing: for expansion to scale.

Later stage financing: for expansion of an enterprise that is already profitable.

Bridge/Mezzanine financing: as a preparation for going public or for buyout/takeover.

The very early stage financing is seldom provided by venture funds and often comes from angel investors, a category that can, in principle include official agencies that provide low cost seed capital.

1.12 Venture capital funding is much more of a partnership than the standard modes of institutional financing. Taking innovation to the market requires that those who have the technology concepts, those who have the entrepreneurial capacity to implement these concepts in the market and those who have the funds to finance this exercise come together. This interaction between the technologists, the entrepreneurs and the VC funds is what has been described as an ecosystem for innovation.

1.13 The ecosystem functions well when the three groups involved understand the field of application, that is, have domain knowledge. But each group must look beyond its normal frame of reference. For instance, the technologist must see innovation from the perspective of market prospects, the entrepreneur must look beyond current market conditions to grasp the potential of new products, processes or business models, the VC fund must be ready to accept higher risks of failure than in a normal financing operation.

1.14 Typically this happens when VC funds and technology entrepreneurs gravitate towards locations with a high concentration of research activity. This agglomeration of talent and risk takers creates the etri dish in which the culture of innovation can thrive. The geographical concentration, seen most typically in Silicon Valley in California, helps to build networks of contacts and trust which is very necessary to reassure the risk takers. It also helps to build domain knowledge in the VC industry and to establish the basic rules for engagement, so that all partners know the broad parameters within which they have to negotiate to strike a deal.

1.15 The central problem in the funding of early stage technology ventures is the asymmetry in the information available to the three partners – the technologist, the entrepreneur and the financier. Because of this they may have widely varying perceptions of the prospects for the enterprise. The role of the VC funding system is to devise financing and management agreements that accommodate these variations in information and perceptions.

1.16 The informational asymmetries make it difficult to raise debt type financing for early stage ventures. Early stage ventures often have a low equity base and lack a cash flow which can sustain debt finance. Hence the classical route of loan financing from a development finance institution will not work. When these institutions are in the public sector and open to wide public scrutiny they also tend to be risk averse. That is the exact opposite of what is needed for funding early stage technology ventures.

1.17 Early stage ventures cannot rely on the conventional modes of raising equity finance because these are not designed to handle substantial informational asymmetries or to cater to the need for mentoring. Moreover the standard mode of a market flotation may not be a viable option for such ventures which often start on a small scale.

1.18 Venture capital funding necessarily involves sharing in the risks of the enterprise and has to have the character of equity even if it may not always look like it. Hybrid instruments that assure some return but also allow a sharing in exceptional gains may be needed. But even direct equity participation by lenders cannot solve the informational asymmetry. That is why venture funding also involves a substantially greater engagement of the lenders in management. In fact, since early stage technology ventures may well be floated by entrepreneurial novices, the mentoring and guidance provided by VC investors who have domain knowledge and useful business contacts may be crucial to the success of the enterprise.

1.19 The basic goal of policy must be to facilitate the emergence of such an ecosystem for innovation. At one end it must work at promoting excellence in education and research. This is the primary task of science and technology policy. At the other end it must establish a fiscal and regulatory framework that encourages risk taking by financiers. In between these two ends there is a role for public intervention in the incubation and nurture of technology start-ups so that they can be brought to a point at which market forces can take over. In a formal sense the case for public intervention rests on informational asymmetries between the borrower and the lender, in this case the technology entrepreneur and the VC fund respectively.

2
Venture Capital in India

2.1 The Securities and Exchange Board of India (SEBI) regulates venture capital by both domestic venture capital funds (DVCF) and foreign venture capital investors (FVCIs). SEBI-registration offers benefits subject to certain restrictions.

- Income is passed through to investors without tax in the case of Trusts registered under the Indian Trusts Act and Venture Capital Companies
- FVCIs can freely remit funds to India for investments in Indian venture capital undertakings ("VCUs") and SEBI registered DVCFs.
- FVCIs are exempt from both the entry and exit pricing regulations that otherwise apply to foreign investors, such as market-related pricing on divestment.
- The sale of shares by VCFs to company insiders post-listing is exempt from the SEBI takeover code.
- VCFs automatically obtain Qualified Institutional Buyer ("QIB") status, which is useful for participating in new security placements.
- Exemption from one-year lock-in for divestment post-IPO for shares purchased prior to the IPO.
- VCFs do not get treated as promoters for purposes of IPO.

2.2 Sectoral caps for industries as prescribed in the FDI regulations are applicable to FVCIs. The other restrictions common to all VCFs include:

- at least 66.67% of the investible funds shall be invested in unlisted equity shares or equity linked instruments of VCUs
- Not more than 33.33% of the investible funds may be invested by way of: subscription to IPO of a VCU whose shares are proposed to be listed or in debt or debt instrument of a VCU in which the VCF has already made an investment by way of equity or in preferential allotment of equity shares of a listed company subject to lock in period of one year
- SPVs (Special Purpose Vehicles) created for facilitating investments in accordance with SEBI guidelines
- Minimum capitalization reqirement.

2.3 While there is no minimum corpus requirement for FVCIs, DVCFs require a minimum capital commitment from its investors of INR 5 crore with a minimum of INR 500,000 from individual investors contributing to the VCF. The domestic branches of FVCIs, if established, need to be capitalized with a minimum of $500,000.

2.4 A DVCF can be organized either in the form of a trust or as a company. There is no restriction on how the FVCI may be organized. A DVCF with overseas and domestic investors is, however, more complex to organize but is possible.

2.5 According to SEBI records there are 72 registered domestic venture capital funds (DVCF) and 37 registered foreign venture capital investors (FVCI). All but one of the foreign investors are based in Mauritius and nearly half of these seem to share the same address. A substantial part of the flow of money for venture undertakings comes from abroad and much of this is channeled through the FIPB route, bye-passing SEBI regulation. In fact venture investing is difficult to distinguish from private equity funds whose activities have been expanding rapidly in recent years. Hence the data on the flow of funds for venture investing vary from source to source.

2.6 According to the Indian Venture Capital Association Yearbook (2003), investments of $881 million were injected into 80 companies in 2002, and investments of $470 million were injected into 56 companies in 2003 by venture capital funds. (Data to be updated) The firms, which received these investments, were drawn from a wide range of industries, including finance, consumer goods and health.

2.7 Venture capital commenced in India with the formation of TDICI in the 80's. Regional funds like GVFL & APIDC were setup in the early 90s, with Government funding. The mid 90's saw the advent of Foreign Venture Capital funds primarily focused on developmental capital without any sectoral focus, driven by opportunities. Post the success realized by these funds, there was an emergence of a number of India-centric foreign VC firms. Currently there are a number of large funds whose focus is buyouts and PIPEs. (Private Investment in Public Equity). A recent study by Dr. Rafiq Dossani, a member of this Committee, has given the following synoptic picture of private equity operations in India:

Evolution of Private Equity Finance

	Phase I Pre-1995	**Phase II 1995-97**	**Phase III 1998-2001**	**Phase IV 2002-2005**
Total Funds: ($m)	30	125	2847	5239
Number of Funds	8	20	50	75
Primary Stages and Sectors	Seed,Early-stage and Development - Diversified	Development - Diversified	Early-stage and Development - Telecom & IT	Growth/ Maturity - Diversified

Evolution of Private Equity Finance *(Contd...)*

	Phase I Pre-1995	**Phase II 1995-97**	**Phase III 1998-2001**	**Phase IV 2002-2005**
Primary Sources of Funds	World Bank, Government	Government	Overseas Institutional	Overseas Institutional
Seed/early-stage ($m)	5	15	657	250
Number of Transactions	10	20	273	58
Development ($m)	25	110	2168.1	3107
Number of Transactions	20	45	273	288
Growth/maturity ($m)			21.9	1882
Number of Transactions			2	100
Total Number of Transactions	30	65	548	446
Average Investment ($m)	1	2	5.20	11.75

Sources: TSJ Media, IVCA publications (various years).

2.8 As the study shows the supply of finance takes off after 1997. But there is a sharp drop in early stage financing after the end of the internet boom and the bulk of the money goes to late stage development. The comparison with China shows that though China started later it has more venture funds and more money going to early stage firms. One reason advanced for this declining interest in early stage financing in India is the lack of a deal flow after the collapse of the internet bubble.

2.9 The study by Dr. Dossani referred to earlier, suggests that "India does not have networks as powerful as Silicon Valley or even China. Spin-offs from large firms and university research, for example, are rare. While the India-US (particularly Silicon Valley) corridor is growing, it does not yet match the China-US corridor, thanks in large part to the mediation provided by Taiwanese engineers and capital, which is of longer standing and is even an important source of capital for Silicon Valley startups. China's location has made it a focal point for investment by firms in Japan and Korea, apart from Taiwan and Singapore. China's dense social networks and manufacturing relationships with engineers, entrepreneurs and VCs in Taiwan, Korea and Japan induces early-stage investment for onward supply to intermediate and final goods producers in East Asia. India, by contrast, though well-linked with Silicon Valley does not have multi-country supply-chain relationships with the rest of Asia."

2.10 Dr. Dossani's review of the venture capital scene in India has indicated certain deficiencies which need to be addressed:

- Entrepreneurs possess domain and cost-management skills but do not know how to develop early-stage ideas into viable businesses.

India Risk Capital Investments by Stage, 2003-05

	2005					2004					2003				
Stage of Company Development	**Volume**		**Value**		**Av deal Size**	**Volume**		**Value**		**Av deal Size**	**Volume**		**Value**		**Av deal Size**
	Deals No.	**% Share**	**Amt $ M**	**% Share**	**$M**	**Deals No.**	**% Share**	**Amt $M**	**% Share**	**$M**	**Deals No.**	**% Share**	**Amt $ M**	**% Share**	**$M**
Early Stage															
(India-based)	22	15.1	79	3.6	3.6	19	28.4	125.9	11.6	6.6	18	47.4	134.7	27.0	7.5
Early Stage															
(Cross-border)	6	4.1	71	3.2	11.8										
Sub-total Early Stage	28	19.2	150	6.9	5.36										
Growth Stage	24	16.4	332	15.2	13.8	13	19.4	244.9	22.5	18.8	10	26.3	55.8	11.2	5.6
Late Stage	40	27.4	638	29.1	16.0	15	22.4	238.4	21.9	15.9	4	10.5	41.9	8.4	10.5
PIPE	49	33.6	763	34.9	15.6	20	29.9	477.3	43.9	23.9	4	10.5	184.5	37.0	46.1
Buyout	5	3.4	306	14.0	61.2						2	5.3	82.2	16.5	41.1
Total	146		2189		15.0	67		1086.5		16.2	38		499.1		13.1

- Risk capital providers possess portfolio diversification and risk assessment skills but lack the domain expertise to guide entrepreneurs to create successful businesses.
- Shortage of complementary capital, such as debt capital.
- Underdeveloped equity markets for the listing of early-stage firms which limits the transition into and from early stage investments.
- Inadequate pipeline of angel/university/state funded seed-stage firms seeking early-stage funding.
- Entrepreneurs' networks consist primarily of limited personal connections and brokers.
- Shortage of university-industry collaborations

2.11 The bureaucratic, regulatory, legal and tax hurdles include the necessity to create tax-efficient structures for overseas investors, unclear rules on taxation of ventures, investors and funds, sectoral and security restrictions on investment under SEBI rules and inadequate investor rights associated with venture investments.

2.12 At a broader level, the business environment within which entrepreneurs and risk-capital providers function has several weaknesses including poor corporate governance, cumbersome legal systems, a poor environment for intellectual property creation and protection and in some important areas, weak domestic markets, such as for IT.

2.13 The study from which this assessment is drawn also recognises the positive features of the environment in India and suggests that if properly structured, the risk capital industry ought to be a flourishing engine of early-stage growth, due to:

- The success of the software and services industry, which has created a cadre of engineers and other domain experts with marketing and product development skills.
- Well-developed managerial skills among managers of large firms.
- A cadre of returnees with advanced technical and business development skills.
- The rising number of graduates in various fields.
- Entrepreneurial opportunities arising from rapidly changing global dynamics, e.g., in textiles, auto components industry and healthcare.
- The growth of domestic markets in fast-growing sectors such as telecommunications, finance and retail.
- Presence of risk finance providers even in centres outside the main commercial centre, Mumbai, and closer to the locations of small and medium enterprises.
- Globally connected and flourishing private equity industry with independent management structure and experience of dealing with large, global institutional funds.
- Expanding pool of multinational firms providing access to the latest technologies in a range of sectors.

2.14 In the light of this assessment, which the Committee broadly shares, the crucial need now is to strengthen the research-finance-entrepreneurship network, to raise the supply of risk capital for early stage activities and to fine tune the fiscal and regulatory system that has been put in place. The next chapter deals with our proposals directed at these ends.

3
Proposals for action

3.1 The venture capital industry in India is still at a nascent stage. Its further growth will require a change in the way innovation and investment finance connect. India needs VC funds that are more than financing windows. They must have the domain knowledge to provide management support to new enterprises. This is particularly important for the technology start-ups that are our particular concern. The counterpart to this is a cultural change amongst new entrepreneurs that makes them more amenable to mentoring and guidance from their financiers.

3.2 India also needs a more organised system for ensuring a deal flow for venture funding. This requires a more systematic attempt to provide incubation seed and start-up funding. Hence we begin by first presenting our proposals for nurturing this ecosystem for innovation and deal with what needs to be done at the sources of technological capacity in the research institutions and what can be done to strengthen the flow of risk finance for new technology ventures. VC/PE funding is now a high percentage of our FDI inflow. it should be nurtured and encouraged even more than FII flows, as it creates new ventures, new employment and is invested for the long term and is not hot money that can be pulled out at short notice.

3.3 Fiscal and regulatory issues have been dealt with by two earlier committees- the Chandrashekhar Committee and the Lahiri Committee. Our proposals should be seen as supplementing the recommendations of these two committees. When it comes to fiscal matters the core issue of tax pass through has been addressed and the changes that are needed are in some matters of detail. The regulatory structure has also been simplified with SEBI being given the nodal responsibility. However, with a substantial amount of venture funding coming from outside the formal venture fund route, regulatory authority is in effect fragmented. Regulatory changes are needed mainly to reduce the incentive to stay outside the SEBI venture capital framework

Promoting New Technology Ventures

3.4 New ideas for products, processes and business models can originate in some existing small or large enterprise or in universities and research institutions. The technology ventures that may emanate from large companies and are implemented by them are not start-ups and are generally outside the scope of venture funding. The focus in this Report is on the ventures that may come from existing talented individuals, SMEs and research entities, where technology innovations are pursued mostly as part of funded research, but sometimes as independent research done by individuals and groups. The main task is to reach out to talented individuals within or outside research institutions and to strengthen institutional capacity in the research entities for promoting technological entrepreneurship.

3.5 The pool of technical talent and the presence of an entrepreneurial ethos are often seen as India's principal comparative advantage. Yet this has not resulted in a large enough deal flow of new technology venture ideas. Venture investing thrives when technologically savvy serial entrepreneurs come to the market with some bright idea, implement it, make money, sell out and start all over again with a new idea. This culture of continuous entrepreneurship has to be developed with public support.

3.6 The role of public support in the case of talented individuals and SMEs is to create facilities for supplementing their technical capacity with entrepreneurship education, advisory services for preparing business plans and a better connection with research institutions and laboratories that can help them to prove their ideas. Many of these new entrepreneurs will have studied in engineering schools and science departments. They would be better prepared if their education included courses on new venture management.

Recommendation 1: The Committee recommends that the Government, through the DHRD, UGC and AICTE, should encourage all science departments and technical education and training institutions to include entrepreneurship and new venture management (including global project management) courses in their curriculum.

Recommendation 2: The Committee recommends that universities and research institutions should provide referral services and laboratory facilities to their alumni to help them to prove project ideas.

Recommendation 3: The Committee recommends that venture funds and other financing institutions, particularly those through which government funding is channeled, should encourage entrepreneurship promotion and education schemes designed to find, assist and train new technology entrepreneurs.

3.7 New technology ventures are driven by individual talent. However a strong connection between universities and research institutions and industry creates an environment that promotes business-sense in academia and greater technological understanding in the business world..

3.8 In India, there is a lack of adequate university-industry partnerships or networks to access funds or management skills which needs to be corrected.

Recommendation 4: The Committee recommends that the major centres of technology education and research be encouraged to set up Enterprise Units, organised as independent societies or not-for-profit companies, to (a) provide group consultancy services to industry, (b) undertake contract research for industry (c) partner with private companies for activities like Technology Parks (d) support incubation activities for new ventures within the institution.

3.9 Incubation efforts in research institutions aim at going further than forging a link with industry. Their aim is to allow faculty, students and, in some cases alumni to become new entrepreneurs. They do this by helping them to develop project concepts to the point at which they can be posed to financing organisations outside for commercialization.

3.10 The best known case is Stanford Research Institute in the 1970s where the flow of ideas came out of the deep involvement of Stanford faculty in research contracts provided primarily by the Department of Defense, because of which they were ahead of the technology curve. Graduate students were also willing to suspend their academic research in order to pursue ideas commercially. SRI's success did not involve creating marketable products but pre-market ideas.

3.11 Incubation centres have been set up in IITs with assistance from the DST. At IIT Mumbai it is organised a society called SINE, that can hold equity for IP transferred by IIT, and which provides early incubation facilities (subsidized space, computing facilities, conference room etc.). SINE also helps with legal/financial/accounting issues. Recently, SINE has established mentor panel to help incubate companies with strategic thinking.

3.12 Incubation efforts in universities and research institutions have not always succeeded. First, the consulting staff the institution is able to deploy do not have complementary skills (to the client entrepreneurs) in business development and marketing. Second, the incubator managers do not have effective networks to angels and risk-capital providers. The first can be addressed through better networking with the local business services community and venture funds. The second problem is addressed below in our proposal to direct investments from high net worth individuals to such enterprises emerging from the incubators. Nevertheless it is important to recognise that incubators are not themselves venture funds and their main task is to assist prospective entrepreneurs at the seed stage.

3.13 One issue that arises is the ownership of intellectual property emerging from work done by individuals or groups at the institution. Leading research institutes like IITs now have a well-defined IP policy, and the University Grants Commission (UGC) has recently set up a framework for financing registration of IPR. Converting innovation to patents is partially supported at some universities, but there is limited awareness of this facility.

Recommendation 5: The Committee recommends that all leading technology institutions should setup profit-sharing Enterprise Incubation Units, organised as independent societies, able to hold equity and well connected with the local business community. The functions of such an incubation unit would be to (a) provide advisory services and negotiating support to the client entrepreneurs, (b) assist in filing patents and protecting commercially valuable intellectual property, (c) host enterprises at the seed stage with space and other facilities for a short time, (d) forge links with entrepreneurs, alumni and venture funds. Such incubation units should be eligible to receive grants up to 50 per cent of their expenditure from government schemes for entrepreneurship development.

Recommendation 6: The Committee recommends that these Enterprise Incubation Units in research institutions should be exempted from tax as long as they use the returns for further innovations/ entrepreneurship development.

Mobilising Risk Finance

3.14 VC funds require a structure of financing that will, in the typical case, see losses in the short run matched by large gains after five to seven years or so. Therefore, those investing in VCFs must be able and willing to wait for their investments to show a decent return. They must also have the staying

power to live with an occasional loss. In USA and elsewhere such resources came from pension funds, which have to focus on long term returns that allow them to meet their future pension liabilities. In India pension funds were earlier allowed to invest in VC but are no longer allowed to do so. Further, VC funding was eligible for consideration as priority sector lending by banks, but is no longer eligible. It is desirable that, if seed and early stage VC are to take off, banks, financial institutions, pension funds etc, should not be debarred from VC investments. Whether they actually invest in VCs will depend on their risk perception. Today only government funds and domestic personal funds are available for seed and early stage investments. If the venture capital industry is to grow a beginning has to be made.

Recommendation 7: The Committee recommends that the Government must relax constraints on institutional investment in domestic venture funds, starting with institutions, which were earlier allowed VC investments.

3.15 The lack of angel investor finance for seed capital and early stages of start up when a concept is being proven is a major gap that needs to be plugged. This is more likely to come from high net worth individuals who have domain knowledge and are willing to take a chance. Fiscal incentives could help in pushing such individuals into becoming angel investors. Canada has such a provision for a 30% set-off for angel investments by individuals. However there is always either a risk of misuse if investment in any venture undertaking is eligible or a regulatory overburden if a case by case approval is required. Hence it may be best to restrict the fiscal incentive to a well-defined class.

Recommendation 8: The Committee recommends that a fiscal incentive in the form of a set-off against taxable income be provided for individuals who invest in:

(a) start-ups emanating from incubation facilities in research institutions and/ or

(b) domestic venture capital funds that are less than Rs.250 crore and whose charter clearly states that the VCF will be investing primarily in seed stage companies.

3.16 VC funds are the main source of capital for seed stage ventures. Typically funds that make seed stage investments would have a fund size of not more than USD 50 million, i.e., Rs. 250 crore, such funds need to be encouraged.

3.17 The high costs of establishing an overseas venture capital fund is a serious deterrent to overseas angels who are usually non-resident Indians with exactly the skills that domestic entrepreneurs need. Connecting these individuals with technology entrepreneurs in India will help also to build a technology corridor that will further ratchet up foreign VC interest in India. Similar arguments could apply to high net worth individuals in India.

Recommendation 9: The Committee recommends that SEBI should register groups of high net worth individuals located in India or overseas, who meet the criteria of being independent investors, as accredited investors and offer them the same rights (including tax pass-through privileges) as registered VC firms.

3.18 Venture undertakings are generally a private enterprise. Public support for such undertakings has to take the form of a public private partnership. The main case for public support is the shortage

of risk capital for unproven ventures. Hence channelling such support through risk averse public financial institutions or banks does not make much sense. The resources have to be channelled through some entity which is capable of taking risks and, to avoid moral hazard, also stakes a significant amount of its own resources in the venture. It is also important to ensure that entities through which these resources are channelled have sufficient domain knowledge and the capacity to provide active advisory support to the venture undertakings.

3.19 The models followed abroad vary. In the case of the SBIC's in the USA the support took the form of loans and guarantees to VC funds with proven domain expertise. In the Israeli model the focus was on forging partnerships between domestic and foreign venture funds and allowing the fund to gain from upside windfalls by buying out the public stake at a predetermined rate. This latter model may be of some interest in forging links between domestic and foreign venture funds that can enhance domain knowledge and fund management expertise. It may be possible to provide this support jointly with the concerned foreign government.

Recommendation 10: The Committee recommends that the Government, acting jointly with its counterparts in other countries, should use public resources to facilitate partnerships between Indian and foreign venture funds by underwriting downside risks. The Indian partners for such an exercise should be chosen on the basis of their track record in venture investing, their domain knowledge and their willingness to commit their own resources.

3.20 In the Indian context public support for venture investing should focus on facilitating the seed and start-up stage so that an enterprise may build sufficient credibility to be able to go to commercial venture funds for additional money. This may be done through a special early stage venture fund with public money that would assist the units being incubated in research and technology institutions to grow to the point of commercial viability. The same fund could also be used to realize the commercial potential of the non-commercial research efforts in the space, defence and atomic energy programmes. The starting point for such a fund could be the resources that are today being used for supporting the commercialization of innovation in various government schemes run by the DSIR and other departments. These schemes could be brought together and implemented by a professionally managed fund, with sufficient domain knowledge, that would also aim at attracting institutional finance.

Recommendation 11: The Committee recommends that the Central Government establish an Early Stage Venture Fund through a public-private-partnership, under the auspices of the DSIR and the major non-commercial research organisations of the Government, through a public private partnership. The initial corpus of the fund would come from existing schemes of these departments for promoting entrepreneurship, supplemented by additional public and institutional resources.

3.21 Government institutions are generally risk averse and may find it difficult to manage risky investments. Further, research oriented and largely non-commercial people could benefit from commercial scrutiny of investments by investors who have experience of financing such ventures. Therefore, Early Stage Venture Funds should be deployed through Public Private Partnership, as matching funds for investments made by DVCFs and other seed stage investing groups.

Regulatory Issues

3.22 The organizational form of VC funds in India is as trusts or as corporations. A model that is widely preferred in the venture industry abroad is the limited partnership which combines limited liability with flexibility. The US venture capital industry led the way in using the limited partnership as a fund vehicle and it has, over the past two decades, been adopted widely for VC, including in Israel, Japan, Singapore and UK. The LLP structure gives tax transparency – the investors are treated as investing directly in each portfolio company – and affords investors the protection of limited liability. The members of an LLP are free to agree amongst themselves the relationship between them, rather as partners do in traditional partnership. The LLP itself is a separate legal entity and is therefore able to enter into contracts and hold property and the LLP is able to continue in existence independent of changes in membership. A Limited Liability Partnership is tax transparent. Its members are taxed as if they are members of an ordinary partnership. Corporate members are liable to corporation tax. Over the past 15 years, the US risk capital industry has moved from LLP structures to the limited liability corporation (LLC). This is similar to LLPs except that the LLP offers a limited shield of liability; while the LLC offers a wider shield of liability by limiting liability to the extent of the owner's investment in the business plus his own individual negligence and malpractice. Enabling LLCs will require an amendment to the Companies Act to permit redeemability.

3.23 In India, the Naresh Chandra committee has recommended the introduction of LLP structure in India. Proposals for the required legal changes have been put forward by the Department of Company Affairs However the legal fraternity in India remains divided in its interpretation of whether venture funds are included in the kind of firms recommended to be permitted to have LLP structures.

Recommendation 12: The Committee recommends that the Government should enable the creation of limited liability corporations (LLCs) through an amendment on redeemability under the Companies' Act. It should also extend the applicability of such LLCs and the proposed limited liability partnership (LLP) structure to venture capital funds.

3.24 Venture funds hedge their risks by using hybrid instruments that assure them some return but also allow them to share in exceptional gains. This is the price they demand for lending to a speculative operation. The most often used financial instruments in venture capital deals are the so called hybrid instruments which combine some of the characteristics of straight debt with some of the characteristics of straight equity. Like common stock, preferred stock is considered equity which strengthens the capital structure of the firm, and only pays dividends when the firm has made profits. However, in the event of liquidation the preferred stock offers relatively more protection to its holder since it has a privileged position with respect to common stock.

Recommendation 13: The Committee reiterates the J.J. Irani Committee proposal for perpetual preference shares and recommends that the appropriate legislative changes be made in the Companies Act and other relevant legislation.

3.25 There is discrimination against domestic investors in tax treatment of capital gains on exit. When they exit an unlisted company they are charged capital gains tax; however if exit is through listing there is no capital gains tax.

Recommendation 14: The Committee recommends that capital gains be exempted on exit from unlisted companies for registered VC funds.

3.26 Under SEBI's VC rules, there are restrictions on the securities in which VCF may invest, (that may be invested,) such as that no more than 33.33% of the fund may be invested in listed securities. This allows VC funds to protect their NAV while the longer gestation venture investments bear fruit.

3.27 In India, by virtue of its past history of favoring listing in order to obtain debt capital, a large number of small corporations are listed though they are not widely traded. Many of these cannot raise funds directly from capital markets. Some of these may be ideal vehicles for technology start-ups, although typically, these will not be early-stage firms. However, a removal of all restrictions is not advisable as there may remain a concern that capital providers should not behave as hedge funds and pick up large secondary market shares in order to influence management.

Recommendation 15: The Committee recommends a shifting of the restriction of 33.33% from all listed securities to only those purchased in secondary markets.

3.28 The Lahiri Committee recommended removal of the restriction of not investing more than 25 per cent of the investible funds of a FVCI in a single VCU on the grounds that this condition poses a practical problem for FVCIs as they do not have a fixed corpus size exclusively for investment in India. The same argument could apply to domestic VCF investors as the base for venture funding is broadened to include high net worth angel investors.

Recommendation 16: The Committee recommends that the restriction on domestic venture funds which limits their investment in a single VC undertaking to 25 %, be removed if the investment is from an accredited high net-worth angel investor.

3.29 Domestic VC funds are required to invest in domestic companies. However there are some contexts in which some overseas investment would be a desirable part of the overall goal of promoting domestic ventures. This issue was examined by the Lahiri Committee which made two recommendations on this matter.

3.30 First, domestic VCFs should be permitted to invest up to a certain percentage of their corpus in overseas companies as this will allow them to invest in synergistic offshore companies and also allow global management exposure. Typically investments would be made in a company, which has a front office overseas while back office operations are in India.

3.31 Second, whenever a 'Venture Capital Undertaking' is acquired by a foreign company, the consideration paid is through cash or through issuance of securities of a foreign company. A VCF which had invested in the securities of a domestic company receives foreign securities in lieu of such domestic securities. The Committee understands that the Lahiri Committee's recommendation that VCFs would continue to enjoy tax exemption even after they receive foreign securities in lieu of domestic securities held by them in a 'Venture Capital Undertaking has been accepted.

Recommendation 17: The Committee recommends that the Lahiri Committee recommendation with regard to foreign securities acquired by a VC fund on exit from a domestic venture investment be notified and that its recommendation that VCF may be permitted to invest in offshore VCUs be implemented.

3.32 Venture capital is founded on trust in the entrepreneur and his team. This trust must be maintained by allowing the investor to see what's going on inside a company. In India, companies are often secretive. This may be even more true of technology start-ups where the promoter may have concerns about protection for intellectual property.

3.33 Venture capital investing is a partnership between the technologist/entrepreneur and the financier. That is why venture capital funds insist on special rights as shareholders or partners. These may include superior voting rights, informational rights, restrictions on dilution or shareholding changes without their consent and so on. Special rights, including veto voting rights, are permitted for listed companies through a shareholders' agreement, which can lead to litigation by potentially aggrieved shareholders. A simpler solution is for the Department of Company Affairs to allow VCFs to exercise veto powers as agreed with the board.

Recommendation 18: The Committee recommends that the special rights negotiated by venture funds with the undertakings they finance, should be made enforceable by appropriate changes in legislation.

3.34 At present, FVCIs which desire to set up Indian subsidiaries, need to capitalize their Indian operations with a minimum of $500,000. The removal of the minimum capitalization requirement ($500,000) for Indian subsidiaries of foreign funds is needed to encourage small funds to supply risk capital. As discussed earlier, such funds are a very important channel for the flow of funds and domain knowledge.

Recommendation 19: The Committee recommends removal of the minimum capitalization requirement for Indian subsidiaries of SEBI-registered FVCIs.

Clarificatory and Harmonizing Recommendations

Implementing Agency	Recommendations
SEBI	ı Current SEBI guidelines restrict investment in preferential offering through pure equity investment; SEBI should consider including optionally convertible instruments as these are hybrid & hence classified as non-debt ı Amend SEBI VCF Regulations to clarify that placing of surplus funds by VCFs temporarily in bank deposits and other non-VCU investments is permissible to avail of tax benefits ı Standstill agreements to be permitted during due-diligence of VCUs ı Clarify the foreign component of Corpus permitted in DVCFs ı Permit investment in projects/SPVs ı Reduce the time for registration of VCFs from the current 6-8 weeks; define minimum guidelines required for registration, and for funds which meet these guidelines, permit retrospective registration ı SEBI (Substantial Acquisition and Takeover Code) Regulation, 1997: o Private equity & Venture investors not to be deemed as 'Promoters' & hence not to be qualified as persons acting in concert (PAC), o Modify definition of control to appropriately reflect PE investment features o Exempt PE investors from open offer requirements of 20% additional offer for sale o Permit use of bank guarantee instead of using cash in escrow account for open offers
RBI	ı To avoid delays, RBI should come out with a general permission, as in the case of FIIs, so that once an FVCI is approved and registered with SEBI, it will be eligible under FEMA regulations to make investments in India in accordance with Schedule VI; similarly Schedule VI of FEMA needs to be made consistent with SEBI VCF Regulations w.r.t. investments in listed entities and purchase of secondary shares. ı Allow banks to value VCF investments on a cost-basis for the first three years (or upto 'investment period' of VCF) and marked-to-market thereafter (current regulations require marked-to-market throughout) ı Clarify eligibility and limits of VCFs and PE firms to take stakes in banks ı Clarify ability of FVCIs to invest in real estate and applicability of FDI limits ı Clarify inconsistencies in references to VCFs and FVCIs in different sections of FEMA ı Exclude an SPV formed by a VCF from definition of NBFC as defined under Section 451(f) of the RBI Act and permit a bank to fund acquisition of shares, debentures etc by the SPV to enable leveraged buyouts

Implementing Agency	Recommendations
	ı Clarify applicability of ECB guidelines for debt investments by FVCIs ı Overarching guidelines to state that Venture capital RBI guidelines for Venture capital investments to be harmonized with and governed by SEBI guidelines
CBDT/MoF	ı Include investments in VCFs in the same class as in equity MFs for the purposes of calculation of capital gains in the hands of investors; similarly sections 194 A (3) or 196 to be modified to effect that withholding tax will not be applicable in respect of any income of a VCF registered with SEBI ı Tax credit (like in R&D) for investment in VCFs by domestic institutions and HNIs ı Allow investment into VCFs by pension funds upto defined prudent levels as part of asset diversification policy ı Extend tax pass though to FVCIs irrespective of legal structure adopted in country of origin ı Clarify definition of VCF activity, income recognition of VCFs and tax transparency as per Sec 10 (23FB) and Sec 115 (U) of the IT Act to make it consistent with the treatment under regulation 12(d) (ii) of the SEBI VCF Regulations.; 10(23) FB of the ITA does not permit VCFs to make investments in listed companies while SEBI Regulations permit this. ı Section 10 (23G) to be amended to the exempt applicability of Minimum Alternative Tax (MAT) to Venture Capital Companies
Ministry of Company Affairs	ı Allow redemption of capital through trade sale proceeds for VCFs ı Streamline regulations for winding up of companies where outsider liabilities are almost non-existent (eg. VCFs) ı Notification under Sec 86 of Companies Act to be made more flexible to allow disproportionate rights relative to economic interest (eg. voting rights, anti-dilution rights etc)
Indian Venture Capital Association	ı Set valuation guidelines