

FINANCING TECHNOLOGY ENTREPRENEURS & SMES IN DEVELOPING COUNTRIES: CHALLENGES AND OPPORTUNITIES

AN *infoDev* PUBLICATION PREPARED BY

Roberto Zavatta

Economisti Associati SRL in
collaboration with

Zernike Group BV

Meta Group SRL

June 2008

Information for
Development Program


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PREFACE

As part of *infoDev*'s work program on innovation and entrepreneurship, we are currently supporting business incubators in over 70 developing countries. Our work with these business incubators and their tenant companies, as well as our analytical work on competitiveness and growth, has reinforced the fact that access to financing for ICT and ICT-enabled SMEs remains a significant impediment to private-sector innovation and economic growth.

In order to better understand the challenges facing technology entrepreneurs and SMEs, *infoDev* has commissioned this study on “Financing Technology Entrepreneurs & SMEs in Developing Countries: Challenges and Opportunities”. This report provides an overview of the main findings of the study, which are based on extensive field work in ten countries across Europe, Africa, Latin America and Asia, and also incorporates comments received on earlier drafts presented at international workshops held in Casablanca, Paris and Washington.

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MAIN ACRONYMS AND ABBREVIATIONS

ADB	Asian Development Bank	IPO	Initial Public Offering
BPO	Business Process Outsourcing	ISP	Internet Service Provider
CGS	Credit Guarantee Schemes	IT	Information Technology
CRM	Customer Relationship Management	MBI	Management Buy-in
DFI	Development Finance Institution	MBO	Management Buy-out
EBITDA	Earnings Before Interest, Taxes, Depreciation and Amortization	MIF	Multilateral Investment Fund
EBRD	European Bank for Reconstruction and Development	MNC	Multinational Corporations
EIB	European Investment Bank	NGO	Non-Governmental Organization
ERP	Enterprise Resource Planning	PC	Personal Computer
EU	European Union	R&D	Research and Development
FFF	Family, Friends and Fools	SBC	Small Business Corporation
GICT	Global ICT Department – World Bank Group	SME	Small and Medium Sized Enterprises
ICT	Information and Communication Technology	SMS	Short Message Service
ICTE	ICT-enabled	UNIDO	United Nations Industrial Development Organization
IFC	International Finance Corporation	VAS	Value-Added Services
IFI	International Financial Institutions	VC	Venture Capital
IP	Internet Protocol	VoIP	Voice over IP
		WiMAX	Worldwide Interoperability for Microwave Access

SYMBOLS USED

- Nil or below the minimum level
- .. Not available
- n.a. Not applicable

In all the tables and figures totals
may not add due to rounding



EXECUTIVE SUMMARY

I. INTRODUCTION

In developing countries, small and medium-sized enterprises (SME)—particularly micro and small enterprises—have great difficulty in obtaining the necessary financial resources to effectively scale up and grow their businesses. Access to traditional growth capital, including debt and equity, is often prohibitively costly, due to such factors as insufficient legal and regulatory policies, and inadequate financial markets.

The development community has tried to address this challenge by creating microfinance lending instruments and private sector investment intermediary institutions, including those supported by the International Finance Corporation (IFC). Microfinance has made considerable strides in improving access to capital for individuals seeking US\$10 to more than \$1,000 to start or expand a business. Similarly, the IFC and other investment institutions have improved access to capital for established firms seeking US\$5 million and above to expand their operations nationally and internationally.

Despite the success of these efforts, the development community has yet to address effectively and sustainably the challenge of providing access to capital for SME seeking US\$50,000 to \$1 million to scale up their businesses and attract private capital markets. For SME competing in the information and communication technology (ICT) industry and in ICT-enabled (ICTE) activities, the challenge of accessing growth capital is particularly acute, because these firms possess few tangible assets that can be leveraged as collateral for loans.

In order to better understand these challenges facing technology entrepreneurs, *infoDev* has commis-

sioned this study on “Financing Technology Entrepreneurs & SME in Developing Countries: Challenges and Opportunities”. The Study was carried out in two steps. The *first phase* was devoted to a desk review of the main issues involved in the financing of small businesses in general, and of SME active in the ICT/ICTE industry. The *second phase* involved the assessment of financing conditions in ten selected countries, including: (i) three in South America (Peru, Argentina and Brazil); (ii) one in Eastern Europe (Ukraine); (iii) three in Africa (Morocco, Senegal and Kenya); and (iv) three in Asia (India, Vietnam and the Philippines). This Report summarizes the main findings of the work, including: (i) an assessment of the financing needs voiced by techno-entrepreneurs; (ii) a review of the financing opportunities available; and (iii) a series of suggestions regarding possible measures to alleviate the financing gap. Separate country reports provide detailed results for the ten countries surveyed, which are available on *infoDev*’s website: www.infodev.org.

II. BASIC DEFINITIONS AND CONCEPTS

II.1 Definition of SME

The definition of SME utilized in this study is the current World Bank Group definition, which encompasses enterprises with up to 300 employees and total annual sales of up to US\$15 million.

However, a company with more than 100 employees faces constraints and opportunities that are completely different from those faced by firms employing a couple dozen workers. This is particularly true of high technology, service activities that constitute the bulk of the ICT/ICTE industry (see below).

These differences are even more significant in developing countries. Therefore, our study focuses on micro and small enterprises, with up to 50 employees and sales of up to US\$3 million.

II.2 Definition of ICT/ICTE Industry

For the purpose of this study, *ICT activities* are defined to include: (i) the production, sale and

servicing of ICT equipment; (ii) telecommunications and the provision of connectivity services by internet service providers (ISP); and (iii) service activities such as software development and IT-related consulting. Activities typically carried out by large companies (e.g. manufacturing of micro-chips and fixed line and mobile telephony) are only covered briefly. The **ICTE sector** consists of those activities whose existence depends upon access to ICTs, or whose operating modalities have been significantly affected by the introduction of ICTs. This includes a wide range of customer care and administration-related services (Business Process Outsourcing – BPO), as well as services with a higher technical content, such as remote testing, design and R&D.

II.3 Types of Financing

This study covers the whole range of financing sources potentially available to small firms. Compared with SME in traditional industries, SME in the ICT/ICTE industry have a higher risk profile and lower valued collaterals—their activities are more intangible and the assets that they generate are more difficult to assess. Therefore, this study devotes special attention to **equity financing**. It analyzes a variety of operators and schemes, including commercially-oriented venture capital operations, ‘development-oriented’ equity funds, and business angels networks. These schemes provide funds at the various stages of development—seed, start up, and development. This study also includes a review of more traditional **debt financing** operations, such as commercial lending, and credit guarantee schemes and other instruments to facilitate SME’s interactions with commercial banks. It also includes a review of **hybrid financing instruments**, which share some features of quality and debt financing.

II.4 The Financing Gap Concept

The main objective is to assess the nature, extent, and origins of the ‘financing gap’ that plagues SME in the ICT/ICTE industry. Two aspects are worth highlighting at the outset. First, most studies of financing gaps focus on the ‘supply side’, i.e. on the constraints related to the behavior of the providers of finance. However, enterprises also make decisions about financing and, therefore, constraints may also appear on the ‘demand side’. This is especially true of equity financing, because entrepreneurs are often unwilling to relinquish part of the control of the company to outsiders. Second, a precise measure-

ment of the financing gap requires the detailed analysis of individual investment/lending decisions, an exercise that is both operationally complex and conceptually challenging. Therefore, most analyses of financing gaps are qualitative—based on whatever evidence can be collected regarding the financing needs voiced by enterprises and the operating modalities of providers of finance. This study follows this tradition of qualitative analysis.

III. SALIENT FEATURES OF THE ICT/ICTE INDUSTRY

There are major variations in the size, composition, dynamism and market orientation of the ICT/ICTE industries in the ten countries surveyed. India is a major player in the international market for both ICT and ICT-enabled services. It is home to some of the world’s largest companies, and boasts total exports of about US\$20 billion. At the opposite end of the spectrum are countries such as Kenya and Senegal, where the ICT/ICTE industry basically consists of vendors and installers of software and hardware. These countries have only a handful of software houses, which perform relatively basic work. Industry turnovers are less than US\$100 million. Between these two extremes, the conditions vary widely. Vietnam focuses primarily on the manufacture and assembly of hardware for export, with the Philippines and Morocco have sizeable ICTE sectors. Brazil and Argentina have a more balanced industry structure that includes manufacturing, software development, and ICT services, but they focus primarily on the domestic market. A summary presentation of the ICT/ICTE industries in the countries surveyed is provided in the box below.

IV. ISSUES IN SME FINANCING: OVERVIEW

IV.1 General Obstacles to SME Financing

The economics literature on enterprise financing has identified three main obstacles that may prevent SME from obtaining adequate financing. These obstacles are as follows:

Basic Features of the ICT/ICTE Industry in the Countries Surveyed

India: Over the past two decades, India has become one of the key players in the international ICT industry. In 2005, the sector posted a turnover in excess of US\$24 billion, with exports accounting for about 75% of total sales. There are over 1,000 software and IT services companies, including world leaders such as *HCL*, *Infosys*, *TCS* and *Wipro*, all in the billion-dollar club. The development of the ICT sector has been paralleled by the emergence of a powerful ICTE industry. In 2005, the ICTE industry posted a total turnover in excess of US\$5 billion. While the ICTE sector includes a number of captive operations, resulting from the relocation of labor and skill intensive activities from western countries, about 200 Indian-owned companies are active in the provision of customer care, account management, financial processing, and other services, mainly for international clients.

The Philippines: In the Philippines, the ICT/ICTE industry is quite developed and diversified, with a total turnover of some US\$3.5 billion, and an employment in excess of 160,000. Software development and BPO are the most dynamic segments, working primarily for the US market. There are over 600 firms currently in operation, including animation and 3D graphic designers, remote testing and engineering firms, ERP solution developers, providers of back office services (e.g. medical and legal transcriptions), and a sizeable number of call centers and other CRM operations.

Vietnam: The core of Vietnam's ICT industry is represented by the manufacture and assembling of hardware, which accounts for an estimated 70% of the total ICT/ICTE turnover of US\$1.1–1.2 billion. This includes large-scale, export-oriented operations, controlled by multinational corporations such as *Fujitsu* and *Canon*. The ICT services segment is comparatively less developed, but it is growing fast. In 2005, exports of ICT services reached US\$63 million—up by 40% compared with 2004. The development of BPO services is constrained by linguistic barriers, and existing operations consist of only few providers of testing and transcription services.

Ukraine: Ukraine is becoming an increasingly important player in the global ICT industry. It has a large pool of highly qualified persons—in terms of annual output of software engineers, Ukraine ranks fourth worldwide, following the US, India and Russia. The outsourcing of ICT services has been growing fast in the last few years, reaching an annual turnover of about US\$150 million. Services for the domestic market are also expanding, in line with improvements in the economic situation.

Brazil: Brazil is the leading ICT/ICTE player in Latin America. In 2005, the industry reached a total turnover of about US\$1.5 billion, which includes US\$5.7 for hardware, US\$2.1 for software, and US\$7.3 for ICT/ICTE services. Sales are largely concentrated in the domestic market, which has been growing fast in all segments over the past few years. Over 3,000 firms are active in the software and ICT services segments. The sector is dominated by a dozen large companies, which account for some 50% of total turnover.

Argentina: The Argentinean ICT industry was severely hit by the financial crisis of 2001 and by the end of the 'dot com bubble', but it is now showing encouraging signs of recovery. Overall turnover is about US\$1.9 billion, which includes US\$330 million related to software development and sales, and US\$700 million related to various IT services. Sales are predominantly in the domestic market, where the devaluation triggered a major trend towards import substitution. However, exports of ICT applications have recently shown an upturn.

Peru: In Peru, the ICT/ICTE industry is still largely undeveloped. Total turnover is probably around US\$1 billion, but the bulk of this involves the assembly and sale of hardware. The software segment, including both commercialization and development, is worth less than US\$70 million, while other ICT services are estimated at US\$300 million. There are very few ICTE activities, call centers, or BPO services. Sales are predominantly in the domestic market. International outsourcing is still in its infancy.

Morocco: Morocco has a relatively small but lively ICT sector, which is comprised of about 200 enterprises with a total turnover of around US\$200–250 million. Most of these enterprises are involved in the provision of relatively basic IT services. In certain segments, such as solutions for payment systems, Moroccan ICT companies have reached a remarkable position and gained a good international reputation. Morocco boasts a fast growing ICTE sector, which includes over 60 call centers and other BPO companies. It has a turnover of about US\$100 million—mostly related to the sale of customer care services for the French market.

Senegal: Senegal's ICT sector includes about 200 firms active in the selling and installation of IT equipment, about 50 software developers and IT service providers, plus a large number of telecenters. The industry is very small: although precise data are lacking, the turnover for software and ICT services is unlikely to exceed US\$100 million. Thanks to the availability of good infrastructure (optic fiber cable), some positive signs are noticeable in the ICTE segment. There are a dozen call centers that provide telemarketing services for the French market, and several other BPO providers.

Kenya: In Kenya, the ICT sector consists primarily of vendors and installers of hardware and software. There are 30–40 firms involved in the provision of fairly basic IT services, such as web designing, development of customized solutions, and translation of standard packages in Swahili. Total turnover is not known, but it is unlikely to exceed the US\$100 million benchmark. The development of ICTE activities is hampered by the lack of adequate infrastructure, and currently only a handful of call centers and BPO firms are in operation.

- The existence of marked *informational asymmetries* between small businesses and lenders, or outside investors;
 - The intrinsic *higher risk* associated with small scale activities, because they operate in a more competitive environment, and because they have less capacity to withstand adverse developments;
 - The existence of sizeable *transactions costs* in handling SME financing.
- A fourth problem often cited in the literature (and loudly lamented by small entrepreneurs) is the *lack*

of collateral that typically characterizes SME. In developing countries, these problems are often exacerbated by *institutional factors*, such as limited protection offered by laws to creditors and investors, and lack of an appropriate information infrastructure (e.g. credit bureaus and similar structures).

IV.2 Specific Obstacles Affecting the ICT/ICTE Industry

In ICT/ICTE sector, industry specific aspects often limit the access to finance for SME. In the case of ICT activities—somewhat less so for most ICTE businesses—the *high-tech nature of the business magnifies the informational asymmetries*. This is particularly true of commercial banks, which rarely can count on loan officers with some experience in the variegated aspects of ICT. In turn, this inevitably contributes to increased transaction costs, because the *economics of high technology firms are more difficult to evaluate* than the fundamentals of ‘brick and mortar’ businesses. Many ICT/ICTE businesses are involved in the continuous development of new products and in the use of new processes in untested markets. Therefore, as in any type of innovative activity, the *distribution of returns is highly skewed and the probability of failure very high*. Therefore, the intrinsically risky nature of ICT activities adds to the unfavorable risk profile of SME in general, resulting in a peculiarly unattractive picture for the more conservative financiers. In the case of ICT/ICTE, the issue of collateral is made more severe by the *intangible nature of innovation activities and of assets generated through such innovation*. Indeed, not only are innovation-related assets difficult to value in monetary terms, but they also have little salvage value in the event of commercial failure. Therefore, innovation activities have limited collateral value in obtaining a loan.

IV.3 Demand-side Constraints

The behavior of financial institutions is not the only reason that SME have problems accessing financing. Constraints on the demand side also have an impact. Indeed, while SME advocates loudly lament the inaccessibility of external finance, bankers and venture capitalists often decry the shortage of ‘bankable’ or ‘investable’ firms. One demand side constraint has to do with the *poor quality of projects submitted for financing*. This also applies to the ICT/ICTE industry, where more than a few business ideas are little more than empty boxes. Second, promoters are often *unable to make the*

best use of available opportunities irrespective of the intrinsic quality of the projects. Promoters often lack the ability to articulate in a convincing way business ideas. Furthermore, many small entrepreneurs display an unwillingness to ‘waste time’ in dealing with financial institutions. In this respect, the ICT/ICTE industry is not much different than more traditional sectors—high-tech promoters tend to concentrate exclusively on technical aspects, and are not inclined to invest time in prospecting financing opportunities. A third problem has to do specifically with equity financing, and relates to the *unwillingness of relinquishing control over the company to outsiders*. This attitude, referred to as ‘control aversion’ in the literature, is quite widespread among SME. Contrary to conventional wisdom, high-tech firms are not much more open than other SME. Even in countries with an established ‘equity culture’, such as India, the ‘51% syndrome’ contributes to limit the volume of equity investment.

V. FINANCING ICT/ICTE SMALL BUSINESS: THE DEMAND SIDE

V.1 Financing Needs

The financing needs voiced by small businesses in the ICT/ICTE industry reflect the diverse nature of the sector, the different cost conditions in the various countries analyzed, and the different degrees of development achieved by the operators. The latter range from recently established enterprises that are still engaged in the development of their products, to more established operators that have already gone through a couple of expansion phases. The rationale for these financing needs is also varied, going from the funding of initial R&D expenses to the building up of working capital to the establishment of foreign branches to penetrate new markets. A summary presentation of the financing needs identified during the study is provided in the section below.

Software Development and IT Services: The lower end of financing needs is represented by *web-based services*, such as the design of internet pages, the setting up of e-commerce portals, and the development of basic e-contents. In these cases, financing

needs voiced by enterprises typically range from US\$10,000 to 30,000. The *development of software applications* (e.g. for insurance brokerage or for on-line gaming) requires higher initial investments. This is due to the need to invest in R&D, and, sometimes, to purchase licenses (i.e. when the products are developed on specific systems). Overall, initial investments go from US\$30,000 up to US\$150,000—a larger investment is required in countries where market conditions have pushed up wages of engineers and other skilled personnel. These investment figures may easily double or triple for enterprises dealing with *embedded software and 3D graphic animation*. In these segments, the cost of licenses for the use of patented applications is so high, that there are cases where companies envisage a joint purchase, in order to share the costs. The provision of *ICT value-added services* is an extremely diverse segment, and this is reflected in the value of investments. These range from the US\$100,000 sought by a Senegalese contents provider selling services to farmers and fishermen, to the US\$200,000 plus required by Indian enterprises providing cutting-edge services on J2ME platform.

Internet Services: Over the past five years, the *ISP sector* has witnessed a substantial consolidation. Many small players that had been established in the wake of the initial liberalization of the telecom sector have been forced to merge, sell or close down. The companies that survived have strived to diversify their activities, primarily through the introduction of new value-added services. This process requires fresh investments, both in infrastructure (e.g. the setting up of internet exchange points made by consortiums of ISP as in Kenya) and in e-contents development. As a result, the ISP business has become increasingly capital intensive, with investments that can easily reach US\$200,000–300,000. In countries where PC penetration is low, *cybercafés* provide most of the access to the Internet. In those cases, initial investments go mainly toward the setting-up of premises and the purchase of work stations, and operating costs mainly refer to the ISP bill for connectivity. The initial investment per seat is usually between US\$1,500 and 3,000.

Business Process Outsourcing: The main lines of business subsumed under this category include the following: call centers, back office operations, testing and R&D services, and transcription services. *Call centers* require relatively high initial investments. In

the Philippines, the investment per seat ranges from US\$4,000 to 6,000. Higher costs have been mentioned in Morocco and India. On average, for an initial configuration of at least 50 seats, the required investment to start-up a call center is US\$200,000–400,000. At the opposite end, the least expensive type of activity is *transcription services*. The average number of seats in this segment is smaller, and the personnel requires less intensive training. In the Philippines, where transcription services are a major component of the ICT/ICTE industry, the cost of setting up a facility with 30 seats varies from US\$50,000 to 70,000.

Assembly and Sale of Hardware: The assembly of hardware is typically the preserve of large companies, and there are very few examples of new SME entrants. The same applies to the wholesale distribution of IT equipment and off-the-shelf software packages. In the countries surveyed, large distributors often dominate this segment—selling to a myriad of small retailers. At the retail level, financing needs mainly relate to working capital, and are usually about a few thousands dollars.

VI. FINANCING ICT/ICTE SMALL BUSINESS: THE SUPPLY SIDE

VI.1 Equity Financing

The availability of equity financing varies greatly across the countries surveyed. India has a sizeable venture capital industry, with dozens of funds in operation, including both domestic and international operators. In addition, private initiatives are supplemented by a variety of publicly-funded schemes, often targeted at innovative sectors, such as ICT and biotechnology. On the other hand, in Sub-Saharan Africa and in some other countries such as Peru, venture capital is either non-existent or in its infancy, and the few equity financing facilities in existence are usually the result of donor or government-sponsored initiatives.

The attitude toward the ICT/ICTE sector, and especially toward small firms in the industry, varies considerably depending upon the nature of the providers of equity finance. Four main typologies can be identified: (i) generalist venture capital funds,

(ii) development-oriented funds, (iii) high-technology funds, and (iv) business angel investors.

Generalist funds tend to have diversified portfolios. There are cases in which significant resources have been invested in ICT/ICTE companies. For instance, in Morocco the ICT/ICTE industry accounts for one-fifth to one-quarter of all the equity deals finalized over the last decade. However, generalist funds rarely invest in early-stage deals, and the range of deals considered (typically, between US\$1.5 and 3 million) is well above what is required by the small ICT companies. One of the main obstacles preventing the consideration of smaller deals has to do with the existence of sizeable ‘transaction costs’—the expenses associated with the preparation, negotiation, and monitoring of small investments. This applies to SME in general, but the problem is more acute for the ICT sector, because generalist funds often do not have in house the expertise required for a sound assessment of ICT investment projects.

Development-oriented funds can be regarded as a sub-category of generalist funds. They include operations primarily funded by international financial institutions (IFIs) or donors. The main operators are: (i) the US-based *Small Enterprises Assistance Funds* (SEAF); (ii) South African-based *Business Partners*; and (iii) UK-based *Aureos Capital*, a joint venture between CDC, NORFUND and FMO. In line with their development mandate, these funds are comparatively more inclined to invest in SME—although sometimes the focus is more on ‘medium-sized’ firms than on ‘small’ firms. Furthermore, ICT/ICTE firms account for only a modest share of their portfolio.

High-technology funds are found primarily in India, with a few examples in Brazil, Morocco, the Philippines, Ukraine and Vietnam. They include: (i) private initiatives, such as India’s *Infinity*; (ii) government-financed funds, such as India’s *National Venture Fund for Software and Information Technology* and its counterparts at the state level; and (iii) mixed schemes, such as the funds supported by Brazil’s *Inovar* initiative. In several cases, private and government funds are supplemented by financing provided by IFIs or bilateral donors. In principle, the range of investments considered by these funds is very wide—and includes seed and start-up financing. In practice however, only public and mixed schemes normally consider early-stage

investments—private funds tend to concentrate on later-stage and larger deals (i.e. above US\$2–3 million). However, the reluctance of funds to get involved in early-stage deals is increasingly tempered by the awareness that an inadequate funding at early stages may negatively impact on the quality of future pipelines. As a result, private high-tech funds appear increasingly interested in collaborating with governments and donors to devise ways that would allow smaller—and riskier—deals, while protecting against the downside.

Business angels represent an alternative to formal equity funds. Business angels normally consider investments in the US\$100,000 to 250,000 range, but sometimes take investments as low as US\$50,000. This is definitely more in line with the needs of small ICT/ICTE firms. However, business angels are active only in a few of the countries surveyed: India, and to a more limited extent, Brazil, Argentina and the Philippines. Moreover, business angels normally tend to invest in sectors where they have gained direct experience, and in the countries surveyed the number of angels familiar with the business models prevailing in the ICT industry is still relatively small. As a result, business angels’ investment in the ICT/ICTE sector remains at low levels.

VI.2 Quasi-Equity

Quasi-equity investments is a broad category that encompasses a series of hybrid instruments, such as preferred shares, convertibles, shareholder loans, and profit or revenue sharing mechanisms. These investments are often structured as unincorporated joint ventures. **Preferred shares and convertibles** are closer to ‘pure equity’. Therefore, they are more appropriate for ICT/ICTE companies with a significant growth potential, i.e. those with an important ‘intellectual property’ element. By contrast, **shareholder loans and unincorporated joint ventures** are more appropriate for firms involved in simpler ICT-related services, such as software customization and Internet access provision.

Indian equity funds use convertibles and preferred shares frequently. This is particularly true of the ‘high-tech’ public funds established at the state level, which are also the operators that are more inclined toward smaller deals. In the other countries surveyed, venture capitalists utilize quasi-equity far less often. In Morocco, some venture capitalists investing in ICT firms have used profit-sharing mecha-

nisms, but only in conjunction with equity, and primarily as a way to minimize the downside. Some quasi-equity deals have been recorded in Vietnam, the Philippines, Brazil and Argentina, but reportedly, only for larger deals.

VI.3 Debt Financing

In most of the countries surveyed, the attitude displayed by commercial banks toward SME is relatively conservative. However, in recent years commercial banks' efforts to serve the SME segment have increased, with the launch of new products and the adoption of more flexible operating modalities. In parallel, 'micro-enterprise' banks have shown a tendency to scale-up their operations, and some now offer short and medium-term loans of about US\$100,000, sometimes relying on soft collateral (personal guarantees or guarantees on receivables). While these changes certainly contribute to facilitate access to bank lending for SME in general, the impact on small ICT/ICTE businesses appears to have been rather modest. There have been cases in which ICT/ICTE firms have benefited from the more favorable stance towards SME but, overall, bankers' attitude towards high-tech firms remains very cautious, and criteria for assessing credit worthiness remain very stringent.

The problems encountered with commercial banks are partly mitigated by the existence of **government-financed lending schemes** designed either to support ICT/ICTE firms specifically, or to support innovative enterprises in a more general sense. This is especially true in Brazil, where various government bodies and development finance institutions are actively involved in the provision of loans. Examples of credit lines or re-financing facilities are also found in India, Senegal, Argentina and the Philippines. The amounts made available through these facilities typically range from US\$50,000 to 500,000. There are usually relatively favorable repayment conditions—typically, a duration of five years or more, with a one or two-year period of grace). Another solution is the use of credit guarantees, which facilitates access to debt financing by replacing at least partly the need for tangible collaterals. **Credit guarantee schemes** targeted at ICT/ICTE firms and other innovative enterprises operate in Brazil and India. In Morocco, Argentina and the Philippines ICT/ICTE enterprises can access—sometimes at preferential conditions—'generalist' credit guarantee funds.

VII. EXTENT AND SEVERITY OF THE FINANCING GAP

Results from this study confirm the existence of a financing gap, in the sense that seemingly well deserving ICT/ICTE operators have limited or no access to external financing. However, this general finding needs to be qualified, taking into account the stage of development of firms, the particular features of the various sub-sectors, and the conditions prevailing in different countries.

VII.1 Financing Gap and Stages of Development

Financing needs voiced by firms in the *early stages of development* vary significantly, depending upon the specific nature of the business, but in most cases requirements do not exceed US\$100,000. These are amounts often compatible with the recourse to the usual 'FFF channels', complemented with some personal loans and with some financing from public schemes. The financing gap is much more severe for firms in the *development and first-expansion phases*, because they need larger amounts of capital—they are seeking investments that range from US\$100,000 to 1,000,000. Enterprises at these stages of development, although already in business and sometimes trading profitably, still do not have a sufficient track record to be accepted as a credible borrower by commercial banks. At the same time, the majority of venture capitalists consider these amounts to be too small to justify the high 'transaction costs' associated with full-fledged equity investments. Credit guarantee schemes could be used to facilitate access to bank lending, and quasi-equity—especially in the form of shareholder loans and revenue/profit sharing arrangements—could be a useful alternative to 'straight equity' deals. However, these instruments are not available in most of the countries surveyed.

VII.2 Sector Considerations

Firms active in *software development and IT services* experience the most difficulty in accessing finance. Only a handful of these firms display the potential upside capable of attracting the attention of tech-savvy venture capitalists. Furthermore, many promoters do not want to relinquish control of their projects. The bulk of SME in this segment deal with simpler activities, such as web-designing, software customization, and training. These firms may well

bring decent returns, but not enough to motivate equity investors. In addition, the innovative nature of the business and the intangible character of assets, make access to bank lending more problematic. In other lines of business, the financing gap is less severe. Call centers and other BPO operations are usually launched only after securing contracts with a solid foreign client—this allows for the discounting of receivables, which makes bank financing much more accessible. The situation is similar for firms involved in the manufacture and assembly of IT equipment. The financing needs of sellers of equipment and software are normally limited to modest volumes of working capital.

VII.3 Country Considerations

In India, the limited availability of funding for small operators is widely lamented in industry circles. Nevertheless, the situation is comparatively better than in other countries and, even more importantly, there are clear signs of improvement. Recently, the number of investments in the early stages has increased. About 50 seed and start-up deals were finalized in 2006, compared with only 20–30 per annum recorded in the previous two years. In Brazil, the government and IFIs have co-financed several seed and start-up tech funds—this is gradually broadening the opportunities available to small firms. In Kenya, Senegal and, to some extent, Peru, the financial systems are still relatively undeveloped, and SME face serious limitations in accessing finance. However, these weaknesses in the financial system are mirrored by the modest investment opportunities offered by a small and unsophisticated ICT/ICTE industry. Whatever financing gap may exist, it cannot be described as ‘industry specific’. In the Ukraine, Vietnam, the Philippines, Argentina, and Morocco, available evidence suggests a lack of funding opportunities for investments in the US\$1–2 million range and below. The problem is only partly mitigated by the existence of some government schemes and by the recent launch of a new generation of high-tech funds.

VIII. RECOMMENDATIONS

The findings above point to a series of measures that could help in alleviating the financing gap faced by small firms in the ICT/ICTE industry. Some of these measures are aimed at facilitating access to

specific forms of financing—equity, quasi equity and bank lending. Others aim at improving the interaction between the supply and demand sides of the financing market. Given the nature of the *infoDev* program, the recommendations formulated here only focus on ‘soft’ interventions, which involve the deployment of technical assistance resources. However, some of these actions can be regarded as preparatory of ‘investment’ operations that could be taken up by other donors or by financial institutions.

VIII.1 Improving Access to Equity Financing

Improved access to equity financing is essential in order to support the development of innovative SME. Interventions can be envisaged in three areas: (i) the design of schemes aimed at mitigating the risk associated with early-stage deals; (ii) the establishment of a mechanism aimed at alleviating the costs incurred by fund managers in the finalization of small deals; and (iii) the provision of support to business angels networks.

Mitigating The Risks Associated with Early-Stage Investments:

The results of this study confirm the limited appetite of venture capitalists for early-stage investments. Memories of past losses are still vivid, and for many operators early-stage deals are simply too risky. However, venture capitalists are also aware that an inadequate level of funding in the early stages will inevitably have an impact on the quality of their future pipelines. Therefore, many VC are increasingly interested in devising forms of ‘public private partnerships’ that would make it possible to consider smaller and riskier deals, while protecting against the downside. During fieldwork, this theme was frequently discussed. In India, several venture capitalists declared their interest in exploring the feasibility of co-investment schemes based on a risk sharing approach modeled after the US *Small Business Investment Companies* scheme. Venture capitalists in Morocco, the Ukraine and the Philippines voiced similar considerations—they mentioned the idea of establishing guarantee mechanisms to mitigate the risk faced by private investors.

The keen interest in the subject suggests that a useful follow-up to this study could be a *review of existing risk mitigating schemes*. This would include the following: (i) a detailed analysis of the operating modalities and institutional and legal arrangements

currently in use; and (ii) identification of the models best suited to match the institutional and market conditions found in various countries. This would be followed by the preparation of full-fledged *feasibility studies for specific schemes* to be implemented in selected countries. The analysis would focus on incentive schemes in use in both developed and developing countries, taking into account the operating modalities normally preferred by IFI/donor institutions potentially interested in providing support.

Alleviating the Venture Capitalists' Transaction Costs Problem: Transaction costs related to the preparation, finalization, and monitoring of equity investment deals are a significant barrier to the greater involvement of venture capital funds in the financing of small companies. The problem is present in the case of SME in general, but it is particularly acute in the case of ICT/ICTE firms, due to their particular features. The problem could be alleviated through the establishment of a donor-funded *transaction costs facility* that would reimburse fund management companies for at least part of the expenses incurred for small equity investments. This reimbursement could take the form of a flat fee that would be payable for each investment made in ICT companies below a certain threshold. This flat fee would complement the management fee normally received by fund managers. The facility could make payments to fund managers in phases—to link payments to specific events in the investment process. The advantage of such mechanism is twofold. On the one hand, a relatively modest investment (the proposed fee of US\$50,000 is less than the cost of a small consulting assignment) would help to mobilize much greater amounts of investment money, ensuring a very high multiplier effect. On the other hand, despite the presence of a subsidy element, the mechanism would not unduly impact on the fund managers' incentive structure, because the fee would be too small compared with the amounts to be invested. This would ensure that assessment criteria would remain linked to sound business principles, with the merits of specific investments assessed on a strictly commercial basis.

VIII.2 Supporting Business Angels Operations

Business angels can play an instrumental role in fostering the development of small ICT/ICTE

firms, by combining the provision of financing with much valued hands-on managerial support. Among the countries surveyed, well-developed networks of business angels are found only in India, Brazil, and, to a more limited extent, Argentina and the Philippines. Angel activity is largely absent in the other countries. Actions aimed at supporting business angels operations could be a useful complement to initiatives targeted at institutional equity financing operators.

Two different types of intervention can be envisaged. First, in countries where angel activity is weak or non-existent, support could be provided to the *establishment or consolidation of nascent business angels networks*. This could take the form of small grants—ideally about US\$30,000 to 50,000 per initiative—for the financing of operational and promotional activities, such as the organization of project presentations and matchmaking activities. IFC's *Grassroots Business Initiative*, which has already supported the establishment of angel networks in countries as diverse as Indonesia and Mali, is a useful model. Second, in the countries where business angels are already active, support could be provided for the *establishment of sidecar funds*—governments could co-invest along with angel groups.

In both cases, activities supporting angel groups should be closely coordinated with other actions that support business incubators. The synergies between the two actions are potentially significant. On the one hand, angel groups could assist incubators in raising the 'investor readiness' of incubatees, through the organization of workshops covering specific topics (the dos and don'ts in business presentations, what are the realistic expectations in dealing with investors, etc.). On the other hand, incubators could complement the financing provided by angel investors with the provision of support in-kind (leased space at affordable rates, access to common facilities and services, etc.).

VIII.3 Promoting a Wider Use of Quasi-Equity Instruments

Despite the great emphasis placed by many observers on equity financing, it is clear that many small ICT/ICTE businesses will never be able to attract the attention of venture capital funds. This is the case for the many small firms involved in standard activities, which may well prove financially viable,

but that do not display the growth potential normally sought by venture capitalists. For many of these firms, quasi-equity, especially in the form of shareholder loans and other profit/revenue sharing schemes could represent a viable alternative. In the countries surveyed, the use of these financial instruments is still limited, and activities aimed at promoting their wider use could be a useful follow-up to this study. The first step would be to make a detailed **review of the schemes currently in operation** in both developed and developing countries—and to identify their success factors as well as their limitations. Special attention should be devoted to the analysis of the legal aspects. It would be particularly useful to identify the factors that might encourage or discourage the use of various quasi-equity instruments in certain countries/legal systems. This initial review could be followed by the preparation of a **feasibility study for the establishment of a dedicated quasi-equity facility** in one or more selected countries. The feasibility study should: (i) review the market potential for quasi-equity instruments, and identify an initial potential pipeline; (ii) propose the appropriate legal structure; and (iii) formulate recommendations regarding the operating modalities—including the need for technical assistance. The final step would involve the **promotion of the concept among potential financiers**. This would involve the organization of dissemination and information events and exploratory contacts with private sector entities, the IFI, bilateral donors and development finance institutions, and members of the ‘socially responsible investment’ community.

VIII.4 Supporting Access to Bank Lending Through Credit Guarantee Schemes

In countries with a weak ‘equity culture’, debt financing will continue to be regarded as the most natural option by many ICT/ICTE firms. Therefore, it is important to devise mechanisms that can reduce the commercial bankers’ cautious attitude toward high-tech activities. This can be achieved by supporting the establishment of credit guarantee schemes (CGSs). CGSs aim to facilitate access to finance through the provision of a guarantee that replaces, in part or in full, the need for collateral. Credit guarantee schemes, often combine public support with a self help element (‘mutual guarantee schemes’). They have long been in use in Continental Europe, where they have played an

instrumental role in facilitating SME access to bank lending. Since the early 1990s, the EU has actively supported the creation of CGSs in Eastern Europe and in the Mediterranean region, and UNIDO has promoted the creation of mutual guarantee associations in India and some African countries.

In the countries surveyed, recourse to credit guarantees is still limited. While the majority of countries do have some form of GCS, the use of credit guarantees to support high-tech companies, is largely confined to Brazil and, to a smaller extent, India. At the same time, various counterparts in at least four countries—the Philippines, Senegal, Morocco and Vietnam—have expressed interest in this kind of intervention, in the form of dedicated schemes or of ‘special windows’ within existing CGS. An important first step to support a wider use of credit guarantees would be to conduct a **benchmarking study of CGS operations**. This study would be aimed at identifying best practices and organizational models, with specific reference to guarantee schemes focused on high-tech industries. It would include recommendations on the desirable structure and operating modalities of CGS operations in selected countries. If interest in the capitalization of CGS operations was confirmed by proponents, then provisions could be made for **technical assistance and training** to support the establishment and initial operations of dedicated schemes. As in the case of initiatives in favor of business angels, efforts should be deployed to exploit synergies with business incubators, which could assist the CGS in the appraisal of credit guarantee applications, and contribute to the monitoring of small enterprises benefiting from the scheme.

VIII.5 Improving the Interactions between Supply and Demand

Access to financing is heavily influenced by prevailing conditions in the environment in which financial institutions operate. Interventions aimed at improving the enabling environment have a less direct impact than the measures suggested above. Nevertheless, they could yield important and lasting results. In this context, two areas of intervention can be devised: (i) the dissemination of information on the economics of ICT/ICTE firms, in order to improve the understanding of these enterprises by financial intermediaries, and (ii) the implementation of activities aimed at raising the investor readiness of small ICT/ICTE operators.

Disseminating Economic and Financial Information on ICT/ICTE Firms: The ICT/ICTE sector is still little understood by a wide range of financial intermediaries, including commercial banks. This inevitably translates into a very cautious attitude. Actions aimed at ***compilation and dissemination of information*** about the fundamental economic and financial parameters of ICT/ICTE firms in developing countries could help in bridging the existing information gap. For example, Morocco's ICT sector association has proposed instituting a *centrale financière* for the ICT sector to be made available to the banking sector.

Enhancing Capabilities to Deal with Financial Institutions: As mentioned earlier, problems in accessing financing for SME cannot be blamed entirely upon the conservative attitude displayed by financial institutions. Promoters and small entrepreneurs are often unable to approach banks and investment funds in an effective way. They are not

always able to prepare business plans of acceptable quality, or to defend them credibly vis-à-vis potential financiers. In light of this, the idea of a ***training and advisory program*** aimed at enhancing the 'investor readiness' of ICT/ICTE firms was discussed during fieldwork with business associations and incubators. The training component would involve the organization of workshops focusing on practical aspects, such as the pros and cons of various financial instruments, and the most effective way to draft, substantiate and present a business proposition. This training component should include the active participation of representatives of financial institutions. The advisory component would involve the recruitment of consultants, who would assist ICT/ICTE in their endeavors with commercial banks and prospective investors. These consultants could operate under the umbrella of sector business associations or in collaboration with the network of business incubators, which could also provide the necessary logistical support.



I. INTRODUCTION

In developing countries, small and medium-sized enterprises (SME)—particularly micro and small enterprises—have great difficulty in obtaining the necessary financial resources to effectively scale up and grow their businesses. Access to traditional growth capital, including debt and equity, is often prohibitively costly, due to such factors as insufficient legal and regulatory policies, and inadequate financial markets.

The development community has tried to address this challenge by creating microfinance lending instruments and private sector investment intermediary institutions, including those supported by the International Finance Corporation (IFC).

Microfinance has made considerable strides in improving access to capital for individuals seeking US\$10 to more than \$1,000 to start or expand a business. Similarly, the IFC and other investment institutions have improved access to capital for established firms seeking US\$5 million and above to expand their operations nationally and internationally.

Despite the success of these efforts, the development community has yet to address effectively and sustainably the challenge of providing access to capital for SME seeking US\$50,000 to \$1 million to scale up their businesses and attract private capital markets. For SME competing in the information and communication technology (ICT) industry and in ICT-enabled (ICTE) activities, the challenge of accessing growth capital is particularly acute, because these firms possess few tangible assets that can be leveraged as collateral for loans.

In order to better understand these challenges facing technology entrepreneurs, *infoDev* has commissioned this study on “Financing Technology Entrepreneurs & SME in Developing Countries:

Challenges and Opportunities”. The Study was carried out in two steps. The *first phase* was devoted to a desk review of the main issues involved in the financing of small businesses in general, and of SME active in the ICT/ICTE industry. The *second phase* involved the assessment of financing conditions in ten selected countries, including: (i) three in South America (Peru, Argentina and Brazil); (ii) one in Eastern Europe (Ukraine); (iii) three in Africa (Morocco, Senegal and Kenya); and (iv) three in Asia (India, Vietnam and the Philippines). This Report summarizes the main findings of the work, including: (i) an assessment of the financing needs voiced by techno-entrepreneurs; (ii) a review of the financing opportunities available; and (iii) a series of suggestions regarding possible measures to alleviate the financing gap. Separate country reports provide detailed results for the ten countries surveyed.

The Study is structured as follows:

- Section II briefly presents some basic definitions and conceptual issues;
- Section III presents an overview of the ICT/ICTE industry in the ten countries surveyed;
- Section IV reviews the main issues faced by SME active in the ICT/ICTE industry in accessing financing;
- Section V examines the nature and extent of the financing needs voiced by small businesses in the ICT/ICTE industry;
- Section VI examines the ‘supply side’ of the financing market, with an analysis of equity, quasi equity and debt financing schemes;
- Section VII combines elements from the demand and the supply side and provides an assessment of the financing gap;
- Section VIII presents recommendations.

This Study also includes a series of annexes that present in some detail the features of various financing schemes particularly relevant to the ICT/ICTE industry.



II BASIC DEFINITIONS AND CONCEPTS

II.1 DEFINITION OF SME

This Study explores techno-entrepreneurs and SME. To begin with, two aspects must be considered. First, there is *no universally accepted definition of SME*. In some countries, the definition is based solely on the size of the labor force. In other countries, the definition incorporates financial variables, such as turnover and/or assets. Furthermore, in certain countries, such as Russia, different definitions apply in different sectors. The current World Bank Group definition of SME is the one used in this study. It encompasses enterprises with up to 300 employees and total annual sales of up to US\$15 million (Box II.1).

Second, due to the dramatic structural changes that have occurred over the past few decades, the notion of SME has become *excessively broad to be useful for analytical purposes*—especially in the case of developing countries. Today, a company with 100–150 workers is, for all practical purposes, a ‘well

BOX II.1 *Definition of SME*¹

The definition of SME used by the World Bank Group, includes three sub-categories:

- Micro-enterprise: up to 10 employees; total assets/total annual sales of up to US\$100,000; turnover must be in excess of US\$400,000, and tangible assets in excess of US\$200,000;
- Small enterprise: between 10 and 50 employees; total assets/total annual sales between US\$100,000 and US\$3 million;
- Medium-sized enterprise: between 50 and 300 employees; total assets/total annual sales between US\$3 million and US\$15 million.

established player’. It faces constraints and opportunities that are completely different from those faced by firms employing a couple dozen workers. This is particularly true of high-tech service activities that constitute the bulk of the ICT/ICTE industry (see below). Therefore, this study focuses on micro and small enterprises, with up to 50 employees and sales of up to US\$3 million.

II.2 DEFINITION OF ICT/ICTE INDUSTRY

Information and communication technologies (ICTs) are constantly and rapidly evolving. New products and services are incessantly being developed and launched in the market. This inevitably effects the definition of the ICT/ICTE industry: its ‘boundaries’ are constantly being modified and redefined². Broadly speaking, the *ICT sector* is considered to include: (i) the manufacturing and assembling of ICT equipment; and (ii) a variety of service activities, ranging from telecommunications to software development, and from provision of interconnectivity services to IT-related consulting. The *ICTE sector* includes activities that are highly dependent upon access to ICT technologies or, at a minimum, that have operating modalities that have been significantly affected by the introduction of ICT technologies. This includes a wide range of customer care and administration-related services (Business Process Outsourcing – BPO), as well as services with a higher technical content, such as remote testing, design and R&D. A detailed list of activities incorporated within the definition of the ICT/ICTE industry used in this study is provided in Table II.1 below.

¹ See http://www2.ifc.org/sme/html/sme_definitions.html.

² The formulation of a uniform definition of the ICT/ICTE industry is currently the subject of analysis at the international level. This Study builds upon taxonomies formulated by the OECD (OECD, *Measuring the Information Economy*, Paris, 2002) and the World Bank (World Bank, *Information & Communication Technology Sector Strategy Paper*, Washington, DC, April 2002), as well as on definitions adopted by some industry associations, such as India’s NASSCOM.

TABLE 1. *Summary Presentation of ICT/ICTE Financing Needs*

ICT Activities		ICT-enabled Activities
Manufacturing and Assembling	Services	Services
IT and office equipment (computers, servers, peripherals, etc.)	Telecommunication services (mobile, fixed-line, paging, etc.)	Technical and R&D services
Equipment for telephony and broadcasting	Broadcasting services	Customer services (call centers, help desks, telemarketing, mailings, etc.)
Consumer electronics products	Wholesale and retail trade of IT equipment and off-the-shelf software	Administrative services (accounting, billing, payroll services, etc.)
Equipment for testing, industrial processes, etc.	Software and hardware installation and maintenance services	Information and database services (compilation and management of databases)
Integrated circuits and electronics components for the above	Software development (system software, firmware and IT applications services)	Data processing services (data transcription services)
	IT-related business consulting services	Computer graphics
	Facilities management (remote data centers, hosting, server farms)	
	Internet and value-added services (VAS)	
	Integrated ICT services (telecenters)	

Not all the activities included in the definition of ICT/ICTE industry are equally relevant, or, indeed, relevant at all, to the study, because several lines of business are dominated by large companies. For instance, the following are typically the preserve of multinational corporations (MNC) and large domestic companies: (i) broadcasting; (ii) fixed and mobile telephony; and (iii) the manufacture of IT equipment and components. Other value added services have a comparatively greater number of SME. These considerations are graphically presented in Figure II.1 below.

In practical terms, the Study focuses primarily on four segments:

- **Software development and IT services**, including firms active in the development of software ('infrastructure' software, embedded software, business applications, etc.), the customization of IT products, web design and e-commerce solutions, and all other IT-related consultancies;
- **Internet services**, including Internet service providers (ISP) and other providers of integrated

connectivity services such as telecenters and internet points;

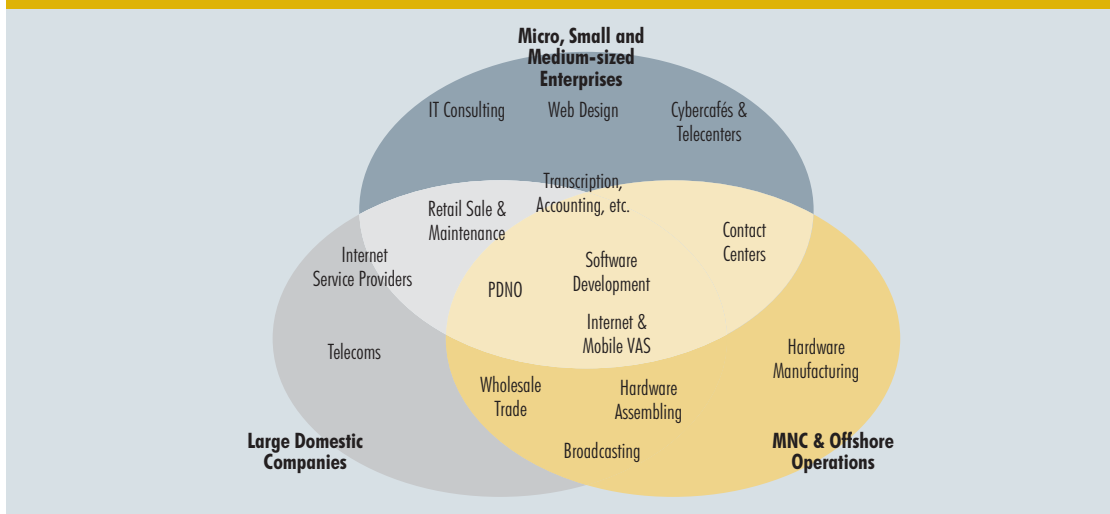
- **Business process outsourcing activities**, including call centers and other customer care activities, and providers of back office outsourced services, such as accounting, payments and transcriptions;
- **Other ICTE services**, including firms active in distant R&D services, online travel agencies and providers of other ICT-enabled services.

Two other segments, the *manufacture and assembly of ICT equipment* and the *sale and maintenance of software and hardware*, are covered only partially—especially in countries where other lines of business are scarcely present.

II.3 FORMS OF FINANCING

This study examines the whole range of financing sources potentially accessible to SME. The peculiar features of the ICT/ICTE industry include: (i) a higher risk profile compared with firms active in

Figure II.1. Firm Size and Lines of Business



more traditional industries; and (ii) largely intangible nature of activities and of assets generated, with negative impact on value of collateral. Therefore, special attention is devoted to **equity financing**. In particular, the focus is on ‘private equity’. That includes investments in enterprises not listed on a stock market—investments made by venture capitalists (VC) and other operators, such as government sponsored investment funds and business angels. The analysis covers the whole range of private equity transactions, from seed capital to later-stages financing (Box II.2).

This study also covers debt financing and quasi-equity instruments. In the case of **debt financing**, the analysis focuses on the following: (i) commercial banks’ lending, including short-term—often in the form of overdrafts—medium-term, and long-term; and (ii) credit guarantee funds, which are schemes intended to facilitate access to bank lending. **Quasi-equity** is a broad category that encompasses a range of ‘hybrid’ financial instruments, which share to varying degrees some features of equity and debt financing. The main types include preferred shares, convertible bonds, shareholder loans and profit/revenue sharing schemes (Box II.3). Preferred shares and convertibles are closer to equity, and are used by specialized operators (‘mezzanine’ funds), and by venture capitalists and angel investors. Angel

BOX II.2 Typologies of Private Equity Transactions

Seed financing is funding invested for the research, assessment and initial development of a product or business concept.

Start-up financing is provided for product development and initial marketing to companies that are in the process of formation, or that have been in business for a short time, but have not yet sold their product commercially. Taken together, seed and start-up financing, are commonly referred to as **early-stage financing**. **Expansion financing** occurs at later stages, when an enterprise is progressively expanding its production base and commercial outreach. Expansion financing is often done in successive rounds, which are referred to respectively as first, second, and third stage expansion financing. **Management buyout/buyin** (MBO/MBI) transactions are usually associated with fundamental changes in an enterprise’s ownership—often as a consequence of some upheaval, such as a period of poor performance or the disappearance or disaffection of the former owners. MBO/MBI transactions often involve the use of private equity.

Source: adapted from European Venture Capital Association (www.evca.com)

investors and development finance institutions frequently use shareholder loans.

The various types of financing mentioned above can be used as complements to each other, or as substitutes for one another. For instance, in contexts where

BOX II.3 Main Types of Quasi-equity Instruments

Preferred shares are those that have preference over ordinary shares, including priority in receipt of dividends and upon liquidation, and, sometimes, preferential voting rights. **Convertible bonds** are financial securities, yielding a fixed or variable interest, which can be converted into ordinary or preferred shares under certain circumstances and at pre-agreed-upon terms. **Shareholder loans** are unsecured ('deeply subordinated') debt instruments, which carry a fixed and/or variable interest. Often, the variable interest element involves the payment of a 'royalty' expressed as a percentage of future revenues/cash flows ('royalty loans'). **Revenue and profit-sharing schemes** are contractual arrangements, involving the establishment of an unincorporated joint venture. The profit/revenue share may refer to the performance of the whole enterprise or to a specific transaction.

medium and long-term loans are scarce or difficult to obtain, the rolling over of short-term financing facilities can be used to finance capital investment. While this is certainly at odds with the principles enshrined in any typical corporate finance manual, it was nevertheless widely used in the early days of the industrialization process in a number of countries. In some countries, debt financing and certain types of quasi-equity (shareholder loans and profit/revenue sharing mechanisms) have largely replaced private equity. This is true of countries where taxation discriminates against returns on equity, or where the legal tradition has favored the emergence of business organizations that limit the free transferability of shares. The financing structure (the equity/debt ratio) of enterprises may differ significantly across countries, reflecting the widely different business and legal cultures and operating conditions.

II.4 THE FINANCING GAP CONCEPT

One of the main objectives of this study is to assess the nature, extent, and origins of the 'financing gap' that plagues SME in the ICT and ICTE industry. The concept of 'financing gap' generally refers to a shortage in the supply of capital to meet the demand³. The following four aspects must be highlighted:

First, the notion of 'financing gap' should not be confused with that of 'absolute scarcity' of funds in a given financial system. Indeed, a financing gap (for a certain category of operators, sometimes in certain geographical areas) may well emerge even when liquidity is abundant.

Second, a clear distinction must be made between 'actual gaps' and 'perceived gaps'. The fact that some enterprises experience difficulties in accessing financing is not necessarily an indication of the existence of an 'actual gap'. In any well functioning financial market, some firms will be, and should be, denied access to finance if their risk profile far exceeds the willingness of lenders/investors to supply funds at a given rate. In other words, an actual financing gap is said to exist if firms that *merit* financing cannot obtain it due to the existence of market imperfections.

Third, a precise measurement of the financing gap requires the detailed analysis of individual investment/lending decisions. This is an operationally complex and conceptually challenging exercise. Therefore, most analyses of financing gaps are qualitative—based on whatever evidence can be collected regarding the financing needs articulated by enterprises and the operating modalities of providers of finance. This study follows this tradition of qualitative analysis.

Fourth, most studies of financing gaps focus on the 'supply side', i.e. on constraints related to the behavior of the providers of finance. However, enterprises also make decisions about financing and, therefore, constraints may also appear on the 'demand side'. This is especially true of equity financing, because entrepreneurs are often unwilling to relinquish part of the control of the company to outsiders.

³ A very recent analysis of the concept of financing gap is provided in OECD, *The SME Financing Gap*, Paris, 2006. Other useful sources include RAM Consultancy Services Sdn Bhd, *SME Access to Financing: Addressing The Supply Side of SME Financing*, a report for the ASEAN Secretariat, July 2005, Bank of England, *Finance for Small Firms—An Eleventh Report*, April 2004, and Equinox Management Consultants Ltd, *Gaps in SME Financing: An Analytical Framework*, a report prepared for Industry Canada - Small Business Policy Branch, February 2002.

III SALIENT FEATURES OF THE ICT/ICTE INDUSTRY

III.1 INTRODUCTION

There are major variations in the size, composition, dynamism and market orientation of the ICT/ICTE industries in the ten countries surveyed. Therefore, for analytical purposes, it is useful to group these countries along a few key dimensions, such as the size, diversification and innovativeness of ICT/ICTE activities. In terms of turnover, exports and employment, India is in a league apart, followed at considerable distance by Brazil. The least developed economies, such as Senegal and Kenya, display a concentration on a few, basic lines of business. In the more advanced countries, virtually all ICT/ICTE activities are present. There is often a strong correlation between diversification and innovativeness. In India, and to a lesser extent Brazil, the ICT/ICTE industry is characterized by the massive presence of knowledge-intensive activities, which often go beyond the outsourcing logic that initially triggered the growth of the ICT industry. By contrast, in countries with an infant ICT/ICTE sector, the bulk of activities are of a relatively simple nature, such as sales and maintenance, IT consultancy, basic Internet services, basic software customization, and sometimes telemarketing services. Based on the above factors, the ten countries surveyed can be grouped into three categories. The first category is **established players**, and includes India and Brazil. The second is **emerging players**, and includes the Philippines, Morocco, Argentina, Vietnam, Ukraine and Peru. The third is **marginal players**, and includes Kenya and Senegal.

III.2 ESTABLISHED PLAYERS

India

Over the last two decades, India has become a world leader in the ICT/ICTE industry. Multi-national corporations spearheaded the process, by establishing 'captive' operations in the early 1990s. This was quickly followed by the emergence of a vibrant domestic industry. Today, the Indian ICT industry can compete with the world giants, and Indian high tech clusters are home to advanced R&D centers serving several global industry leaders. In 2006, total sales reached US\$37.4 billion, which represented a 31% growth over the previous year—total employment was in the order of 1.3 million. The software development and IT services segment dominate the Indian ICT industry. In 2006 there were about US\$17 billion worth of exports, mostly to the US and other western countries. The 4,000–5,000 companies active in this segment are mostly SME, but they also include world leaders such as *HCL*, *Infosys*, *TCS* and *Wipro*, all of which are in the billion-dollar club. India is also home of a powerful ICTE sector. This includes a number of captive operations, resulting from the relocation of labor and skill intensive activities from Western countries, as well as no less than 200 medium-sized Indian-owned companies, active in the provision of customer care, account management, and financial processing for international clients. The manufacture and assembling of hardware is comparatively less developed. MNC investments tended to privilege other Asian countries, and the bulk of production is destined to the growing internal market. An estimated 150 Internet service providers and 100,000 public internet points (cybercafés) provide connectivity services.

Brazil

Brazil is the leading player in Latin America, with a large domestic market, good research facilities and manufacturing capabilities. The leading hardware producers started operating in the 1980s. This acted as a catalyst for further investments and nurtured the start-up of new suppliers of components, distributors and service providers. The birth

of the software development segment is a more recent phenomenon, mainly linked to the diffusion of the Internet. In 2005, the Brazilian ICT/ICTE industry reached a total turnover of some US\$15.5 billion—this included US\$5.7 billion for hardware, US\$7.4 billion for software and ICT services, and US\$2.4 for ICTE activities. Total employment is estimated at about 900,000. The software and IT services segment encompasses some 3,500 enterprises, including a dozen large payers. Foreign-developed applications still account for the bulk of sales, but domestic products are progressively gaining ground. The ICTE sector includes about 1,000 call centers, and a few hundred other BPO operations. They mostly serve the domestic market. Less than 10% of turnover is generated by overseas contracts, mostly with US clients. Sizeable agglomerations have emerged, such as the Sao Paulo/Campinas cluster, which combines hardware manufacturing and software development, and the Recife cluster, which specializes in ICT/ICTE services.

III.3 EMERGING PLAYERS

The Philippines

The importance of the Philippines' ICT/ICTE industry on a regional and global scale is rapidly growing. In fact, the country offers a unique business environment, combining cost-efficiency with a good quality infrastructure and, most notably, excellent linguistic capabilities. The Philippines are primarily a manufacturing base for large producers of hardware and components. In 2005, exports of semiconductors were around US\$15 billion. Gradually, the country has also become an important competitor in the field of outsourced ICT and ICTE services. In 2005, total turnover (excluding hardware) was in the order of US\$3.5–4 billion, while employment was about 200,000. The ICT/ICTE industry includes about 1,000 enterprises, including the following: (i) 300 ISP and value-added providers; (ii) 300 software developers; (iii) 100 call centers; (iv) 70 transcription services providers; (v) 60 BPO operations; (vi) 40 animation and 3D graphics studios; and (vii) 100 firms involved in the sale and installation of IT equipment and software. The vast majority of Filipino ICT/ICTE enterprises have fewer than 50 employees.

Argentina

In Argentina, the ICT/ICTE industry was severely hit by the financial crisis of 2001 and by the end of 'dot com' bubble, but it is now showing encouraging signs of recovery. At present, the industry includes some 700 companies. The majority are micro and small businesses, many of which have been recently established. The main lines of business are the distribution of IT equipment and the provision of 'basic' IT services, but software development and value-added services are gaining ground. In 2005, the overall turnover was around US\$2.5 billion, of which around US\$1.3 billion related to software development and ICT/ICTE activities. Sales are predominantly in the domestic market, where the devaluation triggered a major trend towards import substitution. However, recently there has been an increasing trend toward exports of ICT applications. The ICTE industry is also in a growing phase. It has been estimated that call centers have reached a total capacity of some 40,000 seats, and that total employment is 160,000–190,000.

Morocco

Morocco has a relatively small but lively ICT sector, comprised of about 200 *société de services d'ingénierie en informatique*. Most Moroccan ICT firms are involved in the provision of relatively basic services, such as customized software and web applications, but in certain segments they have reached a remarkable position and gained a good international reputation. This is especially true of payment solutions and ERP systems, where Moroccan companies have won important contracts in other francophone countries. Morocco also boasts a fast growing ICTE sector, including about 150 call centers and other BPO companies, which employ no less than 25,000 people. These include foreign as well as locally-owned firms, which serve the French and, to a lesser extent, Spanish markets. Connectivity services are provided by a few ISP and by a network of more than 10,000 cybercafés, which employ about 15,000–20,000 workers. In 2006, the Moroccan ICT/ICTE industry reached a total turnover of US\$700–900 million, with an employment in excess of 50,000.

Ukraine

Ukraine is becoming an increasingly important player in the ICT/ICTE industry. Over the past few years, Ukrainian ICT/ICTE firms have been able to acquire important clients in the international

outsourcing market for advanced R&D and software engineering, thanks to the availability of a large pool of highly qualified people. The manufacturing/ assembling of hardware is also expanding, but in this case, most sales are in the domestic market. Total turnover is in the order of US\$2 billion, of which some US\$500–600 million relate to IT outsourcing activities. It is estimated that employment is around 40,000–50,000. The industry includes an estimated 2,000 firms, with a number of foreign-owned operations, about 50 medium-sized locally-owned companies, and a plethora of small and micro enterprises. It is estimated that the number of ISP in operation is 250–400. The subsidiaries of the main telecom operators are in a dominant position. There are also about 3,000 small cyber cafés.

Vietnam

The core of Vietnam's ICT industry is represented by the manufacture and assembling of hardware, which accounts for an estimated 85% of the total ICT/ICTE turnover of US\$1.8–2.0 billion. This is due to the presence of manufacturing plants operated by multinational companies, such as *Intel*, *Fujitsu* and *Canon*. Software and ICT/ICTE services generate more modest revenues—about US\$250–300 million. Total employment is grossly estimated to be about 40,000–60,000, with the hardware industry accounting for most. The Vietnamese ICT/ICTE industry consists of about 1,400 enterprises. These include the following: (i) a few subsidiaries of foreign IT equipment manufacturers; (ii) a dozen medium-sized to large state-owned companies; and (iii) a large number of small and micro enterprises, whose activities range from simple 'sale & maintenance' to more sophisticated processes in the field of software development and IT services. The development of BPO services is constrained by linguistic barriers, and existing operations are limited to testing and transcription services. Internet access is provided by 15 ISP, but the share's lion is controlled by three state-owned operators.

Peru

In Peru, the ICT/ICTE industry is still in the early stages of development. The sector is dominated by small and micro enterprises, mostly established in the 2000s. The approximately 300 enterprises in operation are mainly active in the following activities: (i) the sale and maintenance of IT equipment and imported software; (ii) the development of customized software applications;

and (iii) the provision of fairly basic IT consulting services. There are also a handful of companies involved in the assembly of PC. Total turnover is around US\$1 billion, including about US\$50 million for locally developed software solutions, and US\$300 million for IT services. The level of employment in the ICT/ICTE sector is unknown, but it is unlikely to exceed the 10,000 benchmark.

III.4 MARGINAL PLAYERS

Senegal

Senegal's ICT/ICTE sector is very small and has little diversity. It includes about 50 software developers and IT service providers, a dozen call centers, and a handful of BPO service providers. In addition, there are an estimated 200 small retailers and installers of IT equipment. Connectivity services are provided by a couple of main ISP and by about 400 cybercafés, mainly based in Dakar. Total turnover is not known, but it is unlikely to exceed US\$150–200 million. Total employment is probably in the order of 6,000–8,000, of which 2,000 work in the call centers sub-sector. This appears to be the most promising line of business in the near future, thanks to the availability of good international broadband connections and of a well-educated, French-speaking, and cost-effective workforce.

Kenya

Kenya's ICT/ICTE sector is extremely modest. It consists mostly of vendors and installers of hardware and software, with only a few firms involved in the provision of basic IT services (web designing, development of customized solutions, and translation of standard packages in Swahili). The development of call centers and other BPO activities is hampered by the lack of adequate infrastructure. Recently, a handful of assembling operations were established, following the removal of import duties on components. The Kenyan ICT/ICTE industry includes about 300 small and micro enterprises, of which less than 50 are involved in software development and IT services. There are also a handful of BPO providers and call centers. Connectivity services are provided by 16 ISP and about 500 cybercafés. Total turnover is unknown, but probably in the range of US\$150–200 million. Employment is in the order of 5,000.



IV ISSUES IN SME FINANCING

IV.1 INTRODUCTION

The development literature focuses a good deal of attention on issues faced by SME in accessing finance. Traditionally, the focus is on obstacles created by commercial banks or equity funds, or on imperfections in the broader institutional environment. However, SME also make decisions about financing and display attitudes that have an important bearing on financing decisions. Therefore, constraints may also appear on the ‘demand side’ of the financing marketplace.

Section IV.2 provides a brief overview of obstacles faced by SME in general. Section IV.3 provides a brief overview of obstacles faced by ICT/ICTE small businesses. Section IV.4 briefly discusses ‘demand side’ constraints.

IV.2 OBSTACLES TO SME FINANCING

The economics literature on enterprise financing has identified three main obstacles that may prevent SME from obtaining adequate financing⁴. These obstacles are as follows:

- The existence of marked *informational asymmetries* between small businesses and lenders, or outside investors;
- The intrinsic *higher risk* associated with small-scale activities;
- The existence of sizeable *transactions costs* in handling SME financing.

A fourth problem very often cited in the literature (and loudly lamented by small entrepreneurs) is the *lack of collateral* that typically characterizes SME.

In developing countries, these problems are often exacerbated by *institutional factors*. These aspects are briefly dealt with below.

Informational Asymmetries

Informational asymmetries are always present in enterprise financing transactions. Entrepreneurs typically possess privileged information on their businesses that cannot be easily accessed—or cannot be accessed at all—by prospective lenders or outside investors. This leads to two problems. First, the lender/investor may not be able to differentiate adequately between ‘high quality’ and ‘low quality’ companies and projects. In that case, price variables (i.e. interest rates) may not work well as a screening device, because high interests may lead to an excessively risky portfolio (the ‘adverse selection’ problem). Second, once the lenders/investors have supplied the funding, they may not be able to assess whether the enterprise is utilizing the funds in an appropriate way (the ‘moral hazard’ problem). To mitigate these problems, bankers and outside investors may adopt precautionary measures, such as requiring that financing be collateralized.

Ultimately, they may simply turn down the request for financing (‘credit rationing’). Informational asymmetries tend to pose more severe problems for SME, than for larger business. The information that SME can realistically provide to external financiers (in the form of financial accounts, business plans, feasibility studies, etc.) often lacks detail and rigor. This problem is often aggravated by the low level of education of small entrepreneurs, who may not be in the position to adequately articulate their case. This problem is particularly acute in developing countries. The information supplied to bankers and outside investors by family-owned SME is often not

⁴ The literature on obstacles to SME financing is enormous. The theme was extensively discussed at two conferences organized by the World Bank, namely: the *Conference on Small and Medium Enterprises* held in October 2004 and the *Conference of Access to Finance* held in March 2007. The analysis presented in this section owes much to the ideas put forward in two papers presented at the 2004 conference, namely: Berger Allen and Greg Udell, *A More Complete Conceptual Framework for SME Financing*, and Cull Robert, Lance Davis, Naomi Lamoreaux, and J. L. Rosenthal, *Historical Financing of SMEs*. These papers (as well as the other papers presented at the two conferences) can be accessed through the Finance research program website (<http://econ.worldbank.org/>).

fully accurate and realistic, and opaque behavior may prevail. Under these conditions, outside financiers tend to adopt a very cautious attitude towards SME, and either reduce the amount of financing sought or refuse it altogether.

Risk Profile

Another approach ascribes the difficulties faced by SME in accessing finance to their higher risk profile. Suppliers of external funds regard SME as riskier enterprises for a number of reasons. First, SME face a more uncertain competitive environment than larger companies—they experience more variable rates of return and higher rates of failure. Second, SME are comparatively less equipped in terms of both human and capital resources to withstand economic adversities. Third, there is the problem of inadequate accounting systems, which undermines the accessibility and reliability of information concerning profitability and repayment capacity. In developing countries, there is the added problem of a more volatile operating environment, which has a negative impact on the security of transactions. There is a greater risk that lenders/investors will not get paid, or that assets will not be properly registered.

Transaction Costs

Irrespective of risk profile considerations, the handling of SME financing is an expensive business. The cost of appraising a loan application—or of conducting a due diligence exercise in view of a possible equity investment—is largely independent from the size of the financing under consideration. For all practical purposes, the following costs are fixed: (i) administrative costs; (ii) legal fees; and (iii) costs related to the acquisition of information, such as the purchase of a credit profile from a specialized agency. In the case of smaller loans or investments, it is more difficult to recoup these costs. Similar considerations apply to the costs that outside financiers must incur after disbursement, when conducting field inspections, or attending board meetings. Again, the problem is more severe in developing countries for the following reasons: (i) the lack of adequate management information systems in financial institutions; (ii) the undeveloped state of the economic information industry; and (iii) the poor state of certain public services, such as the registration of property titles and collaterals. To some extent, the problem can be solved by raising the cost of financing through a higher interest rate or closing fee. This is indeed the

approach adopted by many micro lending schemes, but it is possible only up to a certain point.

Lack of Collateral

In the case of debt financing, lenders typically request collateral in order to mitigate the risks associated with the ‘moral hazard’. The lack of collateral is probably the most widely cited obstacle encountered by SME in accessing finance. The amount of collateral required in relation to the loan size is a measure frequently adopted to empirically assess the severity of the financing gap. In some cases, the enterprise may be unable to provide sufficient collateral because it is too new—because it is not firmly enough established. That problem is closely related to the ‘higher risk’ argument presented above. In some cases, the lender may deem the collateral insufficient in view of the size of the loan requested. In other words, the proposed expansion project may be too large in comparison with the current size of the firm. Again, this is an issue related to the ‘higher risk’ argument presented above. In other cases, the collateral may be insufficient simply because the managers-owners tend to siphon off resources from the company for personal or other purposes. Again, this is closely related to the risk profile and the moral hazard issues. Lack of collateral can be viewed more as a symptom than as a direct cause of the difficult relations between SME and providers of finance. Whatever the sequence of causes and effects, it is widely acknowledged that in developing countries the issue of collateral is comparatively much more severe. The following section examines how the undeveloped state of institutional and legal frameworks, prevents the possibility of pledging the owned assets as collaterals.

Institutional and Legal Factors

In the case of many developing countries, the above-mentioned obstacles to SME financing are exacerbated by institutional and legal factors.

First, many developing countries still have highly **concentrated and uncompetitive banking sectors**. This is often the result of restrictive government regulations. This reinforces the tendency to adopt very conservative lending policies or to charge high interest rates. If banks can thrive with a stable pool of well-established clients, they have no real incentive to improve the range of financial products—and, in particular, no incentive to go down market, to meet the needs of small businesses. The

same is true if banks can make hefty profits simply by buying government debt—as is often the case in Latin American countries—which results in the ‘crowding out’ of small-scale lending.

Second, *insufficiently developed legal systems* effectively prevent the development of certain financing instruments, including the use of collateral as a risk-mitigating element. For instance, legal provisions regarding security interests (how the collateral is protected, how the collateral priority is determined, etc.) are of crucial importance in determining the efficacy of collaterals. Likewise, if company laws offer only limited protection to minority shareholders, the development of venture capital and angel financing is inevitably negatively affected. These problems were particularly severe at the beginning of the transition period in former socialist countries, when even the memories of certain fundamental market institutions had disappeared.

Third, even when adequate legislation is available, there are often *problems with enforcement*. Today, transitional and developing economies often have cadastres and registers of movable assets. Nevertheless, their functioning is often less than ideal. Records are frequently missing or misplaced. There are lengthy procedures for filing mortgages and pledges, and for ascertaining the status of certain assets. There are often cases of corruption among personnel.

Fourth, the *“information infrastructure” is still largely undeveloped*. There is a lack of credit bureaus and other mechanisms for collecting and exchanging information on payment performance. This inevitably exacerbates the informational asymmetries between enterprises and lenders/investors. While some of the above institutional constraints apply to all enterprises, it is clear that small businesses are likely to suffer disproportionately from their presence.

IV.3 SPECIFIC OBSTACLES AFFECTING SME IN THE ICT/ICTE INDUSTRY

In the ICT/ICTE sector, industry specific aspects often limit access to finance for SME⁵.

Informational Asymmetries and Transaction Costs

In the case of ICT activities—somewhat less so for certain ICTE businesses—the informational asymmetries that characterize any lending or investment decision are magnified by the high-tech nature of the business. This is particularly true of commercial banks, which can rarely count on loan officers with substantial experience in the variegated aspects of ICT. This inevitably increases transaction costs, because the economics of high technology firms are more difficult to evaluate than the fundamentals of ‘brick and mortar’ businesses. Similar considerations apply to equity investments. Venture capitalists are, by definition, better equipped than loan officers to understand and capture the upside of a variety of different businesses. Still, the due diligence process of ICT/ICTE deals may require the deployment of specialized expertise that is not normally available to generalist venture capital funds.

Risk Profile

ICT/ICTE are widely perceived as high risk activities, characterized by a skewed distribution of returns and by a high probability of failure. This adds to the generally unfavorable risk profile of SME in general, resulting in a peculiarly unattractive picture for more conservative financiers. In reality, only a minority of ICT businesses are involved in the development of new products and in the use of new processes in untested markets, while many firms perform activities that are not riskier than many brick and mortar businesses. This is especially the case of simple IT services (e.g. the customization of software) and of several ICTE activities (e.g. the performance of remote accounting and transcription services). However, many providers of finance are largely unfamiliar with the fundamentals of the ICT/ICTE business, and therefore are often unable to differentiate between different categories of risk.

The Issue of Collateral

In the case of ICT/ICTE, the issue of collateral is made more severe by the intangible nature of innovation activities and of assets generated through

⁵ A recent review of issues related to the financing of SME in the ICT/ICTE industry is provided in OECD, *Financing Innovative SMEs in A Global Economy*, Paris, 2004. Useful elements are also presented in the already mentioned OECD study on financing gap (see above).

such innovation. Indeed, not only are innovation-related assets difficult to value in monetary terms, but they also have little salvage value in the event of commercial failure. Therefore, innovation activities have limited collateral value in obtaining a loan. However, the severity of the problem obviously depends upon the specifics of different lines of business. Firms involved in software development and IT consulting are in a comparatively more difficult position, whereas companies working on contract for foreign firms (as is often the case for firms in the BPO segment), may rely on high-grade accounts receivable as collateral. This may facilitate access to various forms of trade finance, such as factoring and forfeiting.

Institutional Factors

The presence of institutional and legal obstacles that have a special bearing for ICT/ICTE activities compound the fundamental problems examined above. Two of the largest of these obstacles are as follows:

- Initial public offerings (IPO) are by far the preferred exit mechanism for venture capitalists. However, in most developing countries stock markets are still undeveloped and thinly traded while SME-oriented stock markets of the NASDAQ variety are largely non-existent. Such a limitation in exit mechanisms inevitably has a negative impact on venture capital operations;
- In several countries, taxation is skewed in favor of debt financing. This results in a powerful brake on the emergence of business angel activities, and on the fundraising capabilities of venture capitalists. In some developed economies (e.g. the UK), tax legislation is formulated to encourage the involvement of wealthy individuals in high risk investment activities, but similar schemes have been adopted by only a handful of emerging and developing countries.

IV.4 DEMAND-SIDE CONSIDERATIONS

The behavior of financial institutions is not the only reason that SME have problems accessing financing. Constraints on the 'demand side' also have an impact. Indeed, while SME advocates loudly lament the inaccessibility of external finance, bankers and

venture capitalists often decry the shortage of 'bankable' or 'investable' firms. In this connection, the following three factors play a significant role:

- The poor quality of projects submitted for financing;
- The inability of SME to make the best possible use of available sources of funding;
- The negative attitude displayed by SME toward equity financing.

These aspects are briefly analyzed in the following section.

Poor Quality of Projects

One 'demand side' constraint has to do with the quality of projects submitted for financing, which is often well below minimum standards. This also applies to the ICT/ICTE industry, where more than a few business ideas do not meet the basic standards for receiving any serious consideration by financiers. Needless to say, the poor quality of projects is frequently invoked as an excuse by conservative bankers, but the problem is often acknowledged also by 'independent parties', such as members of the scientific community. Indeed, as it will be shown later in this Report, in certain countries the pipeline of potentially viable projects is extremely limited, at least in the more 'advanced' segments, such as software development and IT services. In part, the issue of the quality of projects is a problem of perception.

Inability to Exploit Existing Opportunities

A second constraint is that promoters are often unable to make the best use of available opportunities, irrespective of the intrinsic quality of the projects. This relates not only to their limited ability to convincingly articulate business ideas, but also to the unwillingness of many small entrepreneurs to 'waste time' in dealing with financial institutions. In this respect, the ICT/ICTE industry is not much better than more traditional sectors, despite the higher than average level of education of entrepreneurs. Certainly, there are examples of promoters who have been able to cultivate a strong relationship with venture capitalists or business angels, and who have been able to gradually build a relationship of trust and familiarity that could compensate for other factors. However, in many cases, high tech promot-

ers tend to concentrate exclusively on technical aspects and are not inclined to invest time in creating financing opportunities. Even in the case of well-established businesses, there are indications that knowledge of financial instruments is limited⁶. Business associations and incubators can sometimes help in overcoming this attitude, but so far, this has not always been the case.

Negative Attitude towards Outside Investors

A third problem has to do specifically with equity financing and relates to the unwillingness of enterprises to relinquish control over the company to outsiders. This attitude is referred to as ‘control aversion’ in the literature. It is quite widespread among SME, and the ICT/ICTE industry is no exception⁷. The problem is found in several countries. That includes countries with a more advanced ICT industry and a well-developed financial sector, such as India, where references to the ‘51% syndrome’ were quite common in conversations with industry experts. Somewhat at odds with conventional wisdom, there are indications that control aversion may be more widespread among firms at

the very early stages of development (“those believing that they will become another Bill Gates”, as one of our interlocutors put it), than among more established firms (“those who have already faced the reality of business life”). In the Philippines, focus groups were run with enterprises at different stages of development. The more established companies displayed great interest in accessing equity financing, whereas promoters of initiatives at the seed stage—many of which were still hosted in a business incubator—proved much less enthusiast, if not outright negative. This aspect has non-negligible implications in terms of the financing gap at the various stages of development.

⁶ For instance, during field work in Morocco, we came across a fairly successful company active in the development of payment solutions. Despite the fact that the company had already been operating in several export markets (including some risky ones), the management was totally unaware of the possibility of protecting their export sales through export credit insurance. Even the recourse to letters of credit appeared to be limited.

⁷ An early treatment of the ‘aversion control’ issue is found in Cressy R. and Olofsson C., “European SME Financing: An Overview”, *Small Business Economics*, Volume 9, 1997. A more recent empirical study is Berggren B., Olofsson C. and Silver L., “Control Aversion and the Search for External Financing in Swedish SMEs”, *Small Business Economics*, Volume 15, 2000.



V. FINANCING OF ICT/ICTE SME: THE DEMAND SIDE

V.1 INTRODUCTION

The financing needs voiced by small businesses in the ICT/ICTE industry reflect: (i) the diverse nature of the sector; (ii) the different cost conditions in the various countries analyzed; and (iii) the different stages of development achieved by the operators. These range from recently established micro-enterprises still engaged in the development of their products, to more established operators that have already gone through a couple of expansion phases. The rationales of these financing needs range from the funding of initial R&D expenses, to the building-up of working capital, to the establishment of foreign branches to penetrate new markets. The following sections provide a summary of the financing needs identified in various segments of the ICT/ICTE industry.

V.2 SOFTWARE DEVELOPMENT AND IT SERVICES

This segment of the industry is quite diversified. It includes various types of products (business applications, 'infrastructure' software, embedded software, etc.), as well as different services (e.g. software development, customization of IT solutions, IT consultancy, web design, e-commerce, etc.). In turn, this diversity translates into significantly different financing needs. The line of business requiring the smallest investment is the provision of *web-based services*, such as the design of internet pages, the setting up of e-commerce portals, and the development of basic e-contents.

At the seed level, these businesses rarely need financing in excess of US\$50,000. The *development of business applications*, from insurance brokerage to on-line gaming, normally requires higher initial investments. The higher investments are due to the necessary R&D and, sometimes, to the need to purchase licenses (i.e. when the products are developed on specific systems). Initial investments range from US\$30,000 to US\$200,000. Financing requirements may easily double in the case of enterprises dealing with *embedded software and 3D graphic animation*. The licenses for the use of patented applications are so expensive that companies often envisage forms of joint purchase, in order to share the costs. The *provision of IT services* is an extremely diversified line of business. It ranges from the provision of value-added service through SMS in the domestic market (market information for traders), to complex operations providing remote PC assistance to international customers. Investment needs vary accordingly, ranging from US\$100,000 for simpler domestic operators, to US\$1–3 million for operations with a strong international orientation.

V.3 INTERNET SERVICES

Over the past five years, the ISP sector has witnessed significant changes. In several countries, subsidiaries of telecom companies now largely dominate the market. Many small players established in the wake of the initial 'telecom liberalization' have been forced to merge or close down. Those who have managed to survive, are now striving to diversify their activities, mostly through the introduction of new value-added services. This requires additional investments in infrastructure, such as broadband, wireless technologies, and exchange points, and also requires the funding of e-contents and premium services. As a result, financing requirements have increased considerably, ranging from US\$200,000–300,000 for small operations to several million for large ISP. In the future, the convergence among internet, telecom and media is expected to increase the minimum optimal size of ISP operations, which

BOX V.1 Examples of Financing Needs in Software Development and IT Services

Willnet (Morocco): Willnet is a small firm that is active in the development of web applications based on open source software. It has already been successful in designing an ERP system, and it is now planning to invest US\$100,000 to develop a new product.

Emart Business Solution (Kenya): Emart Business Solutions is a startup active in web-design and e-commerce. Currently based in an *infoDev*-supported incubator, the firm is working at the establishment of a large e-commerce portal, and is looking for financing at about US\$60,000.

PeaceSoft Solutions Corp. (Vietnam): PeaceSoft Solutions Corp. started as a software developer, but later went into internet-based services. The company expanded rapidly, and is currently managing one of the largest online auction sites. In order to secure further growth, the company recently secured a multi-staged VC investment for a total amount of about US\$3 million.

VNHCN (Vietnam): VNHCN started as a hosting network company, but later turned to e-security and anti-intrusion systems. The company has already gone through the initial development phase, and is now considering expanding overseas, mainly in Japan and Singapore. To support this move, VNHCN is trying to raise about US\$1–2 million.

Manobi (Senegal): Manobi is a value-added service provider that pioneered the provision of SMS-based information for farmers and fishermen. Manobi is currently leveraging on its experience in e-marketplace services to develop new opportunities. This would require a minimum investment of US\$100,000.

Gridlogics (India): Gridlogics is a software house specializing in grid computing-based application. Due to its proprietary technology, the firm has already had significant success, and is now planning to expand the commercialization. It recently received US\$600,000 from IndiaCo, a venture capital firm active in early stage investments.

iYogi (India): iYogi is a provider of 24/7 remote computer support services. It relies on a proprietary technology. The operation is relatively capital intensive, but the market potential is substantial. As a result, iYogi managed to secure a US\$3 million investment from a venture capitalist to support expansion in the US market.

Core Security (Argentina): Core Security is a software house that specializes in IT security. It was established in the late 1990s, with an initial capital of about US\$100,000. The company went through two subsequent rounds of financing: the first raised US\$700,000 from a business angel; the second raised “a few million” from a venture capital fund. Core Security is well established in the US market, due to these investments.

Jakarta (Argentina): Jakarta is a software engineering firm that specializes in ERP systems, especially logistics and supply chain management. Established in 2002, Jakarta currently posts a turnover of about US\$500,000. It is seeking an investment of US\$1.5 million to enlarge its commercial network.

LOLIMSA e-Health (Peru): LOLIMSA is a multi-service company that specializes in applications for the management of health institutions and the pharmaceutical industry. Established in 1995, LOLIMSA has progressively managed to expand its presence across Latin America. It required an investment of about US\$1 million.

Symphony Consulting (Philippines): This is a startup that is hosted by an *infoDev*-supported incubator. It is active in the design, programming, and testing of an embedded system for large semiconductor manufacturers. At this stage, financing needs for the acquisition of firmware are around US\$50,000.

Logis (Ukraine): Logis is a small software developer, with solid experience in healthcare systems, entertainment, and application re-engineering. The firm is currently looking to further broaden its activities, and is seeking financing of US\$200,000–300,000.

would cause a further increase in investment costs. Countries in which PC penetration is low mostly provide access to the Internet through Internet points and cybercafés. The investment costs—for the setting up of premises and purchase of workstations and software—are of a completely different order of magnitude, usually ranging between US\$1,500 and 3,000 per seat.

V.4 BUSINESS PROCESS OUTSOURCING AND OTHER ICTE ACTIVITIES

In developing countries, *business process outsourcing (BPO)* operations are largely the result of off-shoring from the US and Europe. BPO activities include the following four main lines of business: (i) call centers; (ii) back office operations; (iii) testing and R&D services; and (iv) transcription services. The sector sees the involvement of

BOX V.2 Examples of Financing Needs in Internet Services

Cyber Café Maroc (Morocco): Cyber Café Maroc is a small family-run business that offers internet access services (six seats) and the retail sale of pc spare parts and consumables. The owner is considering an investment not exceeding US\$10,000, to add phone services and improve the quality of the internet connection.

Easy Surf (Kenya): Easy Surf operates a small network of cybercafés, with four facilities in Nairobi and a few more to open soon in Mombasa. The first facility required an investment of some US\$80,000. It was financed through a bank loan that was secured on the basis of the owner's personal properties.

ARC Informatique (Senegal): Established in the mid 1990s, ARC Informatique is Senegal's second largest ISP. It is active in the sale and maintenance of IT equipment and in the provision of IT services. It is presently considering venturing into wireless technology, which would require a staged investment of US\$1–3 million over a 3–4 year period.

ISM (Brazil): ISM is an ISP that offers fiber-optic connection and high-end services. To support its further expansion, the company recently received a multi-stage financing from a national venture capital fund for a total amount of about US\$2.0 million.

several large operators—including both subsidiaries of foreign companies and domestic players—along with small domestic firms. Large operations prevail in the customer care and payment services segments. Smaller, 'third-party' vendors are common in the transcription services and other back-office operations.

Call centers require relatively high initial investments. In the Philippines, the investment per seat ranges from US\$4,000–6,000. The costs appear to be higher in Morocco and India. For an initial configuration of at least 50 seats, the average investment required to start a call center can be in the range of US\$200,000–400,000. At the opposite

end of the spectrum, transcription services are the segment with the lowest initial capital requirements. The average number of seats is smaller than in the case of call centers, and personnel training costs are generally lower. In the Philippines, where this industry generates more than US\$100 million per year, the cost of setting up a transcription services facility with 30 seats is US\$50,000–70,000.

Outsourcing contracts normally grant a constant cash-flow, and therefore reduce the need for additional financing for working capital. There are a number of *other ICTE activities* that involve some type of customer services enabled with ICT systems, such as online rental services and online travel agents. These operations are mostly found in larger

BOX V.3 Examples of Financing Needs in ICTE

Maroc Traitement de Transaction (Morocco): MMT is a provider of e-transaction solutions. It currently operates a vast network of payment services points (e.g. for the charging of cell phones), and is currently planning to replicate the model in other countries such as Senegal. An initial investment of US\$500,000 is required.

Call Me (Senegal): Call Me is a contact center that was established in 2002. It is a regional player—active in several West African countries. The company is considering opening new branches in Benin and Burkina Faso, which would require an additional US\$200,000 investment over three years.

Astra (Philippines): Astra is a BPO firm that mainly works for Japanese clients. Founded with an initial capital of US\$90,000, Astra is currently planning an expansion into new areas, and this would require an additional investment of US\$100–150,000, partly for technical certification.

DH&C (Brazil): Founded in 2000, DH&C is a BPO provider with a staff of 70 that operates in both domestic and international markets. The initial investment of around US\$1 million, was financed by REIF, a local semi-public venture capital fund.

MakeMyTrip (India): MakeMyTrip is a provider of online travel services. Established in 2000 with an initial capital of US\$1 million, in just six years the company reached a turnover of about US\$130 million. It has served one million customers, mainly in the US market. It was supported by two subsequent rounds of venture capital investments. In December 2006, MakeMyTrip raised US\$13 million to further upgrade its infrastructure and technology base.

BOX V.4 Examples of Financing Needs in the Assembly and Sale of Hardware & Software

FirstMile Telekom (Morocco): First Mile Telekom is a supplier of wireless backbone and devices for last mile connectivity. It is currently hosted by an *infoDev*-supported business incubator. Established in 2005, the company has already secured some respectable clients, but an expansion in production capacity and efforts in product development are required. The expected investment over a two-year period is US\$150,000–200,000.

Amitelo Afrique (Senegal): Amitelo Afrique is an affiliate of a Swiss telecommunications corporation that is mainly involved in the wholesale sale of data transmission equipments and in network building services. Due to the poor payment terms prevailing in the Senegalese market, the company is facing a shortage of working capital, and is currently looking for a financing of US\$200,000.

and more advanced countries, such as India. The scale of investment requirements varies. In the case of companies depending upon the technology and the market orientation, the required investment is generally several million US dollars. Enterprises that target the US market may receive significant VC investment from their inception.

V.5 ASSEMBLY AND SALE OF HARDWARE & SOFTWARE

The *assembly of hardware* is typically the preserve of large companies. For instance, the subsidiaries of *Toshiba* and *Canon* generate more than 90% of Vietnam's US\$660 millions worth of exports of PC and computer peripherals. In the Philippines, a handful of major international players—*Intel*, *Philips*, *Acer*, *Fujitsu*, *Amkor*, *Cypress*, etc.—dominate the sizeable semiconductor industry. The few SME active in this line of business mainly act as subcontractors of larger entities, or produce highly specialized items. Their investment needs vary, but start-up capital is normally below US\$500,000. The *distribution, installation and maintenance of IT equipment and off-the-shelf software* is also largely dominated by big companies, sometimes controlled by sizeable domestic groups. At the retail level, financing needs of shops selling IT equipment and software do not differ by more than a few thousand dollars from those of other traders, and mainly relate to working capital. The only exception is dealers of specialized technical equipment, such as wireless technology and network infrastructures. They normally combine the sale of products with specialized services such as consultancy, network design, and system deployment. In these cases, working capital requirements are higher.

VI. FINANCING OF ICT/ICTE FIRMS: THE SUPPLY SIDE

VI.1 INTRODUCTION

There is a wide diversity in the approaches taken by the various countries surveyed. This is reflected in the structure of their financial systems as well as in the attitude displayed by financial institutions towards SME and the ICT/ICTE industry. In some countries, the reforms undertaken over the last two decades have led to the emergence of sophisticated financial systems wherein financial operators are displaying an increasingly positive attitude towards small firms, including those active in innovative sectors. In other countries, a much more conservative approach still prevails. In several countries, government authorities and IFI/donors actively support efforts to facilitate access to financing, through the establishment of dedicated structures and the development of financial products specifically targeted at SME. Section VI reviews developments in the financial sectors of the ten surveyed countries. Section VI.2 deals with equity financing schemes. Section VI.3 analyzes quasi equity instruments. Section VI.4 reviews developments in debt financing. Section VI.5 provides an overview of relevant IFI/donors schemes.

VI.2 EQUITY FINANCING

The availability of equity financing varies greatly across the countries surveyed. India boasts an extremely advanced venture capital industry, with dozens of funds in operation, including both domestic and international operators. Moreover, in addition to these private initiatives, there are a variety of publicly funded schemes. These are often targeted at innovative sectors, such as ICT and

biotechnology. On the other hand, in Sub-Saharan Africa and in some other countries such as Peru, venture capital is non-existent or in its infancy, and the few equity financing facilities in operation are mostly the result of IFI/donor or government sponsored initiatives. The attitude toward the ICT/ICTE sector, and especially toward small firms in the industry, varies considerably depending upon the nature of the providers of equity finance. There are four main typologies: (i) generalist venture capital funds; (ii) development oriented funds; (iii) high tech funds; and (iv) angel investors.

Generalist Funds

Generalist funds tend to have diversified portfolios, but in some cases, they have invested a significant share of resources in ICT/ICTE companies. In India, ICT deals figure prominently in the portfolio of generalist funds. In Morocco, the ICT/ICTE sector accounts for one quarter to one fifth of all the equity deals finalized over the past decade. However, generalist funds normally do not invest in early stage deals, and do not consider investments below US\$1.5 million, which is well above what is required by the small ICT companies. One of the main reasons why generalist funds do not generally consider or finalize smaller deals, is because of sizeable 'transaction costs'. These are the expenses associated with the preparation, negotiation, and monitoring of small investments. This applies to SME in general, but the problem is even more acute for the ICT sector, because generalist funds sometimes do not have the in house expertise required for the assessment of investment projects.

Development-Oriented Funds

Development-oriented funds are a sub-category of generalist funds. They include operations run by specialized equity financing organizations, such as the US-based *Small Enterprises Assistance Funds* (SEAF), South African-based *Business Partners*, and UK-based *Aureos Capital*, a joint venture between CDC, NORFUND, and FMO. They are primarily funded by IFI or bilateral donors. In some cases they have been funded from private investors—banks, insurance companies and large corporations—that are interested in signaling their concern for develop-

BOX VI.1 *Development Fund Operators*

Small Enterprises Assistance Funds: Established in 1989, Small Enterprises Assistance Funds (SEAF) is a fund management operator specializing in SME financing. It is headquartered in the US. In 2006, SEAF was managing 14 funds with a total committed capital in excess of US\$320 million, plus another US\$40 million in inactive or closed funds. It was active in over 20 countries in Latin America, South Asia, East Asia, and Eastern Europe. At the end of 2006, SEAF had invested around US\$140 million in about 240 companies, with an average investment of around US\$400,000. While retaining an SME orientation, overtime SEAF has somewhat shifted the attention toward larger deals. The average size of investments has grown from US\$300,000 in earlier funds (now inactive), to US\$500,000 in more recent funds. There are some cases of much larger deals (e.g. about US\$7 million invested in a leading Indian electric components manufacturer). SEAF has a fully integrated approach, and the provision of financing is supplemented with extensive hands-on management support to investee companies. This is done through two dedicated resource centers, based in Washington and in The Netherlands.

Business Partners: Based in South Africa, Business Partners is the successor of the Small Business Development Corporation, which was a government-owned entity that originated in 1981. In its present form, Business Partners is a public-private financial institution. It is co-owned by Khula Enterprise Finance (controlled by the Department of Trade and Industry), some financial institutions such as Nedcor and Sanlam, and several private groups. Business Partners provides equity, quasi-equity and debt financing to South African SME, with a strong emphasis on businesses owned or promoted by previously disadvantaged individuals and female entrepreneurs. In FY 2006, the company approved some 630 deals that totaled about US\$120 million, with an average of less than US\$200,000. Financing is typically accompanied by extensive technical assistance ('mentoring') to client SME. A distinctive feature of Business Partners is the use of quasi-equity instruments in the form of shareholders loans (see below). Business Partners is active in international development through its fully-owned subsidiary Business Partners International, which is currently managing funds in Madagascar (US\$10 million) and Kenya (US\$15 million). The establishment of these funds was actively promoted by the IFC, which was later joined by the European Investment Bank, NORFUND, CDC, East African Development Bank, and some local investors. Both funds are intended to target investments in the US\$50,000–500,000 range.

Aureos: Aureos was established in 2001, as a joint venture between the Norwegian Investment Fund for Developing Countries (NORFUND) and CDC Capital for Development (CDC), which is the UK's development finance institution. In 2006, the capital was opened to Netherlands' FMO and to the management. Aureos operates through a network of some 15 equity funds active in Sub-Saharan Africa, Central America, and Asia. With the recent closing of some new funds in Africa and South East Asia, the total committed funds under management have approached US\$600 million. Funding is provided by various IFI, bilateral DFI, and some private investors. At establishment, Aureos was given a mandate in the area of SME financing—the company inherited a large part of CDC's small investments portfolio. However, over time the company has shown an increasing inclination towards larger deals. Around 30 transactions have been finalized since establishment, which have totaled an investment of more than US\$90 million, with an average of US\$3 million per deal.

ment. In some cases, there are additional funds for technical assistance. This facilitates the provision of extensive hands-on support to investee companies. The mandate of these funds invariably places a lot of emphasis on SME financing, but sometimes, as in the case of *Aureos*, they wind up mainly funding larger enterprises. The average size of deals finalized in recent years by *Aureos* is around US\$3 million, which is similar to generalist funds. By contrast, *SEAF* has an average of about US\$500,000 per deal, and *Business Partners* has an average of US\$100,000 per deal. Development-oriented funds have diversified portfolios, and ICT/ICTE deals account for perhaps one tenth of the total number of investments finalized. The salient features of the main operators are summarized in Box VI.1 above⁸.

High-Tech Funds

High-tech funds are found primarily in India and Brazil, with a few examples in Morocco, the Philippines, Ukraine and Vietnam. There are three types of high-tech funds:

- **Fully private initiatives**, such as India's *Infinity* and *ICICI*, Brazil's *FIR* and *Eccellera*, and the various branches of *Intel Capital* and *IDG Ventures*;
- **Government financed funds**, such as India's *National Venture Fund for Software and Information Technology* and its counterparts at the state level;
- **Mixed schemes**, such as the funds supported by Brazil's *Inovar* initiative.

In several cases, funds provided by IFI or bilateral donors supplement private and government funding. The situation in the surveyed countries is summarized in Box VI.2⁹.

In principle, the range of investments considered by high tech funds is very wide, and includes seed and

⁸ More details on the operations of development-oriented funds are provided in Annex B.

⁹ The salient features of a selection of high-tech funds are illustrated in more detail in Annex C.

BOX VI.2 High Tech Funds

India: India's venture capital industry boasts a number of funds specifically targeted at ICT/ICTE activities. The Software Fund was launched in 1997 by ICICI Bank with support from the World Bank. It was rapidly followed by many others including: (i) the Econet Fund, which is also managed by ICICI; (ii) the Information Technology Fund, which is managed by the venture capital arm of the Infrastructure Leasing & Financial Services—IL&FS; and (iii) the Infinity funds. The size of these funds ranges from as little as US\$2 million (the Information Technology Fund) to over US\$30 million (the Infinity II Fund). Funding comes from a variety of sources, including: (i) angel investors (especially in the case of Infinity funds); (ii) leading Indian groups, such as Laxmi Mittal group, Digital Century, and Tata; and (iii) international institutional investors, such as Sun America, AMP Life Limited, and Phoenix. India is also home to a number of government-led operations. The prototype of these public funds is the National Venture Fund for Software and Information Technology (NVFSIT). This is a US\$22 million facility, which was established in 1999 by the Small Industries Development Bank of India (SIDBI). It is active at the national level. The NVFSIT model was subsequently replicated at the local level. State authorities promoted the establishment of half dozen high tech funds, including: (i) the Karnataka Information Technology Venture Capital Fund; (ii) the Kerala Venture Capital Fund; and (iii) the Tamil Nadu Info-tech Fund. These "local" funds normally have a capital of US\$3–5 million, which is contributed to by local development finance institutions, and sometimes supplemented by SIDBI and institutional investors.

Brazil: The public sector plays an important role in Brazil. Three state-owned entities have been extremely active in supporting the development of the indigenous innovative enterprises (not necessarily ICT), through the establishment of a network of seed/venture capital funds. The three entities are: (i) the Financiadora de Estudos e Projetos (FINEP); (ii) the Serviço Brasileiro de Apoio às Micro e Pequenas Empresas (SEBRAE); and (iii) the Banco Nacional de Desenvolvimento Econômico e Social (BNDES). These funds are run by professional fund management companies, which are selected through a tender mechanism. At least 20% of the funding must come from private investors. Seven government-sponsored funds, with a capital ranging from US\$5–15 million, have already been set up. Four more are in the process of raising capital. Another tender procedure was launched at the beginning of 2007, and an additional half a dozen high-tech funds are expected to become operational in 2008. In Brazil, government-sponsored funds are complemented by some purely private initiatives, including: (i) e-Platform, which was established in 2000, with a capital of US\$4 million; and (ii) FIR Capital, which was established in 1998 and currently manages several funds with a total of about US\$50 million under management.

Other Countries: In the other countries surveyed, high-tech funds are much less common, and the amounts available are usually lower. In **Morocco**, the following two specialized funds have been in operation: (i) the US\$5 million Fonds Sindibad, which is a seed-financing fund that is now fully invested; and (ii) Upline Technologies fund, which was endowed with US\$5 million. Both funds see the participation of institutional investors along with some public institutions and IFI/donors. The **Philippines** are home to two fully private venture capital operations focusing primarily, though not exclusively, on the ICT/ICTE industry. These two operations are: (i) ICCP Ventures Partners; and (ii) Narra Venture Capital. A distinctive feature of these funds is their marked international character—in particular, their strong links to Silicon Valley venture capitalists. Only a minority of the some 25 deals finalized so far are located in the Philippines. In **Vietnam**, the only high-tech fund currently in operation is IDC Ventures Vietnam, a subsidiary of the IDG group. The fund became operational in 2005, and is currently in the initial investment phase, with half a dozen deals finalized. The **Ukraine**, is home to Techinvest, a US\$6 million fund that was established in 2004 by AVentures, a leading local distributor of PC and consumer electronics goods. In 2005, Techinvest became part of the network of Draper, Fisher and Juverston (DFJ), which is a leading player in early stage investments that has become increasingly active outside the US.

start-up financing. In practice, public and mixed funding schemes tend to concentrate on early-stage investments, while private funds tend to concentrate on later-stage and larger deals (i.e. above US\$2–3 million). The *Aavishkaar India Micro Venture Capital Fund* (AIMVCF) is a special case. It was established in 2002, with a capital of US\$1.5 million. AIMVCF is a 'micro equity' fund, focusing on start-ups and making investments in the US\$20,000–100,000 range. The tendency for private funds to stay away from early-stage investments is sometimes the result of bad experiences. This is especially the case in India, where venture capitalists suffered significant losses with deals in the US\$1–2 million in the late 1990s and early 2000s. However, this is changing as it becomes more and more clear that inadequate funding of early-stage projects may result in less future later-stage opportunities. According to a

Filipino venture capitalist, "we are wary of investing in early stages, but at the same time we are aware that unless a new generation of entrepreneurs emerges, we will not be able to invest in larger deals tomorrow". Private high tech funds appear increasingly interested in collaborating with governments and donors to devise ways of taking on smaller—and riskier—deals, while protecting against the down side. The Brazilian seed capital program managed by the *Financiadora de Estudos e Projetos* (FINEP) provides an example of this. FINEP guarantees to cover the initial investment of individual investors participating in seed capital funds if the funded program fails. The *Equity Ventures Program* (EVP) was launched in 2006 by the Philippines *Small Business Corporation*. EVP is a matching fund scheme, co-investing on a *pari passu* basis with private venture capital funds, for a

maximum amount of US\$360,000. The scheme has already been involved in two deals along with the fund *Enviro Ventures*, with a total investment of some US\$1 million.

Business Angels

Business angels (BAs) are an alternative to formal equity funds. The size of investments considered by business angels is more in line with the needs of SME, normally in the US\$100,000–250,000 range, but sometimes as low as US\$50,000. In addition, business angels are often able to actively support the management of investee companies, by combining the provision of financing with hands-on support. However, business angels tend to invest in sectors where they have gained a direct experience, and in the countries surveyed the number of angels familiar with the business models prevailing in the ICT industry is still relatively limited. Furthermore, while investments are made on an individual basis, a certain degree of institutionalization is necessary in order to facilitate the identification and appraisal of investment opportunity. Among the countries surveyed, well-developed networks of business angels are found only in India, and, to a more limited extent, Brazil, Argentina and the Philippines. An example is provided in Box VI.3¹⁰:

BOX VI.3 *India's Band of Angels*

The downturn of early 2000s had a particularly large impact on small-scale investors. The downturn caused them to significantly reduce their operations. Recently, BAs' activities have regained momentum partly due to the establishment in April 2006 of the Band of Angels (BoA). This is an umbrella organization that brings together entrepreneurs and high net worth individuals from India and overseas, with the aim of making joint investments in seed and early-stage deals. BoA members typically look for transactions in the US\$100,000 to 1 million range, but occasionally consider larger investments. The desired investment period is of 3 to 5 years, and exits may involve IPO, mergers or strategic sales. The BoA operates as a facilitator. Individual members decide how much they want to invest, on a purely personal basis. Interesting deals are proposed to members by the BoA Secretariat or by a member acting as a mentor. Those who are interested in going ahead with a given investment then form a sub-group, which makes its decision autonomously, and, if the decision is in the affirmative, finalizes the operation. Normally, within any sub-group, investments are made on a *pari passu* basis, but better conditions may be granted to those members that devote more time and effort to providing assistance to the investee enterprise. BoA was established in April 2006. At present, five deals have been finalized in the ICT/ICTE and media & entertainment sectors.

VI.3 QUASI-EQUITY FINANCING

Historically, the birth and development of venture capital has been closely intertwined with the emergence of the 'ICT economy'. This has led some observers to regard equity financing as the optimal form of financing for ICT/ICTE firms¹¹. However, such a generalization does not take into account the vast range of ICT/ICTE activities, especially in developing and emerging countries. Venture capital is certainly the preferred form of financing when ICT/ICTE activities have an important intellectual property element, and are therefore capable of generating a significant capital appreciation. In addition, this capital appreciation makes it possible to exit the investment through IPO or trade sales to strategic investors. The situation is much different in the case of simpler activities, such as web design, software customization, and Internet access provision, which constitute the bulk of the ICT/ICTE industry in many of the countries surveyed. For these companies, the potential for capital appreciation is limited, and the likelihood of exiting the investment through a stock exchange listing or a trade sale is often negligible. In these cases, other forms of risk capital—of the quasi equity variety—are much more appropriate.

Quasi-Equity Instruments

Quasi-equity is a broad category, encompassing a wide range of financial instruments, which share to a varying degree some features of equity and of debt financing. Precisely because of its 'hybrid' nature, quasi-equity is also called 'mezzanine finance'¹². There are four main types of quasi-equity tools. These are as follows:

- **Preferred shares.** These are shares that have preference over ordinary shares, including priority in receipt of dividends and upon

¹⁰ A more detailed analysis of business angels' activities in the countries surveyed is provided in Annex D.

¹¹ The superiority of equity for the financing of innovative enterprises is a recurrent theme in the literature. For example, this position is clearly expressed in OECD, *Financing Innovative SMEs in A Global Economy*, paper presented at the 2nd OECD Conference of Ministers responsible for SME, Istanbul, June 2004, and in Bank for International Settlements, *IT innovations and financing patterns: implications for the financial system*, Basle, February 2002.

¹² The word mezzanine comes from the Italian *mezzanino*, which is a low-ceilinged story between two main stories in a building, usually immediately above the ground floor.

liquidation and, sometimes, preferential voting rights;

- **Convertibles bonds.** These are financial securities yielding a fixed or variable interest, that can be converted into ordinary or preferred shares under certain circumstances, and according to pre-agreed terms;
- **Shareholder loans.** These are deeply subordinated debt instruments, repayable over a certain period of time and carrying a fixed and/or variable interest. Often, the variable interest element involves the payment of a ‘royalty’ expressed as a percentage of future revenues/cash flows (‘royalty loans’);
- **Unincorporated joint ventures.** These are revenue or profit-sharing contractual arrangements that are regulated in detail by commercial law. These ventures are often used in countries that follow the Roman-German legal tradition. An example of these laws in the Roman-German tradition is the French *association en participation*, and its Italian, Spanish and Portuguese equivalents.

A common feature of all quasi-equity tools is that the investors’ remuneration is entirely or at least largely ‘performance-related’, i.e. it depends upon the performance—in terms of revenue and/or profits—of the investee company. Preferred shares and convertibles involve a modification in the ownership structure of the investee company, with the dilution of original owners. Shareholder loans and unincorporated joint venture schemes are purely contractual arrangements, and leave the control of the company in the hands of its promoters. Preferred shares and convertibles are relatively complex instruments from a legal point of view, that require extensive due diligence. This is due to the fact that they impact on the ownership structure of the investee, in certain countries, filings in accordance with laws on securities are also required. Shareholder loans and unincorporated joint venture arrangements are much simpler, although in certain jurisdictions attention has to be paid to the issue of potential unlimited liability.

IPO and trade sales are the main exit routes for preferred shares and convertibles. Shareholder loans and investments in unincorporated joint ventures are reimbursed by the investee over a certain period of time. Preferred shares and other profit sharing schemes require a high degree of informational

symmetry between outside investors and managers, which in turn requires detailed financial reporting, and substantial involvement of auditors. Shareholder loans and other revenue sharing arrangements are ‘cash flow-based’, which normally requires a less intensive monitoring.

In the cases of shareholder loans and other ‘cash flow-based’ instruments, the interest (‘royalty’) paid to the investors is tax deductible for the investee company. This is not the case for the dividends paid to preferred shares and is also not always the case for the unincorporated profit sharing schemes¹³.

Clearly, the various quasi equity/mezzanine finance instruments are not equally suitable to all SME. Preferred shares and convertibles, which are closer to ‘pure’ equity, are more appropriate for companies with a significant growth potential. Shareholder loans and unincorporated joint ventures (especially of the revenue sharing variety) are more appropriate for firms involved in more standard activities¹⁴.

Operations

In developed countries, the use of quasi-equity instruments is quite common, and a number of dedicated mezzanine funds have been operating for several years. Most of these funds focus on large later-stage deals, and they tend to rely on preferred shares or convertibles. However, there are also examples of schemes targeted at small businesses, which use shareholder loans. For example, the French SME bank *Oseo* extends financing (up to €150,000) to innovative firms in the early stages of development, through a sort of shareholder loans program (*prêt participatif d’amorçage*). The British *Accelerator Fund*—which is managed by *Finance South East* and partly funded by the Department of

13 The tax treatment of profits that are distributed based on unincorporated joint venture agreements, varies across countries.

14 The role of various types of quasi-equity as a source of capital for SME in developing countries was recently discussed at a workshop organized by the German Marshall Fund (“Helping SMEs access capital in the developing world”), held in Paris in June 2007 (www.gmfus.org). Of particular interest are the presentations made by Tom Gibson (Smethink, *Financing Small and Medium Businesses in Developing Countries*) and Glenn Yago (Milken Institute, *Financing the Missing Middle: Transatlantic Innovations in Affordable Capital*). The use of quasi-equity instruments for the financing of SME in developing countries was also a major topic of the “Meso-finance seminar” organized by the Dutch National Committee for International Cooperation and Sustainable Development (NCDO) in late 2006 (www.bidnetwork.org). See Thierry Sanders and Carolien Wegener, *Meso-finance: filling the financial service gap for small businesses in developing countries*, NCDO, September 2006.

Trade and Industry—uses shareholder loans with a royalty element. It provides financing up to £ 100,000. Similar schemes, typically implemented by public or quasi-public financial institutions, are found in other EU countries. These include: (i) *Namur Invest* in Belgium; and (ii) *Société Nationale de Crédit et d'Investissement* in Luxembourg. In the US, a number of specialized private operators, such as *Capital Royalty* and *Licent Capital*, use royalty loans and local development funds. Two examples of local development funds are: (i) the *Western Massachusetts Enterprise Fund*; and (ii) the *New Hampshire Community Loan Fund*.

In developing countries, only few operators focus on quasi-equity instruments as a way to reach out smaller enterprises. Possibly the largest operator in this field is the *Business Partners* of South Africa, which makes extensive use of: (i) shareholder loans of the 'royalty' variety for the financing of medium-term investments; and (ii) profit-sharing arrangements for the short-term financing of specific operations, such as the completion of a certain contract. *Business Partners* departs from the classical venture capital model by targeting individually-owned or family-owned small businesses rather than enterprises with a potential for 'capital appreciation'. *Business Partners* refer to these as 'lifestyle businesses', i.e. businesses that can provide a decent lifestyle to their owners.

In recent years, a number of NGOs have advocated the use of quasi-equity instruments for the financing of SME. These NGOs have launched several pilot initiatives, especially in the field of energy efficiency and renewable energy. One example of these NGOs is the US-based *E+Co*, which focuses on clean energy and energy efficiency. In 2005, *E+Co* launched the *Central American Renewable Energy and Cleaner Production Facility* (CAREC). This is a US\$15 million mezzanine fund that provides investment financing through subordinated debt, convertibles, preferred shares and other quasi-equity instruments. CAREC's capital was provided by the Multilateral Investment Fund, the *Banco Centroamericano de Integración Económica* (BCIE), some bilateral development finance institutions (FINNFUND, BIO and FMO), and *Triodos Bank*.

Of the countries surveyed, India is the one where quasi-equity instruments—mostly convertibles—are most commonly used. This is particularly true of the

high-tech funds promoted by state authorities, which are also the operators that traditionally focus on smaller deals. In Morocco, a variant of the profit-sharing mechanism (the *comptes courants d'associé*) has been used by some venture capital funds investing in ICT firms—but only in conjunction with equity, and primarily as a way to minimize the downside. A few quasi-equity deals have also been reported in Vietnam, the Philippines, Brazil and Argentina. Although detailed information is not available, these transactions seem to refer to sizeable investments, and involve convertibles or combinations of equity and subordinated debt.

VI.4 DEBT FINANCING

Many observers regard debt financing as structurally inadequate for ICT/ICTE firms. Those observers argue that the need to make regular repayments places an excessive burden on companies that typically experience highly volatile cash flows. Nonetheless, in many countries, the equity financing industry is still not sufficiently developed. Therefore, lending remains the only source of formal external financing available to the bulk of enterprises. The following section reviews the attitude displayed by commercial banks, and the features of special programs launched by governments and IFI/donors.

Commercial Banks

In most of the surveyed countries, the attitude displayed by commercial banks towards SME is quite conservative. However, since the early 2000s, ***commercial banks' efforts to serve the SME segment have increased.*** Broadly speaking, three different strategies can be identified.

First, in response to the particular financing needs of SME, a number of banks have broadened the range of their products and adopted more flexible operating modalities. Two examples of this are: (i) the Philippines' *Planters Development Bank*, which expanded the range of its 'SME biz loans' with the softening of collateral requirements; and (ii) Senegal's *Ecobank*, which recently launched a series of products specifically targeted at SME. These included start-ups, and both investment and working capital loans in the US\$50,000–500,000 range.

Second, in some countries, commercial banks have started collaborating with micro-finance institutions (MFI), to whom retail banking operations are being outsourced. This is especially true in India, where leading commercial banks such as *ICICI Bank*, *State Bank of India* and *Canara Bank* have contributed to the capitalization of MFI and extended re-financing facilities.

Third, in certain countries, banks have teamed up with business associations or NGOs, to launch special programs aimed at new entrepreneurs. For instance, the two leading commercial banks in Morocco, *Attijariwafa bank* and *Banque Populaire*, contributed to the establishment of the *Réseau Maroc Entreprendre*. This is an initiative aimed at supporting the establishment of new enterprises through a package of unsecured lending and hands-on technical assistance provided with assistance from an international NGO. The tendency of commercial banks to go ‘down market’ is paralleled by the **scaling up of operations of micro-enterprise banks**, which are increasingly offering short and medium-term loans in excess of US\$100,000—sometimes relying on soft collateral (personal guarantees or guarantees on receivables). Three examples in the

countries surveyed are: (i) *ProCredit Bank* in Ukraine, which is part of the *ProCredit Group* active in some 20 countries; (ii) *Opportunity Bank* in the Philippines; and (iii) *K-Rep Bank* in Kenya.

The above innovations certainly mark an important departure from previous trends, and are likely to have a significant impact on SME access to finance in general. However, the situation for SME in the ICT/ICTE sector appears less positive. There are exceptions. For instance, in Kenya, ICT firms—because of their ‘modernity’—are sometimes regarded by banks as ‘corporate clients’. *K-Rep Bank* provided loans to about a dozen firms, for amounts of up to US\$100,000. Similarly, small ICT firms are reported to account for 10–15% of the total loan portfolio of Vietnam’s *Techcombank*. However, these appear to be exceptional situations. The general bankers’ attitude toward ICT firms remains very cautious, and criteria for assessing credit worthiness remain very stringent. An example of this attitude is provided in Box VI.4.

Special Initiatives Targeted at ICT/ICTE Firms

There has been a recent trend for governments to launch initiatives specifically targeted at the ICT/ICTE industry. Interventions in this area fall into two broad categories. They are:

- The establishment of dedicated credit lines or re-financing facilities, often involving some degree of interest subsidy;
- The establishment of mechanisms, such as credit guarantee schemes, aimed at reducing risk and alleviating collateral requirements.

At least five of the countries surveyed have **Credit lines/re-financing facilities** that target firms in the ICT/ICTE industry, and, sometimes, other innovative sectors. In Brazil, the main initiative available is the *Programa para o Desenvolvimento da Indústria Nacional de Software e Serviços Correlatos* (PROSOFT), which is managed by BNDES and targeted at local software houses. PROSOFT has a direct lending window that provides long-term investment loans that cover up to 85% of invest-

BOX VI.4 Assessing SME Creditworthiness – The Case of ICICI Bank¹⁵

ICICI Bank is one of India’s leading financial institutions. In recent years, the bank has made a genuine effort to address the needs of the growing SME segment, with special attention on high-tech firms. ICICI has undergone a change in its approach toward creditworthiness assessment. It has adopted a “holistic view of the customer” and places less emphasis on conventional “credit appraisal based on financial statements”. However, this new philosophy has only been partially reflected in the operational criteria retained for the granting of loans. Indeed, ICICI Banks’ Go – No Go Criteria include the following requirements:

- The borrower must have been in business for at least two years;
- Turnover must be in excess of US\$400,000, and tangible assets in excess of US\$200,000;
- EBITDA must be above 5%, and the borrower must have been trading profitably during the two previous years, with positive projections for the current year;
- Receivables beyond six months must account for less than 5% of annual turnover.

It is clear that, even in the case of a very dynamic financial institution such as ICICI Bank, the decision criteria for assessing creditworthiness still show a significant mismatch with the distinctive features of small ICT operators.

¹⁵ Based on the presentation made by Mr. Kumar Ashish, Head of the Business Banking Group of ICICI Bank, at the 2nd Global Forum on Business Incubation, November 8, 2006. The presentation is accessible through the [infoDev website](#).

ment costs for amounts of at least US\$200,000. It also has two re-financing windows that promote bank loans granted for the commercialization of IT solutions and the export of software products, through the re-financing of loans extended by commercial banks. The *Pró-Inovação* program is managed by FINEP. This program provides long-term loans—up to 10 years, including a grace period of two years—to innovative enterprises involved in R&D activities. Under the *Juro Zero* program, which is also managed by FINEP, Brazilian ICT firms are eligible for interest-free loans. The *Juro Zero* program provides medium-term loans of US\$50,000–450,000 to innovative SME that have a turnover of at least US\$150,000.

A similar approach is adopted in Argentina, where the *Agencia Nacional de Promoción Científica y Tecnológica (ANPCyT)* is responsible for the management of the *Fondo Fiduciario de Promoción de la Industria del Software (FONSOFT)*. FONSOFT is a direct lending window for export-oriented software firms, which provides loans of up to six years (including a grace period of two years) and covers up to 80% of project costs, with a variable interest rate. Funds are allocated on the basis of an open tender mechanism: in 2006, FONSOFT financed a total of 11 projects, each receiving an average of US\$20,000 out of an average project cost of US\$50,000. In Argentina, additional funds are available to ICT firms through: (i) an indirect lending facility for technological innovation that was implemented in collaboration with commercial banks; and (ii) a grant scheme covering the costs of patent registrations.

In India, the *Technology Development Board (TDB)* provides loans for the financing of innovative projects in the ICT industry and other innovative sectors. TDB loans have a duration of five years (including a grace period of one year), can cover up to 50% of project costs, and carry an interest of 5%. From 1997–2005, TDB financed a total of 14 initiatives, with an average funding of US\$350,000. India also provides a rare example of an initiative specifically targeted at small businesses in internet services: the ‘Cyber Plus’ loan program, which was launched by the *State Bank of India*. This scheme is targeted at individuals wishing to establish internet and cybercafés in rural and semi-urban areas. The duration of loans is 36–40 months, with a short grace period, and the loan is

collateralized with the IT equipment financed by the loan.

In other countries, initiatives aimed at the ICT/ICTE industry are either not really targeted to SME or have met with limited success. The state-owned *Development Bank of the Philippines* is managing a US\$270 million credit line funded by the Japan Bank for International Cooperation (JBIC). However, the funds are primarily targeted at activities in the manufacturing of IT components, which is dominated by large enterprises. In Senegal, some years ago the *Fonds de Promotion Economique (FPE)* established a US\$3 million line of credit specifically targeted at ICT/ICTE enterprises. However, the credit line was subsequently consolidated into a general SME credit line, due to a lack of projects in ICT.

In the countries surveyed, recourse to **credit guarantee schemes** is comparatively less common. The Brazilian *Fundos de Garantia de Crédito* is an example of credit guarantee schemes specifically targeted at ICT/ICTE and other innovative enterprises. It operates in five Brazilian states: Pernambuco, Minas Gerais, Paraná, Bahia, and Santa Catarina. Established and funded by local authorities and business associations, these schemes provide a 50% guarantee on loans extended to small operators within the framework of the *Juro Zero* program. In India, there is no dedicated credit guarantee facility, but ICT is one of the sectors eligible under the Credit Guarantee Fund Trust for Small Industries (CGTSI). Established in 2000, the CGTSI is a joint undertaking of the Federal Government and the Small Industries Development Bank of India (SIDBI). The CGTSI provides a 75% guarantee for short and medium-term loans of up to US\$50,000. It also provides counter guarantees to smaller guarantee funds established at the local level (e.g. the mutual guarantee fund established in Andhra Pradesh). The establishment of a special guarantee facility specifically targeted at the ICT industry and to be implemented in collaboration with a sector business association has been announced, but does not seem to be operational. In Morocco, Argentina and the Philippines, there are no guarantee facilities specifically targeted at high-tech firms, but ICT/ICTE enterprises can access—sometimes at preferential conditions—general credit guarantee funds.

BOX VI.5 Financial Support to ICT Firms: A Special Case

A special case of financial support measures is represented by the SME FIT credit line, which is managed by the Philippines' Small Business Corporation. The facility is intended to help Filipino SME to acquire some degree of IT capabilities, through the purchase of IT equipment, software applications, website development, training and other IT-related initiatives. The peculiarity lies in the fact that the scheme is also accessible to ICT firms—i.e. sellers of equipment and IT service providers—in the form of a discounting facility for the financing of working capital needs. The discounting facility works by discounting invoices for goods and services sold on credit. This mechanism, conceptually not much different from a factoring facility, has potentially far reaching positive effects, because it supports the efforts of ICT firms to develop a domestic market for their products and services. In the early 1960s, the Italian government adopted a similar approach, to support the development of the then nascent mechanical engineering industry. The scheme, known as *Legge Sabatini*, allowed for the discounting of invoices related to the sale of machinery at a moderately subsidized rate, thereby making it possible to lengthen payment terms. The *Legge Sabatini* was instrumental in the strengthening of the mechanical engineering industry, which later became one of the pillars of the Italian economy¹⁶.

VI.5 IFI AND DONOR PROGRAMS

IFI and bilateral donors have been supporting in various ways efforts aimed at facilitating access to finance in the ICT/ICTE sector. An overview of the initiatives undertaken by the main players is presented below.

International Finance Corporation (IFC)

Since the mid-1990s, IFC has been extremely active in the financing of ICT/ICTE activities. In the countries surveyed, IFC operations include both investments in financial institutions targeting the ICT/ICTE industry, and the provision of equity and loan financing to specific ventures. **Investments in financial institutions** have been quite common in Asia and Latin America. Two examples are: (i) the acquisition of participations in India's *ICICI* and *IL&FS*, both of which manage several high-tech funds; and (ii) the equity investment in Brazil's *Companhia Riograndense de Participações*, which also manages a whole family of high-tech funds. A recent initiative is the *VenturEast Proactive Fund*, a US\$100 million Hyderabad-based venture capital fund, in which the IFC is expected to invest US\$15 million.

In Sub-Saharan Africa, IFC has been promoting a new generation of SME financing operations that combine the provision of equity and quasi-equity financing with substantial technical assistance funds. IFC has already established operations of this type in Kenya and Madagascar. These facilities are of a 'generalist' nature—they target small businesses irrespective of their sector orientation. However, the

Kenyan fund is cooperating with a local incubator supported by *infoDev*, which facilitates the consideration of investments in the ICT industry. In other cases, IFC has helped in designing ICT/ICTE-oriented financial instruments. An example of this is in Morocco, where IFC is partnering with the local ICT sector association in the structuring of the recently established *Fonds de Soutien à l'Innovation*. IFC **direct investments** were made in: (i) telecom operations, such as India's *Bharti Enterprises*, Morocco's *Medi Tel*, and *TIM Peru*; and (ii) in other segments of the ICT/ICTE industry, such as software development and BPO. Most of these deals were quite sizeable, from US\$10 million up, but there are also examples of small to medium-sized investments, from US\$2–3 million. A summary presentation of these investments is provided in Box VI.6.

Other International Financial Institutions

The **Multilateral Investment Fund (MIF)** actively promotes the ICT/ICTE industry, through a combination of investment operations and technical assistance programs. In Brazil, the MIF has been partnering with local development finance institutions in the establishment of a growing network of seed and venture capital funds specifically targeted at innovative SME. Also in Brazil, the MIF is actively supporting the emergence and consolidation of clusters of innovative enterprises through technical assistance. In Argentina, the MIF is mostly active in

¹⁶ For a review of the impact of the Sabatini Law on Italian industrial development, see UNIDO, *The Italian SME Experience and Possible Lessons for Emerging Countries*, Vienna, 1997.

BOX VI.6 IFC Small Scale Deals in ICT/ICTE

Spryance (India): Spryance provides medical transcription services to hospitals in the US, through a web-enabled process that allows trained staff in India to transcribe into written documents the voice recordings that doctors report on non-acute medical situations. IFC was the first institutional investor in Spryance, providing US\$2 million in equity.

Software Ventures International (Philippines): Software Ventures International is an IT services company that initially focused on offshore systems development and maintenance, mostly targeting US companies. Later, the company expanded into other IT enabled services, such as document management and billing transcription. IFC supported this diversification move through an equity investment of US\$2 million.

Indecomm (India): Indecomm provides document management solutions and services to global financial and healthcare companies, based on proprietary data capture/data management technology. Specific areas of expertise include mortgage processing, back office banking services, and benefits administration. IFC supported Indecomm's growth with a US\$2.6 million equity investment.

Glass Egg Digital Media (Vietnam): Founded in early 1999, Glass Egg Digital Media targets three business segments: (i) 2D animation and coding development; (ii) computer and video games; and (iii) educational software. IFC took an equity participation worth US\$1.5 million.

DQ Entertainment (India): DQ Entertainment is an animation outsourcing company that provides animation production services to North American, European and Asian television, film and gaming companies. The company operates several facilities in India, as well as two contracted facilities in China and The Philippines. The IFC provided an early stage equity financing of US\$3 million.

Global CyberSoft (Vietnam): Global CyberSoft is a US company headquartered in Silicon Valley that offers a broad range of IT consulting and outsourcing services. The company established a fully-owned subsidiary in Vietnam, which is involved in software outsourcing operations. IFC supported the move, with an equity investment of US\$1.5 million.

supporting technology upgrading at the institutional level, but it also is planning an investment in a high-tech fund, *TGLT Ventures*. In Peru, activities are mostly of a broad-based nature. They support the strengthening of financial institutions (factoring, credit guarantees, etc.) and of SME in general, without any special emphasis on the ICT industry. The **European Investment Bank** (EIB) was among the shareholders of Morocco's first seed fund. Similar operations are reportedly under consideration in Morocco and other Maghreb countries. The **Asian Development Bank** (ADB) has broadly followed the approach adopted by the IFC. ADB has made investments in financial institutions and selected venture capital funds, such as Vietnam's *Mekong Fund*.

Bilateral Donors

Bilateral donors are mostly active in promoting wider access to new technologies, including initiatives in e-government and in education. However, there are also some examples of actions aimed at facilitating access to finance. In particular, France's **Proparco** invested in two high-tech funds in Morocco, *Fonds Sindibad* and *Upline Technologies*. It is reportedly considering similar initiatives in other Maghreb countries. Switzerland's **SECO** promoted and funded the *Swiss Technology Venture Capital Fund* operating in India (now fully invested) and is considering a follow up operation. Japan's **JBIC** has granted some credit lines for the financing of ICT operations, but the scheme is largely tied to the involvement of Japanese operators.

VII. EXTENT AND SEVERITY OF THE FINANCING GAP

VII.1 INTRODUCTION

The previous chapters examined the financing needs and the various sources of financing available to small ICT/ICTE firms. Chapter VII looks at the financing gap faced by these firms, from three different angles. First is a discussion of the constraints faced by firms at different stages of development. Second is an analysis of financing conditions in the main segments/lines of business. Third is a discussion of the conditions prevailing in the different countries surveyed. This is followed by some concluding comments.

VII.2 FINANCING GAP & STAGES OF DEVELOPMENT

As firms go through the various stages of development—from early stages (seed and start up) to later expansion phases—their financing needs evolve. Study results indicate that the financing constraints faced by ICT/ICTE firms are comparatively more severe in the development and first expansion phases. The situation is more nuanced in the other phases.

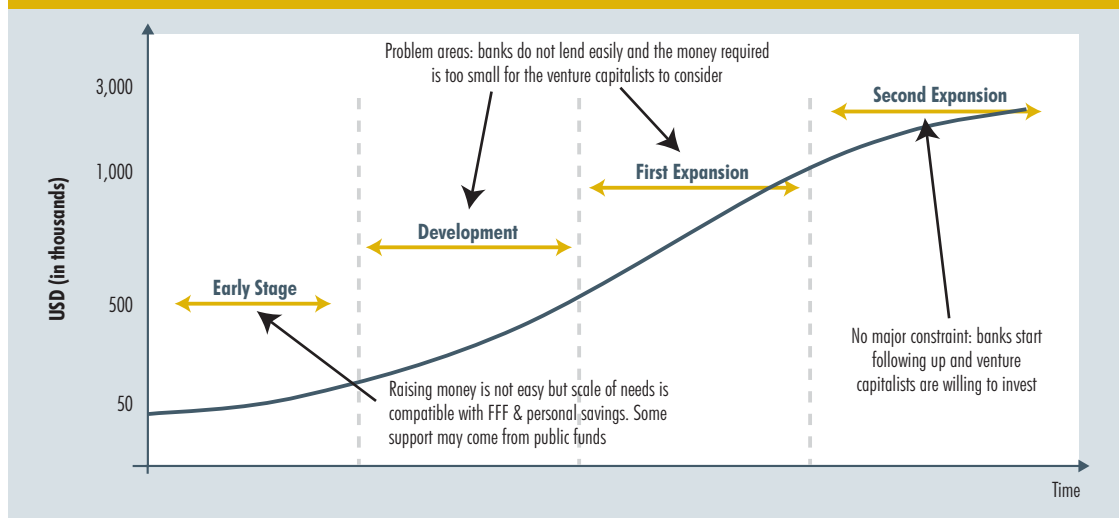
In the *early stage*, financing needs may vary significantly, depending upon the specific nature of the business and the cost conditions prevailing in different countries. In middle-income countries, financing needs are often in the US\$50–100,000 range. These amounts are often compatible with the recourse to the usual ‘FFF channels’, complemented with some personal loans and with some financing from public schemes. In lower-income countries, the amounts at stake may be even lower, and are

sometimes compatible with funds accessible through: (i) micro-enterprise banks and MFI facilities (e.g. Kenya’s *K-Rep*, Senegal’s *Pamecas*, and Peru’s *Edpymes*); or (ii) government or donor supported schemes. More problematic is the situation of promoters of ‘high profile’ innovative SME, such as the export-oriented innovative projects sometimes found in India. The financial requirements of those initiatives usually exceed these informal or traditional sources. Therefore, promoters may turn to government-led seed funds established at the federal or state level, or to a few other private high-tech funds (such as *IndiaCo*). However, the volume of resources available through these facilities is often limited to coping with the demand. For example, India seed funds operating at the state level typically have a capital of not more than US\$5 million.

In the *development and first expansion stages*, financing needs rapidly escalate from US\$100,000 to US\$1,000,000 and beyond. Enterprises at these stages of development do not have a sufficient track record to be accepted as credible borrowers by commercial banks. This despite the fact that they are already in business and are often trading profitably. On the other hand, venture capitalists regard the amounts sought by SME as too small to justify the high ‘transaction costs’. Under these conditions, ICT/ICTE enterprises may try their luck with government schemes. However, more often than not, they are forced to rely predominantly on self-financing. In developing countries, this means taking recourse to unorthodox practices, such as delaying the payment of social security and taxes. This may well result in a significant slow down in the development process, which in a fast moving business such as ICT, may ultimately jeopardize the future chances of success.

If and when an enterprise manages to reach the *second expansion stage*, then conditions for accessing financing improve significantly. Banks may still wary of lending large sums to companies involved in a business that they do not understand well, but the volume of money flowing through the bank account is a powerful factor in mitigating this skepticism. Much more importantly, investment

Figure VII.1. Nature and Severity of Financing Gap



deals above US\$2–3 million can more easily attract the interest of venture capitalists.

The considerations above are summarized in Figure VII.1.

VII.3 FINANCING GAP & LINES OF BUSINESS

From a line of business perspective, financing gap problems are most severe in the case of small enterprises active in software development and IT services. In other sectors, the situation is more favorable, although significant constraints may be faced by firms active in specific segments.

Software and IT Services. As indicated earlier, this sector is highly diversified, and encompasses heterogeneous business models that are sometimes hardly comparable. However, one element in common to most enterprises in this sector is the extreme unpredictability of results, which translates into low survival rates. On the other hand, this is also the kind of business where tremendous achievements are recorded from time to time. Like all other businesses based on immaterial assets, access to finance depends largely on the capability of

promoters to attract capital on the basis of pure business ideas. This is often an uneasy and largely useless exercise when it comes to commercial banks. Unless promoters can offer substantial collaterals in the form of private properties, bankers are extremely unlikely to put any money into an immaterial business that many do not understand well. The situation improves somewhat when an enterprise can maintain a constant cash flow for a certain period through side-activities¹⁷, or when a more established firm can leverage on their own patented applications¹⁸. On the other hand, software development and IT services are the favorite domain for tech-savvy VC, especially those who follow enterprises from the cradle and are ready to accept a high incidence of small losses in order to achieve a few stunning gains. However, these players are not present in all the countries, and they have a very hands-on approach that some promoters dislike. The same applies to business angels, whose involvement is very limited or non-existent in most of the countries surveyed. As a result, firms active in these

¹⁷ A typical example is that of the small early-stage software development firm providing web-design, IT-consultancy and other 'basic' services to finance the R&D necessary to develop more sophisticated and valuable ERP applications and alike.

¹⁸ A critical mass of 'IP-based companies' can be found only in countries with an advanced IT industry, like India and Brazil. In such contexts, it is also possible to find banks willing to accept IPR as collateral. This is rarely the case with SMEs.

sectors face significant problems—and, as seen in the previous section, the financing gap is more acute in the development and first expansion stage, when financing needs normally exceed the opportunities offered by informal sources, MFI and bootstrapping.

Internet Services. Operators connected with telecom companies, media concerns and international ISP providers are increasing dominating the ISP business. The relatively few independent ISP still in operations are often firms that have been in business for several years. Most of them also managed to survive a first wave of market consolidation. However, despite their relatively well-established character and the existence of a credit history, independent ISP often face serious problems in accessing funds. These problems relate to two aspects: (i) the increasing capital intensive character of the business, which increases financing needs compared with existing levels of turnover (ability to repay); and (ii) the intense competition brought about by large operators, which drives down profits and casts doubts on the long-term prospects of these firms. The situation is more positive in the case of the other typology of internet access providers, i.e. cybercafés and internet public points. The financing needs are often very modest—in most countries one can start a cybercafé with less than US\$10,000—and they are normally compatible with FFF channels or small personal loans from local banks. The financing needs are obviously higher in the case of the more structured chains of cybercafés that are increasingly common in various countries. However, by the time firms reach the point at which they can venture into this type of business, they have normally established good relations with commercial banks, who are attracted by the highly liquid nature of the business. Telecenters and cybercafés in rural areas, is a segment where access to finance remains difficult. Promoters' savings are normally lower than in urban areas, and access to bank lending much more difficult. In certain cases, rural ICT activities can get support from socially-oriented donor and NGO programs aimed at 'alleviating the digital divide'. However, promoters are still left struggling with issues related to the justification and eligibility of cost items, and the demonstration of positive social impact.

BPO and Other ICTE Activities. In general, enterprises active in the BPO sector face relatively mild problems in accessing financing. This is due to two main factors. First, many operations are simply

subsidiaries of large international companies, or, increasingly, of powerful domestic groups. In these cases, mobilization of financing obviously does not pose any real problem. Second, even independent BPO providers normally can count on long-term contracts at the start of operations, which permits a certain financial stability. Payment conditions are better when the function outsourced is regarded as 'crucial' by the client, as it is often the case for payment services. However, working capital needs generally remain within reasonable limits, and banks are often willing to open discounting facilities. The situation is more problematic in the case of higher value-added ICTE activities. In these cases, the launch of activities often requires the purchase of expensive software and equipment (e.g. for 3D graphics and animation studios), and mobilizing external financing is not easy.

Sale of IT Equipment and Packaged Software.

In this sector, financing needs are similar to those found in other trading activities, and they are normally of a short-term nature. Working capital needs may increase beyond normal levels if sales to 'bad payers' (such as the government) account for a significant share of turnover. However, this is often compensated by higher margins. Under these conditions, banks are normally willing to open discount facilities, although this often carries a high interest. Working capital needs are higher in the case of specialized and expensive products, such as WiMAX equipment. However, well-established firms often handle these items. Therefore, this does not translate into any significant problems.

Hardware Manufacturing and Assembly. As indicated above, in the countries surveyed, this line of business is the preserve of large companies. Only a handful of small-scale firms active in the assembly of PC and other equipment are in operation. In these cases, financing needs are not too different from those of other light manufacturing companies. Getting money from banks may not be easy, but at least firms do not face any specific 'ICT bias'.

VII.4 FINANCING GAP IN SURVEYED COUNTRIES

Conditions for access to finance vary greatly across the ten countries surveyed. Those differences mainly

reflect the different level of sophistication of financial systems, but, again, demand-side considerations also play a role.

In **India**, ICT professionals widely lament the existence of a significant financing gap for deals of US\$1–2 million. Following the wave of failures that occurred in the early 2000s, many venture capitalists became extremely skeptical about early-stage deals. As a result, the market for small deals (i.e. below US\$3 million) went through a severe recession during the period of 2000–2003. The annual number of small investments shrank from some 140 to less than 20. In parallel, the average size of all VC deals increased from US\$4 million in 2000, to over US\$8 million in 2003. However, signs of a reversal of this negative trend have recently emerged. To begin with, the years 2005 and 2006 witnessed the launch of several funds (*Erasmic Venture Fund*, *SeedFund*, *Upstream Ventures*, etc.) that deliberately targeted deals in the US\$0.5–1 million range. Second, the trend toward large deals has somewhat slowed down due to the overvaluation of more established enterprises. Even some mainstream VC have started to turn toward smaller companies where they can find cheaper investment opportunities. Finally, the closer cooperation between business incubators and some high-tech funds (mainly government-led) has started to bear some fruit—for example, the two incubation finance deals finalized in early 2007 by the *Gujarat Venture Fund*. The positive impact of these factors has yet to be felt in its entirety. Nevertheless, in 2006 the number of small deals has already soared to 50, up from the 20–30 deals per annum recorded in the previous two years. Certainly, this number is insufficient, but at least things are moving in the right direction.

Similar considerations exist in **Brazil**. Again, ICT operators widely lament serious problems in the financing of smaller initiatives—this has been acknowledged by authorities and financial institutions alike. However, there are signs that the situation is improving. A new generation of funds focused on small enterprises—with a total capitalization in excess of US\$50 million—has been established since 2004–2005, and more initiatives of this type are expected to materialize in the near future. These funds—as well as the launch of dedicated credit facilities for the ICT—have just begun to make their impact felt, but in due course they are expected to significantly alleviate the gap.

In **Senegal** and **Kenya**, the financial system is still rather undeveloped, and SME face serious limitations in accessing finance. Weaknesses in the financial system are mirrored by the modest investment opportunities offered by a small and unsophisticated ICT/ICTE industry. Therefore, whatever financing gap may exist, it cannot be described as ‘industry specific’. The situation is similar in **Peru**. Its ICT/ICTE industry is bigger and marginally more diversified, but investment opportunities related to truly innovative activities remain limited. Under these conditions, the constraints faced by small ICT/ICTE operators are not all that different from those affecting SME in general.

The financing gap appears to be comparatively more severe in the **Philippines**, **Vietnam**, and **Ukraine**. These countries already have a sizeable ICT/ICTE industry, and the potential for further growth remains substantial—although in different segments in each country (BPO in the Philippines; software development in Ukraine; hardware and software development in Vietnam). However, the financial systems in these three countries have clear difficulties in following-up. Recently, there have been some improvements, such as the launch of a first high-tech fund in Vietnam, but these improvements are insufficient. All indications are that the demand for investments of less than US\$1 million is still largely unsatisfied.

Morocco and **Argentina** are intermediate cases. In both countries, the ICT industry has some potential—although not as much as in the Asian countries. The financial sector still displays a relatively conservative attitude. However, the government authorities take an activist stance—they have launched dedicated schemes, sometimes with support from donors. In Argentina, there is a new generation of equity investors that are largely focused on early-stage SME. Overall, a financing gap certainly remains, but the number of well-deserving initiatives that get rationed is not huge.

VII.5 CONCLUDING REMARKS

Overall, results from the study confirm the existence of a financing gap, in the sense that many

seemingly well-deserving ICT/ICTE operators have limited or no access to external financing. The gap is particularly severe for companies at an intermediate stage of development—those that seek amounts from US\$100,000–1,000,000. However, this finding cannot be generalized to the whole industry or to all of the countries. Firms involved in software development and in the provision of IT services

face the most stringent constraints—operators in other lines of business are less affected. The financing gap is most severe in countries where the growth of the ICT/ICTE sector has outpaced developments in the financial sector. In other countries, the constraints that ICT/ICTE firms face are not distinguishable from those affecting SME in general.



VIII. RECOMMENDATIONS

VIII.1 INTRODUCTION

The results of the Study point to a series of measures that could help in alleviating the financing gap faced by small firms in the ICT/ICTE industry. Some of these measures are aimed at facilitating access to specific forms of financing—equity, quasi-equity and bank lending—while others aim at improving the interaction between the supply and demand sides of the financing market. Given the nature of the *infoDev* program, the recommendations formulated here only focus on ‘soft’ interventions, i.e. those involving the deployment of technical assistance resources. However, some of these actions can be regarded as preparatory for investment operations, which could be taken up by other donors or financial institutions.

VIII.2 IMPROVING ACCESS TO EQUITY FINANCING

An improved access to equity financing is essential to support the development of small ICT/ICTE companies. In order to increase the volume of equity financing available to smaller companies, interventions can be envisaged in three areas:

- The design of schemes aimed at mitigating the risks associated with early-stage deals;
- The establishment of a mechanism aimed at alleviating the costs incurred by fund managers in the finalization of small deals;
- The provision of support to the formation and operations of business angels networks.

Mitigating The Risks Associated with Early Stage Investments

The results of this study definitely confirm the limited appetite of venture capitalists for early-stage investments. Memories of the losses suffered at the end of the dot.com bubble are still vivid. For many operators, early stage deals are simply too risky. However, venture capitalists are also aware that an inadequate level of funding in the early stages will inevitably have an impact on the quality of their future pipelines. Therefore, many operators are increasingly interested in devising forms of ‘public private partnerships’ that would make it possible to consider smaller and riskier deals, while protecting against the downside. During fieldwork, this theme was frequently discussed. In India, several venture capitalists were skeptical about the effectiveness of certain government initiatives, such as the seed funds established by state-owned financial institutions. At the same time, they were very interested in exploring the feasibility of co-investment schemes, based on a risk-sharing approach modeled after the US *Small Business Investment Companies* scheme. Venture capitalists in Morocco, the Ukraine and the Philippines voiced similar considerations—they mentioned the idea of establishing guarantee mechanisms to mitigate the risk faced by private investors. In other cases, the attention was not so much on risk mitigation but rather on mechanisms that could increase the returns accruing to private investors—leveraging the ‘upside’ potential. The keen interest in the subject suggests that a useful follow-up to this study could be a **review of government-supported incentive schemes**. Such a review would involve three main steps:

- The detailed analysis of the operating modalities and institutional and legal arrangements of incentive schemes currently in use;
- The identification of the models best suited to match the institutional and market conditions found in various countries;
- The preparation of full-fledged feasibility studies for specific schemes to be implemented in selected countries.

The analysis would focus on incentive schemes in use in both developed and developing countries, taking into account the operating modalities normally preferred by IFI/donor institutions potentially interested in providing support. A preliminary typology of the incentive schemes to be reviewed is provided in Box VIII.1.

Alleviating the Venture Capitalists' Transaction Costs Problem

Transaction costs related to the preparation, finalization, and monitoring of equity investment deals are a significant barrier to the greater involvement of venture capital funds in the financing of small ICT companies. The problem is present in the case of SME in general, but it is particularly acute in the case of ICT/ICTE firms, due to their particular features. In the case of Morocco, transaction costs related to the preparation, due diligence and negotiation phases can be roughly estimated at US\$25,000–30,000 per deal. Another US\$25,000 is required for the monitoring phase, assuming an investment period of about five years. These amounts have a negative impact on the attractiveness of deals below the US\$500,000 benchmark. The problem could be alleviated through the establishment of a donor-funded *transaction costs facility* that would reimburse fund management

companies for at least part of the expenses incurred for small equity investments. The possible features of such a mechanism were discussed in some detail with some of the fund managers met during fieldwork. The main elements of the proposed scheme are summarized in the Box VIII.2.

A possible alternative to the subsidization of transaction costs through the proposed facility would be *to promote the pooling of service providers*, such as law, accounting and marketing firms, so as to make their services available to venture capital firms at reduced rates. This approach has proved effective in other contexts, and it is certainly worth exploring. However, in many countries, the number of deals involving small firms is likely to be too small to bring about a significant reduction in the fee rates. In that case, this approach would leave the transaction costs problem largely unresolved.

Supporting Business Angels Networks

Business angels can play an important role in the financing of small ICT/ICTE firms, by combining the provision of financing with much valued hands-on support. Furthermore, business angels are often vocal supporters of institutional reforms aimed at facilitating the emergence of a lively

BOX VIII.1 *Typology of Incentive Schemes for VC Operations*

Government schemes providing incentives to venture capitalists for early-stage deals fall into three broad categories: (i) co-investment schemes, (ii) leveraged returns schemes, and (iii) guarantee schemes.

In the case of **co-investment schemes**, governments participate in privately managed venture capital funds, while leaving the management in private hands. Public participation is intended to share the risk as well as to lend credibility to the operation, thereby facilitating fund raising. This approach has been successfully adopted in various countries (e.g. Israel's Yozma Fund) and is typically used by the IFI and donors. A variant of the 'basic model' is represented by schemes where the government does not participate in the capital of VC, but rather commits to co-invest on a *pari passu* basis along with the VC. An example of this approach is the Equity Ventures Program that was recently established in the Philippines.

Leveraged returns schemes are aimed at increasing the returns accruing to private investors. Public entities participate in the capital of venture capital funds, but they receive a less than proportional share of the profits, thus leveraging the upside potential for private investors. An example is the Australian Innovation Investment Fund Program, which provides up to two-thirds of the capital for VC operations, but takes only 10% of the profits. An alternative approach, often used in more advanced countries (e.g. UK, Taiwan, Belgium), involves the granting of a tax allowance to private investors proportional to their participation in venture capital funds.

Guarantee schemes protect private investors against the downside. An example is the Brazilian seed capital program managed by FINEP: under this scheme, individual investors participating in seed capital funds are guaranteed to receive back their initial investment. Another possibility is to add a loss protection clause to the co-investment schemes mentioned above. In this case, the investment made by the public sector is structured to absorb a more than proportional share of any losses incurred, thereby reducing the risk for private investors. Such an approach was used for some equity financing facilities established by the EBRD in the Balkans, with the support of the Italian government. In these cases, the Italian financial contribution was 'deeply subordinated' to the EBRD contribution, and would absorb all the losses.

BOX VIII.2 *Salient Features of a Transaction Costs Facility*

A transaction costs facility would contribute to the coverage of expenses incurred by venture capital firms in the development, finalization and monitoring of small equity investments. This could take the form of a flat fee that would be payable to venture capital funds for investments made in ICT firms below a certain threshold. As a first approximation, the fee payable to VC could be set at US\$50,000 per deal. Eligibility should be restricted to deals of less than US\$500,000, including all forms of financing (straight equity, quasi-equity and loans). In order to ensure that money is targeted at smaller ICT companies, additional criteria could concern the size of the investee (for example, less than 30 employees) and its ownership structure (not part of a larger group).

The facility could make payments to fund managers in phases—to link payments to specific events in the investment process. For instance, the first tranche could be disbursed upon submission of an acquisition proposal to the investment committee. The second could be released when the equity investment is actually disbursed. The third could occur in the post-investment phase (for example, after two years from the last disbursement), to cover the monitoring costs.

In countries with a significant venture capital industry, the facility could be established at the national level, and its management could be entrusted to some local entity (e.g. some sector association). In other cases (e.g. the Maghreb countries), the establishment of a regional facility could be preferable. In principle, a global scheme can also be envisaged, although operational costs are likely to be greater.

All the fund managers interviewed during fieldwork stressed the need for the facility to operate in a flexible way, without placing an excessive administrative burden upon the fund managers (“it shouldn’t be like EU schemes, where they ask you three years in advance who is going to do a certain job”). Therefore, reporting requirements should be connected as much as possible to standard procedures generally followed in the venture capital industry.

The advantage of such mechanism is twofold. On the one hand, a relatively modest investment (the proposed fee of US\$50,000 is less than the cost of a small consulting assignment) would help to mobilize much greater amounts of investment money, ensuring a very high multiplier effect. On the other hand, despite the presence of a subsidy element, the mechanism would not unduly impact on the fund managers’ incentive structure, because the fee would be too small compared with the amounts to be invested. This would ensure that assessment criteria would remain linked to sound business principles, with the merits of specific investments assessed on a strictly commercial basis (as nicely put it by one of our interlocutors, “nobody would be so foolish as to invest half a million in a poor company just for the sake of cashing in US\$50,000”).

venture capital industry. Among the countries surveyed, well-developed networks of business angels are found only in India, Brazil and, to a more limited extent, Argentina and the Philippines. Providing *assistance to the establishment and operations of business angel networks* would constitute a useful complement to initiatives targeted at institutional equity financing operators. Assistance to business angels’ networks could take the form of small grants—ideally, about \$30,000 to 50,000 per initiative. It would be based on the following principles:

- Assistance should go primarily to the funding of operational activities, such as the organization of project presentations and matchmaking activities. It should go, to a smaller extent, to advocacy and awareness increasing actions, such as the preparation of position papers on specific regulatory bottlenecks affecting private investment;
- Support to administrative structures should be kept to a minimum. (Business angels are, by definition, wealthy individuals, and they should be able to cover modest secretarial costs.) The

existence of a secretariat—however informally it would operate—should be regarded as a precondition for the granting of support;

- Efforts should be made to coordinate the assistance to business angels with other actions that support business incubators. While this may not be always possible (in certain countries business incubators are regarded as “too academically oriented”), the synergies between the two actions are potentially significant. In particular, business angels could assist incubators in raising the investor readiness of incubatees, through the organization of workshops covering specific topics (the dos and don’ts of business presentations, what are the realistic expectations for dealing with investors, etc.).

VIII.3 PROMOTING A WIDER USE OF QUASI-EQUITY

Despite the great emphasis placed by many observers on equity financing, it is clear that many small ICT/ICTE businesses will never be able to

attract the attention of venture capital funds. This is the case for the many small firms involved in standard activities that may well prove financially viable ('lifestyle businesses'), but that do not possess the potential for offering the returns normally sought by venture capitalists. Still, these firms could present good investment opportunities for, and greatly benefit from the availability of, other types of risk capital, particularly quasi-equity/mezzanine finance.

Preparing the Ground for New Quasi-Equity Facilities

With the exception of India, the use of quasi-equity is still quite uncommon in the countries surveyed. Some investment funds utilize preferred shares and convertibles, mainly as way to mitigate risks in the early investment stages. Shareholder loans and other revenue sharing instruments are still rarely used, and there are no examples of specialized operators. Under these conditions, activities aimed at promoting a wider use of quasi-equity, especially of the more 'SME friendly' variety, could be a useful follow up to this study. The first step would be to make a detailed **review of the schemes currently in operation** in both developed and developing countries—and to identify their success factors as well as their limitations. Special attention should be devoted to the analysis of the legal aspects. It would be particularly useful to identify the factors that might encourage or discourage the use of certain instruments in certain countries/legal systems (limits to the size of shareholder loans compared to the value of equity, possibility of unlimited liability, deductibility of royalty payments, etc.). This initial review could be followed by the preparation of a **feasibility study for the establishment of a dedicated quasi-equity facility** in one or more selected countries. The feasibility study should: (i) review the market potential for quasi-equity instruments, and identify an initial potential pipeline; (ii) propose the appropriate legal structure; and (iii) formulate recommendations regarding the operating modalities—including the need for technical assistance. In this context, the experience of recently established quasi-equity finance facilities that support investments in the clean energy sector (such as CAREC or the *Empowerment through Energy Fund*) could represent a useful source of inspiration. The final step would involve the **promotion of the concept**. This would involve the organization of dissemination and information

events and exploratory contacts with potential financiers, including private sector entities, bilateral donors and development finance institutions, and members of the 'socially responsible investment' community.

VII.4 FACILITATING ACCESS TO BANK FINANCING

In countries with a weak 'equity culture', debt financing will continue to be regarded as the most natural option by many ICT/ICTE firms. Therefore, it is important to devise mechanisms that can reduce the commercial bankers' cautious attitude toward high-tech activities. This can be achieved by supporting the establishment of credit guarantee schemes.

Supporting the Establishment of Credit Guarantee Schemes

Credit guarantee schemes (CGSs) aim at facilitating access to finance through the provision of a guarantee that replaces, in part or in full, the need for collateral. Credit guarantee schemes often combining public support with a self-help element ('mutual guarantee schemes'). They have long been in use in Continental Europe, where they have played an instrumental role in facilitating SME access to financing. Since the early 1990s, the EU has made significant efforts to promote the establishment of CGSs in Eastern Europe and in the Mediterranean region, and UNIDO has promoted the creation of mutual guarantee associations in certain areas of India and in other developing countries.

In the countries surveyed, recourse to credit guarantees is still limited. While the majority of countries do have some form of CGS, the use of credit guarantees to support high-tech companies, is largely confined to Brazil and, to a smaller extent, India. At the same time, various counterparts in at least four countries—the Philippines, Senegal, Morocco and Vietnam—have expressed interest in this form of intervention, in the form of dedicated schemes or of 'special windows' within existing CGSs. An important first step to support a wider use of credit guarantees would be to conduct a **benchmarking study of CGS operations**. This study would be aimed at identifying best practices and

organizational models, with specific reference to guarantee schemes focused on high-tech industries. A preliminary selection of the key issues to be analyzed is presented in Box 8.3 below. The study could then be followed by the provision of technical assistance and training to support the actual establishments of CGSs.

VII.5 IMPROVING INTERACTIONS BETWEEN SUPPLY AND DEMAND

Access to financing is heavily influenced by prevailing conditions in the environment in which financial institutions operate. Interventions aimed at improving the enabling environment have a less direct impact than the measures suggested above, but, nonetheless, could yield important and lasting results. In this context, two areas of intervention can be devised: (i) the dissemination of information on the economics of ICT/ICTE firms; and (ii) the implementation of activities aimed at raising the investor readiness of small ICT/ICTE operators.

Disseminating Economic and Financial Information on ICT/ICTE Firms

The ICT/ICTE sector is still little understood by a wide range of financial intermediaries, including commercial banks. Actions aimed at **compilation and dissemination of information** about the fundamental economic and financial parameters of ICT/ICTE firms in developing countries could help in bridging the existing information gap. For example, Morocco's ICT sector association has proposed instituting a *centrale financière* for the ICT sector to be made available to the banking sector.

Enhancing Capabilities to Deal with Financial Institutions

As mentioned in previous sections, problems in accessing financing for SME cannot be blamed entirely upon the conservative attitude displayed by financial institutions. Promoters and small entrepreneurs are often unable to approach banks and investment funds in an effective way. They are not always able to prepare business plans of acceptable quality, or to defend them credibly vis-à-vis potential financiers. In light of this, the idea of a **training and advisory program** aimed at enhancing the 'investor readiness' of ICT/ICTE firms was dis-

BOX VII.3 *Issues to be Considered for the Establishment of CGF*

Nature of Credit Guarantees: Not all credit guarantees are the same, and the level of comfort provided to commercial banks may vary significantly. For instance, the guarantees issued by India's Credit Guarantee Fund Trust for Small Industries offer only a moderate comfort. First, the guarantee becomes payable only upon the start of court proceedings on the part of the bank. Second, at that point, only 75% of the amount guaranteed is paid—the remaining 25% is paid only at the end of the bankruptcy procedure. By contrast, in countries where banking operations are increasingly inspired by Basel II principles, there is an increasing tendency to move toward 'first demand' guarantees, which become payable in full upon the occurrence of the default. The proposed study on CGSs should include a detailed review of banking regulations and practices in various countries, and identify the type guarantees that could best fulfill their risk mitigation function.

Institutional Arrangements: In different countries, the performances of CGSs have varied widely. In some countries, CGSs established by governments or public financial institutions, and managed in a bureaucratic manner, have suffered heavy losses—sometimes to the point that operations had to be discontinued. By contrast, CGSs established in collaboration with the business community and/or private banks, have often performed well. In most European countries, CGSs post default rates that are well below those recorded in the banking sector. The proposed study should analyze in detail the institutional configurations adopted by CGSs in various countries, deriving operationally-oriented recommendations regarding the optimal governance structures.

Operating Parameters: The success of a CGS largely depends upon two main variables: (i) the level of protection offered to lenders (i.e. the share of loans covered by the guarantee, or 'coverage rate'); and (ii) the level of fees charged by SME clients. A high coverage rate (for example, above 80%) is highly 'additional', but at the same time opens the door to moral hazard. On the other hand, an excessively low coverage rate (for example, below 50%) is unlikely to appeal to commercial bankers. As for pricing policy, an excessively high guarantee fee could trigger an 'adverse selection'. The CGS would risk getting only bad clients—those ready to pay no matter what in order to get credit. By contrast, an exceedingly low level of fees could undermine financial self-sustainability. The proposed study should review the guarantee policies adopted by successful CGSs, with the formulation of recommendations on how to transfer these best practices in the countries where the establishment of CGSs is considered.

cussed during fieldwork with business associations and incubators. The training component would involve the organization of workshops focusing on practical aspects, such as the pros and cons of various financial instruments, and the most effective way to draft, substantiate and present a business proposition. This training component should include the active participation of representatives

of financial institutions. The advisory component would involve the recruitment of consultants, who would assist ICT/ICTE in their endeavors with commercial banks and prospective investors. These consultants could operate under the umbrella of sector business associations or in collaboration with the network of business incubators, which could also provide the necessary logistical support.



ANNEXES



ANNEX A – GENERALIST FUNDS

India – SIDBI Venture Capital

Salient Features

<i>Nature</i>	SVCL is an investment, management and advisory subsidiary company, established as a subsidiary of the Small Industries Development Bank of India (SIDBI), which is in turn linked to the Ministry of Finance.
<i>Location</i>	SVCL is headquartered in India.
<i>Geographical Coverage</i>	The VC funds managed by SVCL are national schemes. Part of the investment can be however utilized for investment in opening overseas branch offices/subsidiaries, provided that the investment is beneficial to the parent Company in India.
<i>Establishment</i>	SVCL was incorporated in 1998. The NFSIT fund became operational in 1999, while the SME Growth Fund was established in 2004.
<i>Funding</i>	SVCL is currently operating two funds: <ul style="list-style-type: none">■ the National Venture Fund for Software and Information Technology – NFSIT (about US\$ 22 million);■ The SME Growth Fund – SGF (about US\$ 110 million). <p>The capital for NFSIT fund was provided by SIDBI in association with Ministry of Information Technology, and the Industrial Development Bank of India Ltd (IDBI), while in the case of SGF sponsors have been again SIDBI and other leading commercial banks such as Punjab National Bank, State Bank of India, Bank of Baroda, Bank of India, Central Bank of India, Union Bank of India, Oriental Bank of Commerce and Corporation Bank.</p>
<i>Investment Policy</i>	SVCL's funds basically provide smart capital to startups and early stage companies active in various sectors, such as life sciences, retailing, light engineering, food processing, information technology, infrastructure related services, healthcare, logistics and distribution, etc. Special emphasis is put on SME units. SVCL investing instruments are of equity nature. Size of deals is generally comprised between US\$ 0.5 to 5.0 million. SVCL sometimes co-invest along with other VCs or help the promoter to raise additional capital from other investors during subsequent rounds of financing. SVCL usually takes one seat within the board of invested companies but its stake is limited to a maximum of 40% of the equity base of the investee. The tenure of deals is typically of 3–5 years. Of the two funds currently under management: the NFSIT is specifically dedicated to ICT/ICTE firms and invest in business line such as BPO/ITES, multimedia, Software Services and Internet and telecom value-added services; the SGF—which is the largest domestic fund for SME—has a broader scope but maintains a special focus on technology-based operations.
<i>Operations</i>	Overall, the SVCL has invested in 39 companies (30 NFSIT and 9 SME Growth Fund), with a total of 5 exits.

Other information

- SVCL is a subsidiary management company established by Small Industries Development Bank of India (SIDBI), which is an independent organization related to Ministry of Finance, established in 1990. SIDBI is the main financial institution for the small scale sector, and has been playing a primary role in the development of VC in India. Besides SVCL, SIDBI has funded several other SME-oriented VC funds, such as: India Leverage Fund, India Advantage Fund, India Development Fund, and other publicly-financed funds established by States' Governments at the local level.
- SVCL also co-invests with other Venture Capital funds, an example being the recently exited ECAD Technologies—a firm active in the design, simulation and testing of Printed Circuit Board. ECAD was invested in 2001 jointly by NFSIT and another publicly-financed VC fund—KITVEN, for respectively US\$ 0.45 and 0.22 million. At the liquidity event, the operation recorded a profit of 150%.

Sources on the Web

- <http://www.sidbiventure.co.in/>
- <http://www.sidbi.in>

India – ICICI Venture

Salient Features

<i>Nature</i>	ICICI Venture is one of India's largest venture capital company, involved in the management of a network of equity funds.
<i>Location</i>	ICICI Venture is headquartered at Bangalore (India), with an operational office in Mumbai.
<i>Geographical Coverage</i>	ICICI Venture is operating at the national level.
<i>Establishment</i>	ICICI Venture was established in the mid 1980s.
<i>Funding</i>	<p>ICICI Venture is a subsidiary of ICICI Bank, the largest private sector financial services group in India. Funding for its funds is provided by a wide network of third-party investors including domestic investors (public sector banks, financial institutions and insurance companies), international funds, and international financial institutions (IFC).</p> <p>Total funds under management in excess of US\$ 2.0 billion, with private equity schemes accounting for some US\$ 400 millions.</p>
<i>Investment Policy</i>	<p>ICICI Venture is involved in all types of equity financing deals, from start-up financing to expansion deals, and from MBO to mezzanine financing. The size of investments appears to vary, depending on the nature of specific funds, but no details are available on the subject. Two ICICI Venture funds (ICICI Econet Fund and ICICI Software Fund) have a strong orientation towards ICT/ICTE activities, totalizing altogether around US\$ 30 million. Other investments in these sectors are occasionally made by other funds as well.</p> <p>Most of ICICI Venture investments appear beyond the SME threshold, but in the case of ICT/ICTE activities the company appears to have invested in relatively small businesses. Early stage investments are about one third of the total deals.</p>
<i>Operations</i>	Total number of investments made since inception appears to exceed 200, with some 100 successful exits. The current portfolio includes some 50 companies, five of which in the ICT/ICTE sector.

Other information

- India Advantage Fund: launched in 2004, with a capital of some US\$ 245 million, the fund invested in existing Indian companies and India-related companies, providing dedicated expansion finance (buyouts and mezzanine funding). Today the fund is entirely invested and as of end 2006 the firm launched a further round of investment with a capital provision of US\$ 810 million.
- ICICI Econet Fund: launched in 2001 with a capital of some US\$ 20 million, the fund focused on businesses based on Internet and other related technologies. Part of the financing was provided by Compaq. This strategic alliance has helped ICICI Venture to leverage the technology skills and global alliances required to enhance the value of investments.
- ICICI Equity fund: with a capital of some US\$ 150 million (entirely contributed by ICICI Bank), the fund invests in mid-sized Indian companies, including entities purchased by financial institutions following bankruptcies or reorganizations.
- Emerging Sectors Fund: launched in 2002, with a capital of some US\$ 80 million, the fund invests in small and medium-sized Indian Companies across a variety of fast growing sectors (excluding ICT and ICTE).
- ICICI Software Fund: launched in 1997 with a capital of some US\$ 10 million, the fund aimed at providing financing to companies engaged in the business of computer related products and services with primary focus on software products and services.
- Vecaus Funds: they were set up in collaboration with the publicly-owned IVCF (another pioneer in India's venture capital industry) with the objective to promote new technology in SME (Vecaus I Fund, launched in 1988, Vecaus II Fund launched in 1990, Vecaus I (R) launched in 1994), with a total funding of over US\$ 50 million.
- TCW ICICI Fund: with a capital of US\$ 50 million, the fund is a joint venture with TCW, another venture capital company, established with the objective of investing in medium sized, late stage companies across sectors. The fund has been financed by leading investors including International Finance Corporation, Sun America, AMP Life Limited, Kleinworth Benson Limited, Phoenix Homelife Mutual LLC, Kuwait Investment Authority, Singapore Technologies (P) Limited, TCW ICICI Investment Partner and Kuwait Financial Centre.

Sources on the Web

- Web site: <http://www.iciciventure.com>

India – IL&FS Investment Managers Ltd

Salient Features

<i>Nature</i>	IIML is an asset management and venture capital company, active in the management of a network of private equity funds
<i>Location</i>	IIML is headquartered in Mumbai, with an office in Bangalore, and other presences nationwide through IL&FS network of branches.
<i>Geographical Coverage</i>	IIML is active in India as well as in other Asian countries.
<i>Establishment</i>	IIML was established in 1989 as the Credit Capital Venture Fund. In 1996 it was acquired and renamed by the Infrastructure Leasing & Financial Services Limited (IL&FS).
<i>Funding</i>	<p>IL&FS is IIML's main shareholder. Other shareholders include the Asian Development Bank, International Finance Corporation, and various Indian banks, financing institutions and large corporations. The States of Gujarat and Tamil Nadu also participate in locally implemented schemes. IIML is listed on Mumbai, Bangalore and National Stock Exchanges.</p> <p>Total funds under management are around US\$ 900 million. The funds committed to the two ICT/ICTE oriented funds are around US\$ 7 million.</p>
<i>Investment Policy</i>	IIML provides all forms of equity financing, from start-up to later stage financing and MBO. IIML manages a number of Funds, operating across a variety of sectors, e.g.: Technology, Media, Retail, Consumer Services, Manufacturing and Infrastructure. Two funds (Information Technology Fund, Tamilnadu Infotech Fund) are specifically targeted at ICT/ICTE activities, but other ICT-related investments have been made also by some of the other funds. The size of investments varies depending on the nature of specific funds under management. In the case of larger, generalist funds, or real estate facilities, investments have been in the order of US\$ 5–10 million or above. In other cases deals of US\$ 1–2 million prevails. As regards ICT/ICTE oriented funds (Information Technology Fund, Tamilnadu Infotech Fund) investments appear to be well below the US\$ 1 million threshold. Investees in IT and related fields currently account for 13% of IIML's portfolio.
<i>Operations</i>	Altogether, IIML funds have invested in over 85 companies, of which possibly 10 to 12 in the ICT/ICTE sector. Overall, there have been 30 exits so far both through IPO and other instruments, with an average IRR of 26% p.a. As regards Information Technology Fund performances appear fairly successful, having distributed dividend equivalent of the 90% of the committed value.

Other information

- IL&FS (IIML's mother company) was incorporated in 1987, and commenced operations in May 1988 as a subsidiary of Central Bank of India (CBI). The initial shareholders were the Unit Trust of India (UTI) and the Housing Development Finance Corporation Limited (HDFC). In a period from 1993 to 2001, IL&FS has seen a progressive induction of new shareholders, including: the IFC, ORIX Corporation (Japan), Crédit Commercial de France, the State Bank of India (SBI), and Indivest Pty.
- The IL&FS Group covers a wide range of activities and operates in the financial areas through IL&FS Mutual Fund and IL&FS Investment Managers.
- AIG India Sectoral Equity Fund (AISEF): launched in 1997, with a capital of US\$ 91 million. The fund, focused on Infrastructure, New Technology, and Growth Sector, making investments on equity, quasi-equity and, other equity-related instruments. Fully committed, with a total of 10 investments.
- South Asian Regional Apex Fund (SARA Fund): with a total capital of some 24 million, the fund focused on information technology & media, biotech, distribution and manufacturing, operating in the South Asia region. A total of 17 investments.
- India Project Development Fund (IPDF): launched in 2000 with a total capital of US\$ 20 million, the fund has a specific focus on infrastructures, and operates in India. Two investments completed worth about US\$ 3.5 million.
- India Auto Ancillary Fund (IAAF): set up in 1998 with a capital of about US\$ 15 million, the fund it focuses on auto components sector (plus some forays in the information technology and biotech sectors). Fully committed, with a total of 8 investments
- Tamilnadu Infotech Fund (TIF): with a capital of some US\$ 5 million, the fund focuses on high-tech sectors in the State of Tamil Nadu. Completed 5 investments to date
- Information Technology Fund (ITF): with a capital of US\$ 2 million, now fully committed, the initiative focused on Information Technology.

Sources on the Web

- www.ilfsindia.com
- www.ilfsinvestmentmanagers.com/iimnew/index.htm

Brazil – GP Investimentos

Salient Features

<i>Nature</i>	GP Investimentos is an asset management company running a series of equity funds (GP Capital Partners – GPCP, GPCP II, GPC III, and GP Tecnologia Fund), hedge funds (Petropolis Plus FI Multimercado) and real estate/mortgage backed funds (Aetatis I & II, GP Development FIP).
<i>Location</i>	GP Investimentos is headquartered in São Paulo, Brazil.
<i>Geographical Coverage</i>	GP Investimentos is a national scheme, with the intention to expand operations to other countries in the region.
<i>Establishment</i>	GP Investimentos was established in 1993. Investment operations started in 1994.
<i>Funding</i>	GP Investimentos is a private company. The source of capital of GP funds is varied and include international investors (e.g. AIG Investment Corporation, Capital Group), IFIs (e.g. IFC), and local investors. Since its inception GP has managed total funds in the order of US\$ 1.6 billion, making GP one of the largest venture capital operations in Latin America. GP Tecnologia has a total capita of about US\$ 40 million.
<i>Types of Services/ Financing</i>	<p>GP Investimentos investments are made by way of short- and long-term private equity. While in the initial phases GP funds were open also to early stage financing, recently the focus is strictly on mature enterprises with annual revenues above US\$ 50 million.</p> <p>Apart from finance, it provides networking, strategic and marketing management support and technical assistance as well, with the objective to make the company grow rapidly.</p> <p>GP Tecnologia is largely focused on internet and technology sector. Other funds have no specific sector orientation and invest in all lines of business.</p>
<i>Operations</i>	GPCP, GPCP II, and GP Tecnologia are in the harvest phase. Of the 30 deals financed 27 have been divested fully or partially, while three are still in the portfolio. The GPCP III fund has invested so far in 6 companies.

Other information

- GP Investimentos invests in growth and late stage companies with strong commitment to the country (Brazil) and Latin America. Beside ICT/ICTE GP also invests in retail, commerce, entertainment, real estate and transportation and logistic businesses. Financial structuring is done on a case-to-case basis, keeping in view factors like risk perception, growth potential, equity base and market condition.
- Apart from a clear focus on technology-based activities, the investment philosophy is characterized by a strong involvement in the strategic and marketing management of investee companies, believed to be an essential condition for adding value to financial investments.
- The earlier GPCP and GPCP II fund totaled some US\$1.3 billion, the GP Tecnologia fund raised the equivalent of some US\$ 75 million, while the most recent fund GPCP III, launched in 2006, has closed with US\$ 250 million of committed capital.

Sources on the Web

- Website: <http://www.gp.com.br/english/index.asp>

Brazil – CRP

Salient Features

<i>Nature</i>	CRP is a fund management and financial advisory company, currently managing five venture capital funds, namely: (i) CRP fund, (ii) CRP Caderi fund, (iii) RSTec fund, (iv) SCTec fund, (v) SPTec fund; (vi) CRP VI Fund.
<i>Location</i>	CRP is headquartered in Porto Alegre, Brazil.
<i>Geographical Coverage</i>	Initially, CRP funds operated in its home region (Rio Grande do Sul) but activities have gradually expanded to other regions in Brazil.
<i>Establishment</i>	CRP was established in 1981.
<i>Funding</i>	CRP is a private organization, established by Ary Burger, widely regarded as the pioneer of the venture capital industry in Brazil. The capital of investment funds managed by CRP is provided by private organizations, other venture capital companies, (Brazilian and international) banks, and IFI (Inter-American Development Bank group and IFC). The size of CRP and CRP Caderi funds (which have been fully invested) is not known. The more recent RSTec, SCTec, SPTec funds have resources in the order of 5 to 10 million each. CRP VI Fund has a capital of some US\$ 30 million.
<i>Investment Policy</i>	CRP funds provide early stage financing, typically in the form of minority equity participations or of convertibles bonds. Typical investments are in the US\$ 100–500,000 range, except for CRP VI Fund which invests some US\$ 1.0 million since the first round. CRP supplements the provision of financing with extensive hands-on management support to investee companies and post-investment assistance. Earlier CRP funds (CRP proper and CRP Caderi) had no sector orientation, although there were cases of investments in ICT. The funds of the 'Tec' series are specifically targeting high tech and innovative firms, with a strong orientation towards ICT/ICTE businesses.
<i>Operations</i>	CRP has administered and realized more than sixty investments in companies to date. The current portfolio includes 23 companies, of which at least 15 can be regarded as ICT/ICTE.

Other information

- In the early days CRP investors were private owned companies and development banks operating in southern Brazil. Over time, CRP has been joined by international investors such as Inter-American Investment Corporation and International Finance Corporation. The list of investors in CRP funds is provided in Annex C.
- CRP typically invests in locally registered, private companies. The investments are made through the underwriting by the funds managed by CRP, of convertibles bonds or stock emitted by the investee. Its activities have spread from the South of Brazil to the other regions of the Country and South America, though concentrating preferably in the Southern Cone.
- CRP funds operate on a strictly commercial basis and its investors search for investment opportunities that can yield significant gains, over 25% a year. Therefore, applicant companies' selection and appraisal for investment are rigorous.
- Examples of investments in ICT businesses:

NUTEC/ZAZ – Software manufacturer located in Porto Alegre and founded in 1987. CRP Caderi invested in Nutec in 1991 US\$ 280,000, acquiring 16% of the voting shares equities. At that time, Nutec developed UNIX platform applications and was the Brazilian market leader. It sold 6,000 copies of its main software, N'Office. In 1991, its revenues came to US\$ 450,000. Since 1994, Nutec has turned to the Internet market and has become one of the largest access providers in Brazil. The owners and CRP sold their shares in 1996 to RBS Group for US\$ 1,060,000. After three years, Nutec became part of Terra Networks group, after being sold to Telefónica de Espanha.

DIGITAL ELECTRONIC INDUSTRY – Manufacturer of equipment for data communications located in Porto Alegre and founded in 1978. In 1985, CRP made an investment representing 23% of Digitel's capital. The company's revenues went from US\$ 2.8 million in 1984 to US\$ 38 million in 1998 making the company the market leader in Brazil and an exporter to several countries including the USA. CRP became Digitel's shareholder and, afterwards, coordinated the entrance of other institutional investors such as Arbi, Citibank and Investec (Brasilpar), and BNDSPar. CRP sold its participation in 1996.

Sources on the Web

- Website: <http://www.crp.com.br/>
- Website SPTec: <http://www.sptec.com.br/>

Vietnam – Mekong Capital

Salient Features

<i>Nature</i>	Mekong Capital is the manager of two private equity funds, the Mekong Enterprise Fund (MEF) and the recently launched Mekong Enterprise Fund II (MEF II)
<i>Location</i>	Mekong Capital is based in Ho Chi Minh City. The Funds are domiciled in the Cayman Islands.
<i>Geographical Coverage</i>	MEF and MEF II are regional schemes covering the "Mekong Region" (Vietnam, Laos and Cambodia)
<i>Establishment</i>	Mekong Capital was formed in 2001.
<i>Funding</i>	MEF was launched in April 2002, and MEF II in June 2006 MEF has a capital of US\$ 27 million. MEF II has a capital of US\$ 50 million Funding was provided by a group of 28 institutional and individual investors, including international institutions, namely: i) the Asian Development Bank (ADB); ii) the Netherlands Development Finance Company (FMO); iii) the Nordic Development Fund (NDF); iv) the Swiss Investment Fund for Emerging Markets (SIFEM); v) the Finnish Fund for Industrial Cooperation Ltd. (Finnfund); vi) the Belgian Investment Company for Developing Countries (BIO).
<i>Investment Policy</i>	MEF is a generalist fund, investing in unlisted private Vietnamese companies, active in various sectors, e.g. plastics, packaging, wood processing, garments etc. The focus is on well-established companies with clear growth perspective, start-ups are not considered. The targeted size of investment sought is on average US\$1.2 million. Instruments may include common shares, preferred shares, convertible bonds and other type of securities. MEF II will have similar focus and strategy as MEF I. The average deal targeted is however slightly larger, i.e. US\$ 3.0 million.
<i>Operations</i>	The MEF's portfolio includes 11 enterprises. Only one deal is in the ICT/ICTE sector, namely <i>Lac Viet</i> a leading IT companies providing a wide range of Hardware and Software products and services. The amount invested is US\$745,000. <i>Lac Viet</i> is the smallest of MEF's investment, the largest being US\$ 1.85 million, while the average is US\$1.4 million. MEF II has closed its first deal in November 2006

Other information

- MEF's typical investment is in manufacturing and export oriented companies. The Fund is primarily focused on private sector domestic firms rather than on equitized SOEs or foreign-owned companies. Selective procedures are very stringent; the Fund invests only in well-managed companies with a proven track record.
- The expected life-cycle of MEF is 10 years. By 2007 the investment stage should be concluded and the harvest phase will begin. On average, a single deal may last 5–8 years.
- The average annual revenue growth rate for our investee companies has been 34.6% between the period in which we invested and 31 December 2005. Meanwhile, average annual net profit growth has been approximately 43.9% over the same period.

Sources on the web

- www.mekongcapital.com

Vietnam – VinaCapital

Salient Features

<i>Nature</i>	VinaCapital is an asset management and corporate financing company.
<i>Location</i>	VinaCapital's head office is in Ho Chi Minh City; decentralized offices are in Hanoi, Hong Kong and San Francisco.
<i>Geographical Coverage</i>	VinaCapital operates in various Asian countries, but most of its activities are based in Vietnam.
<i>Establishment</i>	VinaCapital was established in 2003
<i>Funding</i>	VinaCapital is currently managing two closed-end funds—the <i>Vietnam Opportunity Fund</i> (US\$ 560 million) and ii) the <i>Vinaland</i> (US\$ 205 millions) which focuses on the real estate market, both of which listed at the London Stock Exchange. In October 2006, VinaCapital also launched a venture capital fund, the <i>DFJ VinaCapital L.P.</i> (DFJV), who focuses on investment in areas such as internet, wireless technologies, software, BPO, digital media, and ICT infrastructure. This 'technology fund' has a capital of US\$ 50 million, and it has been set up in collaboration with a Silicon Valley partner: the venture capital firm Draper Fisher Jurvetson.
<i>Investment Policy</i>	<p>The DFJV fund will operate with private as well as listed, and over-the-counter companies. The investments will mainly target early stage and expansion stage financing. The acquisition of stakes in SOE that are undergoing privatization will represent another line of investment. Finally, international technology companies planning to enter in the Vietnamese market will also be considered.</p> <p>The typical investment will have a tenure of 4–7 years, and a maximum value of US\$ 5.0 millions. As regards exit strategies there is a preference for IPOs both through Vietnamese stock market and regional ones (Hong Kong and Singapore), but also M&A is considered as a viable option.</p> <p>VinaCapital can adopt financing instruments such as equity or quasi equity schemes (typically convertible bonds), and debt financing.</p>
<i>Operations</i>	The DFJV fund has invested so far in just one deal, in the internet sector. The Opportunity Fund holds stake in less than 40 companies, including one ICT company. Vinaland have closed two investments so far.

Other information

- The DFJV is incorporated in the Cayman Islands as a limited partnership venture capital fund. The U.S.-based partner—Draper Fisher Jurvetson (DFJ)—is a VC firm specialized in technology, and with an extensive global network (30 offices worldwide). Overall, DFJ's committed capital is of about US\$ 3.5 billion.
- One of the main axis of DFJV's strategy is to invest in Vietnamese enterprises well-positioned to replicate business models that proved successful in U.S. or China. This is especially the case of internet company, as the local market still offers good opportunity in this sector while the legislation appears favorable.
- A key-element of DFJV's model is represented by the involvement of technology experts as limited partner. These experts are playing an important role in assisting DFJV to select valid business opportunities in their relevant domain of knowledge.
- Although DFJV do not necessarily seek a board seat in the invested companies, there is a strong commitment in supporting the creation of value through direct participation in the life of the investees. This may include the development of business plans, the creation of strategic partnerships, and the recruitment of skilled managers.

Sources on the web

- www.vinacapital.com

Morocco – Capital Morocco

Salient Features

<i>Nature</i>	Capital Morocco is a generalist venture capital fund, targeted at medium sized companies. The fund is managed by Capital Invest, a joint venture between (i) BMCE Capital, the investment banking arm of BMCE, one of Morocco's leading commercial banks (85%), and (ii) the French venture capital firm SIPAREX (15%).
<i>Location</i>	Capital Morocco is incorporated in Jersey for tax avoidance purposes while Capital Invest is based in Casablanca.
<i>Geographical Coverage</i>	Capital Morocco operates in Morocco.
<i>Establishment</i>	Capital Morocco was established in 2000.
<i>Funding</i>	With a capital of MAD 250 million, Capital Morocco was funded by a group of national and international financial institutions (BMCE, Al Watanya, Royal Maroc d'Assurances, EIB, Proparco, etc.), with individual shares in the order of 8–12%.
<i>Investment Policy</i>	Capital Morocco is involved in development capital operations, without any specific sector orientation. Capital Morocco is primarily aimed at medium sized enterprises, with turnover in excess of MAD 50–100 million. Investments in smaller companies are considered on a case by case basis. Historically, investments made by Capital Morocco have been in the MAD 10 to 25 million, with only a couple of deals below MAD 10 million. Deals involve equity financing, convertible bonds and, more rarely, loans (<i>comptes courants d'associés</i>).
<i>Operations</i>	Capital Morocco is now fully invested with about a dozen operations. Three investments are in the ICT/ICTE sector broadly defined, including: Galaxy Electronics (a distributor of mobile phones and consumer electronics goods, MAD 6 million), Distrisoft (a distributor of IT and telecom products, MAD 15 million), and M2M (a leading developer of software for payment systems, MAD 20 million)

Other information

- Capital Invest is *de facto* the private equity arm of the BMCE group. The same team (but under the name of Actif Invest), is responsible for the management of Actif Capital 1, Morocco's first real estate investment fund. Established in 2004, Actif Capital has a capital of MAD 300 million (with the possibility of further increasing it to MAD 800 millions). Shareholders include mainly insurance companies, such as MAMDA-MCDA, RMA Watanya, SCR (subsidiary of CDG)
- At end 2005 Capital Invest announced the launch of the Capital North Africa Fund (CNAF). With a capital of MAD 350 million provided by institutional investors and development financial institutions (EIB, FMO, SECO, BIO), CNAF will be operating primarily in Morocco, but with the possibility of investing up to 30% in other countries, namely Tunisia and Algeria. CNAF is supposed to target primarily LBO deals, with an average investment in the order of MAD 15–20 million and a preferred time horizon of 4 years.
- At end 2005 Capital Invest was also supposed to launch a second generalist fund (Capital Morocco 2). However, this initiative seems to have been at least temporarily superseded by the launch of CNAF.
- In addition, Capital Invest is considering the launch in late 2006/early 2007 of a fund aimed at financing ICTE off shoring activities (call centers), the fund could have a size of US\$/€ 10 million, and could target investments in the order of 1–2 millions.

Sources on the Web

- www.capitalinvest.co.ma

Morocco – Maghreb Private Equity Fund

Salient Features

<i>Nature</i>	MPEF is private equity fund, active in Morocco and other Maghreb countries. MPEF is managed by MaroInvest, a joint venture between Tuninvest Finance Group (TFG), a venture capital fund owned by SIPAREX, and the Upline Group, a well established Moroccan brokerage company, also active in private equity
<i>Location</i>	MPEF and MaroInvest are both based in Casablanca
<i>Geographical Coverage</i>	The main country of operation is Morocco, to which about 70% of MPEF resources are dedicated, the rest being tentatively earmarked for investments in Algeria and Tunisia.
<i>Establishment</i>	MPEF was established in 2000
<i>Funding</i>	MPEF has capital of US\$ 23,196 million. Funding was provided by a group of institutional and international investors, including: (i) Averroès Finance (a French fund of funds which took over early contributions from Proparco and CDC – PME), (ii) the Natexis group (Natexis Banque Populaire and Natexis Private Equity International), and (iii) various IFI/DFI (IFC, EIB, SECO, and FMO).
<i>Investment Policy</i>	MPEF is a generalist fund, involved in venture capital, development capital and LBO operations. MPEF appears to be primarily aimed at medium sized enterprises. The size of investments sought is in the US\$ 0.5–3 million range, but there are no data on actual size of past deals.
<i>Operations</i>	As of end 2004, MPEF was reported to have made at least 8 investments, of which 6 in Morocco, 1 in Algeria and 1 in Tunisia. Three investments are in the ICT/ICTE sector broadly defined, including: <i>Sigmatel</i> (a telecom and IT network integrator), <i>S2M</i> (a leading provider of payment services), and <i>Matel</i> (a wholesale distributor of IT products). All ICT investee companies are based in Morocco.

Other information

- Through its contacts with Tuninvest Finance Group, Maro Invest is also connected with AfricInvest, a € 25 million venture capital fund targeted at SME and operating in the Maghreb and Western Africa. AfricInvest is participated by institutional investors (Bank of Africa, IBTC group) and IFI/DFI (EIB, FMO, BIO and Finnfund).

Sources on the Web

- www.maroinvest.com

Ukraine – Euroventures Ukraine

Salient Features

<i>Nature</i>	EVU is a private equity and investment advisory firm, which manages two equity funds (EVU I and EVU II) and a London-based investment trust.
<i>Location</i>	EVU is headquartered in Kiev. A support office is located in Amsterdam.
<i>Geographical Coverage</i>	EVU is mainly focused on enterprises incorporated, headquartered, domiciled, or whose businesses are carried on primarily in Ukraine, but may also invest in other countries in the region.
<i>Establishment</i>	EVU was incorporated in 1998 in Cyprus. The first fund (EVU I) was launched in 1999, while the second fund (EVU II) had a first close in 2005 and a second close in mid 2006.
<i>Funding</i>	<p>EVU I was capitalized with 26 million Euros (some US\$ 34 million) provided mainly by <i>the European Bank for Reconstruction and Development</i> (EBRD)—which injects some 90% of funds, and by FMO (a Dutch Development Bank) and the founding partners of EVU. In addition, the technical assistance fees were sponsored by the Dutch Government under its technical assistance program for the entire 10-year period of Fund life. These resources have been employed for the due diligence and to provide investees with additional services in the field of marketing, accounting and other organizational aspects.</p> <p>EVU II is a US\$ 80 million fund with the same characteristics of EVU I. Main funders are: EBRD (US\$ 25 million); IFC (US\$ 7.5 million); SECO (US\$ 5 million); FMO (US\$ 5 million). The balance is provided by various foreign institutional and individual investors.</p>
<i>Investment Policy</i>	EVU I & II are generalist equity funds. Particular interest is devoted to fast moving consumer goods and distribution. ICT sector is seldom targeted. Potential candidates are relatively well-established firms with a minimum turnover of some US\$ 10 million, and some years of business experience. Public companies are not considered. Under EVU I the average size of transactions has been of about US\$ 2.0 million. But for EVU II it is expected that operations will fall in the US\$ 5.0 to 15.0 million range. Typically EVU acts as a minority investor, acquiring stakes in the order of 30–40%, but occasionally may decide to take the control of the companies in syndication with other investors. Financing instruments contemplate straight-equity and quasi-equity while debt instruments are not considered.
<i>Operations</i>	Since its inception, EVU I has invested some US\$ 30 million in ten deals. Three investments were fully exited and few more will be divested in 2007. Given the current trend the expected net IRR to investors will be around 29%. EVU II experienced only one loss so far.

Other information

- In addition, EVU manages since 2005 the Ukraine Opportunity Trust PLC (UKRO), a financing vehicle with an overall capital of US\$ 61.8 million. The Fund is formed through the Placing of Ordinary Shares and Warrants on the London Stock Exchange, and will co-invest pari-passu and pro-rata with Euroventures Ukraine Fund II. Thus As the total combined capacity for private equity investments is of US\$ 130 million dollars. Funds will be directed to companies operating in the field of consumable goods, value-added business services, media and entertainment, export-oriented manufacturing, logistics & distribution, and point-of-sale technologies.
- The only attempt to venture in the ICT/ICTE sector was made in November 2000, and regarded P5 Communication a project of merging of an ISP and a local e-commerce portal. The objective was to combine competitive internet access with additional services in the field of payment systems. But the target of 50,000 customer was not reached and after 3 years and some attempts to bring in strategic alliances, EVU eventually decided to write off the investment. Afterwards, no other transaction in the ICT/ICTE sector was closed.

Other Sources on the Web

- www.evu.kiev.ua

Ukraine – SigmaBleyzer

Salient Features

<i>Nature</i>	SigmaBleyzer is a private equity fund manager and a provider of an ample range of financial services.
<i>Location</i>	SigmaBleyzer is headquartered in Kiev, operates regional presences in Bulgaria and Romania, and has a back office in the United States.
<i>Geographical Coverage</i>	SigmaBleyzer is a regional scheme, covering South-Eastern Europe, with a special focus on Ukraine.
<i>Establishment</i>	SigmaBleyzer launched its first fund in 1996—the Ukrainian Growth Fund (UGF). UGF II was set up in 1997, and one year later a third fund begun operations. In 2005, SigmaBleyzer launched its fourth facility, the Southeast European Fund (SBF IV)
<i>Funding</i>	The first and the second chapter of UGF had a capital of US\$ 20 million. UGF III closed at US\$ 60 million. But the largest is the SBF IV for which some US\$ 325 million has been raised. SigmaBleyzer's funds normally see the co-financing of several Limited Partners. In the case of the most recent scheme, some 40 investors were involved which has invested from as little as US\$ 1.0 million up to some US\$ 70 million. The largest sponsor is the European Bank for Reconstruction and Development. Other financial institutions include: Goldman Sachs, UBS, LVMH, Bank Austria, InvestKredit etc.
<i>Investment Policy</i>	<p>SigmaBleyzer's funds are generalist, and operate in sectors diverse, e.g. retail and distribution, media, food and beverages, naval industry, ICT etc.</p> <p>SigmaBleyzer has a distinct hands-on approach as regards the business strategy of its invested companies. To this end, SigmaBleyzer usually takes the control share in its investees. This is due to the scarce protection granted by the law to the minority investors in these countries. The companies targeted are normally well-established entities, and the investment duration is typically comprised between 3 and 5 years.</p> <p>The size of deals has increased overtime from some US\$ 300,000 on average for UGF I to US\$ 1.8 million for UGF III. The newly established SBF IV will focus much larger deals, i.e. in the US\$ 5 to 15 million range.</p>
<i>Operations</i>	<p>The three UGF are now closed and harvesting from the investment still on-going. Altogether these funds made a total of 142 investment, subdivided as follows:</p> <ul style="list-style-type: none">■ UGF I – 68 transactions;■ UGF II – 40 transactions;■ UGF III – 34 transactions.

Other information

- SigmaBleyzer was founded by Michael Bleyzer, an Ukrainian national which has made its career in the United States in the field of management and financial advisory. After the collapse of Soviet Union he came back to Ukraine and leveraging on its experience he started making investment in the region.
- Initially, the Ukrainian Growth Fund series were created to take advantage from the on-going privatization process. The then areas of business were metals, industrial machineries, electrical utilities, food and beverage etc. The situation changed after the Russian financial crisis of 1998, but while many equity investors were severely affected by this event SigmaBleyzer's UGF managed to maintain and increase its value. More recently SigmaBleyzer has included other sector in its interests, like Cable TV and Media, and Software and IT services.
- In 1999, the SigmaBleyzer's founder set up the Bleyzer Foundation. The Foundation's activities concentrate on research and study of developing countries and transition economies. Through the Foundation, SigmaBleyzer is able to establish relations with governments and stakeholders and cooperate in the institutional strengthening and legal reforms. This also increases the chances of success of the Funds. The information produced by the Foundation is made available freely to banks, IFIs, governments and to the great public through internet.
- As of today, SigmaBleyzer has completed only one deal in the ICT/ICTE sector. The invested company, Sofline, is an independent software developer and systems integrator, providing solutions for business and government sectors. Sofline services ranges from application development, to outsourcing services in the field of financial and operational management, billing, and workflow systems. Sofline is the largest software house in Ukraine, with proprietary product lines consisting of seven products, and a successful track record implementing more than 100 projects. SigmaBleyzer's investment has helped the positioning of the company on the market, and the expansion abroad of its client base through outsourcing services. Under SigmaBleyzer's guidance, Sofline has become profitable, increased its overall competitiveness and increased its staff from 100 to 400.

Sources on the Web

- www.sigmapleyzer.com

Argentina – Chrysalis Argentina

Salient Features

<i>Nature</i>	Chrysalis is a company active in the scouting and support of innovative enterprises. Chrysalis provides seed and startup equity financing and strategic guidance to the invested companies.
<i>Location</i>	Chrysalis is based in Buenos Aires, Argentina.
<i>Geographical Coverage</i>	Chrysalis is a national scheme.
<i>Establishment</i>	Chrysalis was established in 2003 and started operations in 2004.
<i>Funding</i>	Chrysalis was founded by a group of professionals from different disciplines acting as a business angel group. It does not manage a closed end fund but mobilize the capital for investments on a case-by-case basis.
<i>Investment Policy</i>	<p>Chrysalis targets enterprises in the early stage, without any sector preference. Chrysalis' follows a three-pronged approach:</p> <ul style="list-style-type: none">■ direct funding (from US\$ 50,000 to 150,000) and indirect funding, i.e. assistance in finding other co-investors;■ networking: Chrysalis helps establishing relations with institutions, investors, enterprises etc. both at the national and international level;■ strategic collaboration: Chrysalis takes an active role in the invested companies, adding value to the business through the professional and market experience of its partners. <p>Financing is in the form of straight equity and the duration of investment is probably around 5 years.</p>
<i>Operations</i>	Since its launching in March 2004, Chrysalis has closed two deals and a third is in the pipeline. The first regards the ICT sector. The project consists on the development of a software for veterinarians and breeders. The project is implemented through a joint venture with the Universidad del Centro, and Chrysalis contributed to 70% of the total, being US\$ 100,000. The second deal is in the field of commercialization of opportunities emerging in the field of biotechnology. The amount invested is of US\$ 70,000.

Other information

- Chrysalis is also involved in the set up of the Club de Business Angels, founded by 25 alumni of the Escuela de Dirección y Negocios de la Universidad Austral. The club, which started operation in 2005, requests its member to invest at least US\$ 20,000 per year.

Sources on the Web

- www.chrysalisargentina.com.ar

Argentina – Pegasus VC

Salient Features

<i>Nature</i>	Pegasus is an investment firm, with activities ranging from growth stage equity financing to large M&A operations.
<i>Location</i>	Pegasus' main offices are located in Buenos Aires and Boston
<i>Geographical Coverage</i>	Pegasus is a regional scheme, with portfolio companies in Argentina, Mexico and the U.S.A. But operations concentrate in Argentina.
<i>Establishment</i>	Pegasus was founded in August 2000
<i>Funding</i>	Pegasus has ten senior partners, all of whom with relevant background in international finance and business management. Since its inception, Pegasus has invested an estimated US\$ 100 million.
<i>Investment Policy</i>	The main focus of Pegasus is on mezzanine and late stage investment. This can include turnaround or distressed situations requiring capital for restructuring and active management involvement. Well-established early stage companies may however be considered when perspectives of significant growth are present. Typically, it targets sectors like: retail, logistics, telecom, BFSI, and to a lesser extent also ICT/ICTE. To operate in this field, Pegasus has recently made a joint venture with a firm specialized on hi-tech business, and created <i>Aconcagua Ventures</i> a financial vehicle for early-stage investments in technology domains. Financial instruments include equity, quasi-equity, senior or subordinate debt. The size of transaction closed by Pegasus is normally undisclosed but likely range from US\$ 3–5 million in the case of growth capital operations up to US\$ 20 million and more for late stage acquisitions.
<i>Operations</i>	As of today, Pegasus has completed seven deals, one of which based in Mexico and another being a U.S.-Argentina operation. Two transactions were made in the ICT sector.

Other information

- The ICT enterprises in Pegasus portfolio are:
 - **Core Security Technologies** – a leading provider of state-of-the-art Information Security technology to large corporate clients in 30 different countries. Core has offices in Boston and Buenos Aires, and its customers include corporation (IBM, Microsoft, Ernst & Young, Accenture, etc.) government agencies and military organizations. Pegasus invested some US\$ 5.0 million in Core in February 2001. It also provides assistance for the development of the business plan, economic and financial models, growth strategy and organizational design of the company, and supported the entrance into the US market. Recently, Core staff has reached 100 units.
 - **MasNegocio**, is a Mexican application solution provider which specializes on ERP and CRM systems for SMEs throughout Latin America. Pegasus invested in MasNegocio in November 2000 and took two seats in the Board of Directors.
- In 2006, Pegasus has made a joint venture with Core-Core for the establishment of Aconcagua Ventures, a VC firm which will focus on deals in technology sector. Core-Core is a group of Argentine entrepreneurs specialized in the creation and operation of hi-tech businesses, among which it is worth to mention the Pegasus-invested Core Security Technology. According to the information available Aconcagua Ventures has not closed yet its first deal.

Sources on the Web

- www.pegasusvc.com



ANNEX B – DEVELOPMENT FUNDS

Small Enterprises Assistance Funds (SEAF)

Salient Features

<i>Nature</i>	SEAF is a fund management company, providing long term financing through a network of equity funds.
<i>Location</i>	SEAF is headquartered in Washington, DC, and operates a network of offices in some 15 countries.
<i>Geographical Coverage</i>	SEAF funds operate in Latin America (Peru and Colombia), South Asia (India), East Asia & Pacific (India), and Europe and Central Asia (Uzbekistan, Kazakhstan and Kyrgyzstan, Poland, Bulgaria, Macedonia, Croatia, Romania, Baltic States). In the past, SEAF also operated in Russia.
<i>Establishment</i>	SEAF was established in 1989. Investment operations started in 1992.
<i>Funding</i>	SEAF is a private non profit organization. The capital of investment funds managed by SEAF is provided by IFI, donors, bilateral DFI (e.g. Germany's DEG) and, to a smaller extent, private entities (pension funds, venture capital funds). Total capital under management since inception is about US\$ 245 million (committed funds), of which: US\$ 205 million in the 13 active funds and US\$ 40 million in 5 closed or inactive funds. The capital under management increased dramatically in 2005, with the closing of the <i>India Investment & Growth Fund</i> , with a capital in excess of US\$ 100 million.
<i>Investment Policy</i>	SEAF provides early stage and expansion financing, typically in the form of equity participations. Equity financing is often combined with quasi-equity and subordinated debt. Typically, SEAF funds are minority shareholders, but in certain circumstances they have acquired majority shareholdings. Historically, the average size of investments has been in the order of US\$ 400,000. However, in the case of more recent funds, SEAF is prospecting investments in the US\$ 500,000–US\$ 2 million range. SEAF funds supplement the provision of financing with extensive hands-on management support to investee companies.
<i>Operations</i>	Since inception, SEAF funds have invested in some 230 companies, with some 130 full or partial exits. The number of ICT/ICTE firms financed by SEAF funds is not known, but is likely to be in the order of 15–20.

Other Information

- SEAF was established in 1989, as a private investment subsidiary of the international development organization CARE. At that time the organization was known as CARE Small Business Assistance Corporation (CARESBAC). The first two SME investment funds became operational in Poland and Bulgaria in 1992 (CARESBAC Polska and CARESBAC Bulgaria). In 1995 CARESBAC was spun off and became a fully independent organization under the name of Small Enterprise Assistance Funds. Activities picked up considerably in the late 1990s and early 2000s, with the establishment of over a dozen new funds (see chronology in Annex A).
- Since the early days SEAF has attracted significant support from IFI and donors. USAID repeatedly provided grant money to cover for operating expenses, while the EBRD and the IFC have invested significant amounts in various funds. Over time, IFI have been joined by a DFI from various European countries (Germany, Sweden, Belgium) and by some private investors. The *India Investment & Growth Fund* is the first SEAF fund fully financed by private sources. The list of investors in SEAF funds is provided in Annex B.
- SEAF is a US tax-exempt organization registered in the State of New York. SEAF operates its fund management activities through a wholly owned Delaware registered for-profit investment management company, SEAF Management, LLC. Total staffing worldwide is around 85.
- SEAF typically invests in locally registered, private companies. SEAF investments are subject to the usual restrictions on ethical and environmental grounds (weapons, tobacco, etc.). SEAF funds operate on a strictly commercial basis. Investment agreements are tailored to the specific situation, but typically include put and call options as well as various protective features. Equity investments are often combined with quasi equity/debt financing, to reduce the potential risks.

(continued on next page)

Small Enterprises Assistance Funds (SEAF) (continued)

- Unlike other equity investors, SEAF extends significant post investment support to investee companies, in the form of hands-on technical assistance, network development activities (i.e. identification of clients, suppliers, etc.), and training. Assistance is provided directly by local fund management teams and through two dedicated Business Support Units based in Washington and in The Netherlands.
- Since inception, SEAF has been involved in the management of 18 funds, of which 13 are active and 5 are inactive or have been closed. **Active funds:** US\$ 205 million under management (total committed capital); US\$ 60 million invested in 126 portfolio companies, with an average investment of about US\$ 475,000. **Inactive/closed funds:** US\$ 40 million under management (total committed capital); US\$ 34 million invested in 106 portfolio companies, with an average of about US\$ 320,000.
- Information related to active funds indicates a gross IRR of 28% on 68 full or partial exits. Data on inactive funds are not available, but returns are believed to be somewhat lower.
- In Peru, SEAF has set up in 2004 the subsidiary **SEAF Peru SAFI**, which administer the *Fondo Transandino Peru* (FTP)—a US\$ 15 million financing vehicle for SMEs established by SEAF in partnership with USAID, the Swiss SECO, the Belgian BIO and two local pension funds Prima AFP and AFP Integra. So far, SEAF Peru SAFI has screened some 200 proposals and closed 4 deals for an overall investment of US\$ 5.6 million. Some eight more transactions are in the pipelines which will probably saturate the capacity of the Fund, but negotiations are on-going for a new round of financing. The Fund has invested in business active in different fields but with a strong focus on export. No transaction in the ICT/ICTE sector has been made.

Sources on the Web

- www.seafweb.org
- www.seafperu.com/index.htm

Business Partners

Salient Features

<i>Nature</i>	Business Partners is a financial organization, providing equity and debt financing as well as property-related services and technical assistance to SME
<i>Location</i>	Business Partners is headquartered in Johannesburg and operates a network of 22 offices throughout South Africa and a subsidiary in Madagascar
<i>Geographical Coverage</i>	Business Partners is primarily active in South Africa. Lately, the company has become involved in international operations, with existing or planned operations in Madagascar, Kenya and Ghana
<i>Establishment</i>	In its present form, Business Partners was established in 1998. Its predecessor, the Small Business Development Corporation was established as a government-owned entity back in 1981.
<i>Sponsors/Owners</i>	Business Partners is the result of private public initiative. The shareholders include the state-owned Khula Enterprise Finance Limited (itself an SME financing structure), Rengro (controlled by a leading South African private group), some financial institutions (Nedcor, Standard Bank, etc.) and over 40 other private and public entities. Funds for South African operations are raised domestically. Funds for the upcoming overseas investments activities are partly provided by the IFC, with which Business partners has reached a framework agreement. IFC contribution includes the provision of investment money as well as a US\$ 2.5 million grant to cover for operational expenses.
<i>Types of Services/ Financing</i>	Business Partners includes three divisions, namely: (i) Business Partners Investments , providing equity, quasi equity and debt financing to SME, with typical financing ranging between US\$ 40,000 and 2.3 million. The maximum maturity is 10 years but most operations fall in the 3 to 5 years range; (ii) Business Partners Properties , providing property brokering and management services to SME; and (iii) Business Partners Mentors , the technical assistance arm of the group, providing mentoring services to small entrepreneurs. In addition, through an agreement with the Umsobomvu Youth Fund, Business Partners is active in the promotion of entrepreneurship among previously disadvantaged young people.
<i>Attitude towards SME</i>	In line with the mission of its predecessor, Business Partners explicitly targets small and medium sized enterprises. The eligibility criteria for potential Business Partners' clients are rather broad, largely exceeding usual definitions of SME (assets up to US\$ 7.5 million, turnover up to US\$ 30 million, and up to 500 employees) but the clear SME orientation is confirmed by the average size of financing deals, that in FY 2005 was around US\$ 200,000 (up from less than US\$ 150,000 in FY 2004). Business Partners' overseas operations are expected to retain the same marked SME orientation.

(continued on next page)

Business Partners (continued)

Funding

At end of FY 2005, Business Partners' total portfolio in South Africa was around US\$ 165 million. Since establishment, Business Partners has extended financing for a total of some US\$ 800 million.

Business Partners' three overseas investment operations are expected to total some US\$ 35–45 million (10 million in Madagascar, 15 to 25 million in Kenya, 10 million in Ghana).

In FY 2005 Business Partners approved 538 investments (513 in the previous fiscal year), worth a total of some US\$ 100 million. About 40% of transactions related to SME owned or promoted by previously disadvantaged individuals, about 30% to female entrepreneurs. The overall return on assets was around 6%.

Other Information

- Business Partners is a typical example of a public private initiative trying to reconcile the achievement of major policy goals (SME development, black economic empowerment, women entrepreneurship) with a commercial orientation. It is not clear whether the participation of certain leading private investors in Business Partners' capital is primarily due to financial or political considerations.
- One of Business Partners' peculiarities is the widespread recourse to flexible forms of quasi equity financing, the so called Royalty Partner and Contract Partner formulas. Through the first mechanism Business Partners is able to support unincorporated entities, earning a royalty that is calculated as a fraction of total turnover, thereby getting away with more complex monitoring mechanisms. Through the Contract Partner formula, Business Partners is in the position of financing the execution of specific deals ("contracts"), through the provision of a short term loan with a profit sharing clause. The adoption of similar schemes, particularly well suited to SME in developing countries, appears to be rather unique. The only other known example of a similar approach is represented by two EBRD-financed funds that were active in Albania and Kosovo in the early 2000s and that extensively relied on the establishment of unincorporated joint ventures, with profits sharing formulas related to turnover (or, in certain cases, even to physical output).
- **BPI Kenya** will invest in small and medium enterprises with a turnover below US\$ 1.5 million per year, active in almost all sectors of the economy. The foreseen size of investments is from US\$ 50,000 to 500,000. Financing instruments include straight equity, quasi-equity and loan at rates aligned to the local market (around 15% p.a.). The duration of investments may vary from 3 to 5 years. BPI Kenya targets startups as well as established companies. The scheme is not sector-oriented but a particular inclination toward innovative businesses is reported. BPI Kenya is hosted at the SME Solution Center that is an IFC-sponsored facility aimed at supporting the growth of SME in Kenya, through the provision of a variety of services, including (i) technical assistance, (ii) mentoring, and (iii) financial support.

Sources on the Web

- <http://www.businesspartners.co.za/>
- <http://www.khula.org.za/main.html>
- <http://www.ssc.co.ke/>

Aureos Capital

Salient Features

<i>Nature</i>	Aureos is a private equity investor in SMEs in the emerging markets.
<i>Location</i>	Aureos is headquartered in London. Its global network includes 21 offices worldwide.
<i>Geographical Coverage</i>	Aureos operates through a network of 16 equity funds active in Sub Saharan Africa, Central America, certain parts of Asia, and in the Pacific Islands.
<i>Establishment</i>	Aureos was established in 2001, as a joint venture between the Norwegian Investment Fund for Developing Countries (NORFUND) and CDC Capital for Development (CDC), Britain's development finance institution.
<i>Funding</i>	Aureos has US\$570 million under management but plans are to expand the committed capital of an additional US\$500 million in the 2006–2008 period. Funding is mainly provided by the two founders. In 2006 the 26.5% of the share capital was sold to Frontier Investments LP, a holding set up by Aureos Group employees. Frontier Investments LP is expected to expand its participation to 49% by end 2008. Another minority co-investor is FMO, the Netherlands development finance institution. FMO is expected to become a major shareholder in the near future with an overall capital commitment of some US\$ 100 million by 2010.
<i>Investment Policy</i>	At establishment Aureos was given a clear mandate in the area of SME financing, and indeed the company inherited a large part of CDC's small investments portfolio. The goal of supporting SME development is still central to Aureos' operations but the company is showing an increasing interest towards larger deals. Indeed, in the case of later funds, the "desired" size of investment has increased to a minimum of some US\$ 1.0 million with maximums in the order of US\$ 5 millions and above. On average, the deals closed so far by the six regional funds have a capital of US\$ 3.0 million. Aureos Funds tend to focus on later stage operations such as MBOs/MBIs, mergers and

(continued on next page)

Aureos Capital (continued)

acquisitions, and cross-border expansions. Typically, Aureos Funds do not have a sector approach and ICT/ICTE enterprises represent a marginal share of the portfolio. Typically, Aureos Funds take minority stakes and board representation in invested companies. Financing instruments include equity and quasi-equity participation (convertible preferred shares, convertible debenture etc.).

Operations

So far, Aureos has completed 180 deals worldwide. All in all, the six regional funds have closed 28 transactions for a total invested capital of US\$ 92 million.

Other information

- The first of the regional Aureos funds, has been the Aureos Central America Fund (ACAF) which achieved a US\$ 33 million closing in 2002. Then Aureos successfully raised US\$ 140 million for launching three equity funds for SMEs in Sub-Saharan Africa, namely Aureos Southern Africa Fund (ASAF), the Aureos East Africa Fund (AEAF) and the Aureos West Africa Fund (AWAF). In late 2004, Aureos announced a first close of US\$ 40 million for its South-East Asia Fund (ASEAF). This facility focuses on Thailand, Philippines, Indonesia and the Mekong Region and aims at raising an overall US\$ 100 million. The latest regional fund established by Aureos is the South Asia Fund I (ASAF I), launched in 2005 with a US\$ 70 million under management. The six regional funds adopt similar investment policies and operate with similar modalities, though some differences may be observed due to the market where operating and the different co-funders composition.
- **AWAF** is headquartered in Nigeria, and have two decentralized offices Ghana and Senegal. The capital of the fund is of US\$ 50 million partly provided by additional co-funders such as European Investment Bank (EIB), Nordic Development Fund (NDF), and two African banks: the Ecobank Nigeria and the Lead Bank Nigeria. AWAF operates throughout all West Africa region and targets deals in the US\$ 0.5 to 4 millions range. To date, AWAF closed five transactions for a total invested amount of US\$ 10 millions. None of these operations are in ICT/ICTE sector, but reportedly there are a couple of proposals under examination.
- **AEAF** is headquartered in Kenya with a decentralized office in Tanzania. The capital under management amount to US\$ 40 million, financed by Aureos' founders in partnership with other institutional investors, namely: the Swiss State Secretariat for Economic Affairs (SECO), the European Investment Bank (EIB), the International Finance Corporation (IFC), the Netherlands Development Finance Company (FMO), among others. The operations of AEAF are concentrated in Kenya, Tanzania and Uganda. As of today, the AEAF has invested some in three companies: a packaging manufacturer, a pharmaceutical company, and a Uganda's Bank, with transactions in the US\$ 2.0-3.0 million region. For the moment, AEAF appears not particularly interested to invest in ICT/ICTE sector.
- **ASEAF** is active throughout all the South-Asia Region operating from four offices located in Indonesia, Thailand, the Philippines and Vietnam. As of today, the fund has raised US\$ 91 million out of the targeted US\$ 100 million. The main investors are CDC, Norfund, the Netherlands Development Finance Company (FMO), the Government Savings Bank of Thailand and Planters Bank of the Philippines. The preferred sectors are ICT/ICTE services (such as BPO), fast moving consumer goods and retail, and export-oriented enterprises. ASEAF started operation very recently and, so far has invested only in 3 companies, one of which is in the ICT sector. The average size of transaction is of about US\$ 2.0 million.
- **ASAF I** operates in Bangladesh and Sri Lanka. ASAF I is currently merging with the Aureos' India Opportunity Fund, a US\$ 75 million facility set up in 2006. This will create a larger fund (ASAF II) whose resources will be invested prevalently in India (some US\$ 100 million). ASAF I's operations are typically in the US\$ 0.5-3 million, but the ASAF II will likely deal with larger investments, i.e. in the US\$ 3.0-5.0 million range.
- Aureos Funds seldom target ICT businesses. This is due to various reasons: (i) Aureos Funds have a predilection for later stage investment while in most of the countries where they are present, the ICT sector is fairly new, and enterprises typically do not have a business history; (ii) in particular in Africa, where the majority of the transaction closed so far are based, ICT/ICTE sector is relatively underdeveloped, and the risk associated with investment in this type of deals is pretty high; (iii) where the ICT/ICTE industry is well-developed, e.g. India, there are other sources of financing for SMEs active in this field, which are better than private equity (iv) in general, having a sector approach is more costly under many respects, this is especially true for ICT.

Sources on the Web

- www.aureos.com

ANNEX C – HIGH TECH FUNDS

India – Infinity

Salient Features

<i>Nature</i>	Infinity is an investment advisory company, running two investment funds, Infinity I and Infinity II
<i>Location</i>	Infinity is headquartered in Mumbai, India, and operates offices in Bangalore, New Delhi and New York
<i>Geographical Coverage</i>	Infinity I is a national scheme, while Infinity II is active in India and the US.
<i>Establishment</i>	Infinity was established in 1999 and the Infinity I fund became operational in 2000. Infinity II was established in 2000 under a different name (E India Venture Fund)
<i>Sponsors/Owners</i>	Infinity is a private company, established by well known figures in the Indian IT sector. The capital of Infinity I fund was provided by angel investors from India and USA, including several leading corporations such as Laxmi Mittal group, Digital Century, and Tata Sons. Infinity II is an affiliate of Advent International and is participated by Comcraft, a Singapore-based manufacturing and service group, with interests in India. There is no involvement of IFI or donor organizations. Total funding is around US\$ 53 million, of which US\$ 35 million for Infinity I and US\$ 18 million for Infinity II.
<i>Types of Services/Financing</i>	Infinity I is an equity fund, specifically aimed at providing start-up financing to Indian technology companies. Deals average at around US\$ 2 million, with some smaller investments. Infinity II is a venture capital fund investing in cross-border operations, with larger investments. Both funds are specifically targeted at ICT/ICTE businesses, with a prevalence of investments in ICTE activities (outsourced collections and accounting services, on line trading, etc.). Infinity I is involved in the financing of SME as well as of larger companies. Infinity II appears to deal with larger companies.
<i>Operations</i>	Overall, the Infinity group has invested in 21 companies (17 Infinity I and 4 Infinity II), with a total of 8 exits and 5 failures.

Other information

- Infinity I brands itself as India's "first institutionalized angel fund". It was established by a pioneer in the Indian computer industry, who managed to raise funds from a number of leading Indian companies and investors. Infinity II is the result of a sort of joint venture between the Infinity I team and a separate group who had established another IT-oriented venture fund incorporated in Mauritius.
- Apart from a clear focus on technology-based activities, the investment philosophy is characterized by a strong involvement in the management of investee companies, believed to be an essential condition for adding value to financial investments.
- Infinity I invested in 17 companies, of which: 2 were exited through IPO, 5 through trade sales and 1 through an MBO. The fund is still holding participations in 4 companies while 5 companies have ceased operations. Detailed data on returns are not available but available information suggests that the fund has been fairly successful, over a relatively short period of time. No exit has been realized so far by Infinity II.
- One of Infinity I (exited) investments is Avendus Advisors, an investment bank specializing in the ICT and ICTE industries.

Sources on the Web

Website: <http://www.infinityventure.com/index.html>

India – Kitven

Salient Features

<i>Nature</i>	KITVEN is a close-ended Venture Capital Fund, managed by Karnataka Asset Management Company Private Ltd.
<i>Location</i>	KITVEN Fund is headquartered in Bangalore, India.
<i>Geographical Coverage</i>	KITVEN fund operates primarily in the State of Karnataka.
<i>Establishment</i>	KITVEN was established in 1998.
<i>Funding</i>	The fund was established with a capital of some US\$ 3.3 million and a life of 10 year. The sponsors are entirely from the public sector and include: Karnataka State Industrial Investment and Development Corporation Limited (KSI-IDC) with 25%, Karnataka State Financial Corporation (KSFC) with another 25%, and Small Industries Development Bank of India (SIDBI) with 50%.
<i>Investment Policy</i>	KITVEN Fund is principally aimed at investing in the ICT/ICTE industry. Financing instruments include straight equity, redeemable/convertible preferred shares, convertible/non-convertible debentures and other. The investments undertaken by the fund are typically in the range of US\$ 100,000 to 300,000, with a time horizon of 3–5 years. The majority of operations concern small businesses at the early stages. KITVEN Fund then act as a smart money providers as investments are typically accompanied by support services in the area of financial strategies, business strategies, internal controls, management information system etc.
<i>Operations</i>	So far, the fund has invested in 17 companies with 6 liquidity events. Four deals were very successfully exited, while for the other two the original investment was merely recouped. On average the returns posted so far generated a 200% profit return on the initial investment.

Other information

- KITVEN often acts as co-investor along with other institutional and individual partner. For instance, in January 2006 KITVEN participated with other two individual investors to a US\$ 10 million financing round in favor of the e-learning company 24 X7 Learning.
- As KITVEN is largely dependent on capital sourced by domestic banks it is being affected by the NRI's decision to put a 10% cap on banks' investments in private equity or VC funds. The norm also limits to 30% the stake that a bank can hold in equities of an invested firms.
- In late 2006, KITVEN announced the intention to launch a second Fund with a capital of some US\$ 11 million. This new fund will not stick to ICT/ICTE sector as the previous one, but will expand its scope of operation to biotechnology, pharmaceutical industry, health-care and other knowledge-based industries. Possible sponsors are the same investors of the first fund.

Sources on the Web

- <http://www.kitven.com/index.htm>

India – Kerala Venture Capital Fund

Salient Features

<i>Nature</i>	KVCF is an asset management company, providing venture capital funding.
<i>Location</i>	KVCF is headquartered in Kochi, State of Kerala, India.
<i>Geographical Coverage</i>	KVCF is a regional scheme.
<i>Establishment</i>	KVCF was established in 1999 and KVCF became operational in 2001.
<i>Funding</i>	<p>The capital of KVCF fund was provided by public institutions such as the Kerala State Industrial Development Corporation Ltd. (KSIDC), Kerala Financial Corporation (KFC) and Small Industries Development Bank of India (SIDBI).</p> <p>Total funding is US\$ 4.7 million.</p>
<i>Investment Policy</i>	<p>KVCF is a 10 year, close-ended venture capital fund. KVCF investments are made by way of equity and or quasi equity/convertible instruments, specifically aimed at providing start-up and/or growth financing to the State of Kerala companies. KVCF fund is specifically targeted at ICT/ICTE, bio-technology and tourism businesses. KVCF does not take a majority stake in a company and at present restricts its equity stake to 40% of the equity base of the Company and timeframe not exceeding five years. Deals are typically in the range of US\$ 50,000–350,000.</p> <p>Beside finance, KVCF provides networking, management support and technical assistance as well with the objective to make the company grow rapidly.</p>
<i>Operations</i>	Overall, the KVCF has invested in 6 projects, the majority of which in ICT/ICTE sector, but no exit has been realized so far.

Other information

- Kerala Venture Capital Fund (P) Ltd. is a private asset management company which has managed Kerala Venture Capital Fund since 2001. KVCF, a close-ended venture capital fund, was conceptualized by the Kerala State Industrial Development Corporation Ltd. (KSIDC), Kerala Financial Corporation (KFC) and Small Industries Development Bank of India (SIDBI).
- KVCF invests in start-up companies with strong commitment to the region (State of Kerala) and with a special emphasis on sectors in which the State of Kerala has a competitive advantage (IT and biotechnology). Financial structuring is done on a case-to-case basis keeping in view factors like risk perception, growth potential, equity base and market condition.
- Apart from a clear focus on technology-based activities, the investment philosophy is characterized by a strong involvement in the management of investee companies, believed to be an essential condition for adding value to financial investments.

Sources on the Web

- Website: <http://www.keralaventure.org/home.html>

INDIA – Swiss Tec VCF

Salient Features

<i>Nature</i>	Swiss Tech VCF is a private equity fund.
<i>Location</i>	Swiss Tech VCF is headquartered in Mauritius and operates in the offices of Mumbai and Zürich.
<i>Geographical Coverage</i>	Swiss Tech VCF is a regional scheme, with particular focus on India.
<i>Establishment</i>	Swiss Tec VCF was established in 1997. Since 2000 it is managed by the Mumbai-based BTS Advisors.
<i>Funding</i>	Swiss Tech VCF is a private equity fund, sponsored by the State Secretariat for Economic Affairs (SECO) of the Swiss Government. The initial capital was of US\$ 22 million. In 2003 SECO added up US\$ 3.5 million more.
<i>Investment Policy</i>	<p>Swiss Tec VCF is a 10-year, close-ended equity fund. Swiss Tec VCF investments are made by way of equity and quasi equity, specifically aimed at providing growth financing to the Indian technology companies. In exceptional cases also startups may be considered, provided that they are subsidiaries or have entered any long term partnership with well-established Indian or foreign firms. The favorite financial instruments are preference shares, i.e. cumulative convertible preference shares, optionally convertible preference shares or redeemable preference shares. The Fund normally invests between US \$ 250,000 and US \$ 1.5 million. The preferred sectors for Swiss Tec VCF's investments are: IT and software services, Biotechnology, Textile, Manufacturing and Food processing.</p> <p>Apart from finance, Swiss Tec VCF provides networking, strategic and marketing management support and technical assistance as well with the objective to make the company grow.</p>
<i>Operations</i>	Swiss Tech VCF invested in 17 companies, of which: 3 were exited through stock market, 2 through trade sales and 1 through buy out. The fund is still holding participations in 11 companies. Detailed data on returns are not available but available information suggests that the fund has been fairly successful.

Other information

- Swiss Tech VCF is a private equity fund, sponsored by the State Secretariat for Economic Affairs (SECO) of the Swiss Government. Seco has selected BTS Investment Advisors Limited (BTS), based in Switzerland and part of BTS Belvoir Trust AG as its exclusive advisor for investment opportunities in India. BTS, a Swiss company, takes advantage of the strength and stability of the Swiss financial service industry to develop and manage investment products and services.
- In 2006 BTS has launched a new VC fund denominated BTS India Private Equity Fund, which has so far raised US\$ 47 million out of the targeted 80 million. This fund is the ideal successor of the Swiss Tech VCF and will be implemented roughly along the same lines.
- Swiss Tech VCF invests in start-up and growth companies with strong commitment to India and with a special emphasis on sectors in which India has a competitive advantage (IT, biotechnology, Healthcare and Food processing). Financial structuring is done on a case-to-case basis keeping in view factors like risk perception, growth potential, equity base and market condition.
- Apart from a clear focus on technology-based activities, the investment philosophy is characterized by a strong involvement in the network of activities and strategic management of investee companies, believed to be an essential condition for adding value to financial investments.

Sources on the Web

- <http://www.swisstecvcf.com/>
- <http://www.btsadvisors.com/>

India – Aavishkaar India Micro Venture Capital Fund

Salient Features

<i>Nature</i>	AIMVCF is a venture fund aimed at promoting development in rural and semi-urban India.
<i>Location</i>	AIMVCF is headquartered in Mumbai, India.
<i>Geographical Coverage</i>	AIMVCF is a national scheme, concentrating primarily on rural and semi-urban areas.
<i>Establishment</i>	AIMVCF was established in 2002.
<i>Funding</i>	AIMVCF is a private entity and funds have been made available by private investors. Total capital under management is about US\$ 1.5 million.
<i>Investment Policy</i>	<p>AIMVCF specifically aims at providing start-up and growth stage financing to technology companies, typically in the form of micro-equity participations. Equity and quasi-equity financing is sometimes combined with subordinated debt (but not exceeding 25% of the overall investment). Typically, AIMVCF funds are minority shareholders (25% or more) and are in the US\$ \$20,000 to \$100,000 range. Typically, AIMVCF's investments have a tenure of 7 years.</p> <p>AIMVCF supplements the provision of financing with training and extensive strategic and operational hands-on management support to investee companies.</p> <p>AIMVCF invests in technology-based companies, including ICT, energy-efficient technology, bio-diversified and indigenous technology.</p>
<i>Operations</i>	Since inception, AIMVCF has invested in 9 companies, of which a couple can be regarded as ICT/ICTE firms (one providing transcription services and the other software localization/development). As of today the 75% of the fund is invested. No exit has been realized so far.

Other information

- AIMVCF was founded by trustees, Arun Diaz and Nilesh Mehta. The holding company of the trust is Aavishkaar International, incorporated as a private limited company in Singapore. The role of Aavishkaar International, is to aggregate individual contributions and remit the funds to AIMVCF India. Aavishkaar International also has a representative in San Francisco, USA.
- AIMVCF has since inception attracted following strategic partners—Indian Intellectual Capital Advisory Services, Rural Innovation Network (rural business incubator) and Ashoka India (global non-profit organization that invests in entrepreneurs with great ideas through stipends).
- Apart from a clear focus on technology-based activities, the investment philosophy is characterized by a strong involvement in training and management of investee companies, believed to be an essential condition for adding value to financial investments.
- Prospective investments are appraised on the basis of a 32% IRR. Lately, the level of activity seems to have slowed down and there have been no exits so far.

Sources on the Web

- Website: <http://www.aavishkaar.org/index.htm>

Brazil – FIR Capital Partners

Salient Features

<i>Nature</i>	FIR Capital Partners is a venture capital firm which invests in technology-driven companies at early and expansion-stage..
<i>Location</i>	FIR is headquartered in Belo Horizonte, Brazil.
<i>Geographical Coverage</i>	FIR invests almost exclusively in Brazil.
<i>Establishment</i>	FIR was established in 1999.
<i>Funding</i>	FIR is a private scheme. The capital is provided by 14 limited partners. The most recent initiative launched by FIR, the Fundotec Fund, closed with a capital of US\$ 10 million.
<i>Investment Policy</i>	FIR provides early stage and expansion financing (especially Fundotec fund). FIR's investments range in size from as little as US\$ 100,000 to as much as US\$1–3 millions. Typically, FIR invests US\$ 300,000 to US\$ 1 million initially and expect to invest US\$ 1 to 2 million over the life of the investment. FIR supplements the provision of financing with extensive strategic, tactical and operational hands-on management support to investee companies. FIR funds have specific orientation and focuses on information technology, life science and bio-medical technology companies.
<i>Operations</i>	FIR Capital's portfolio includes some 20 companies, a couple of which already successfully exited. ICT/ICTE companies represent half of the portfolio.

Other information

- The ICT/ICTE portfolio of FIR includes the following enterprises:
 - MINER** – created in 1997 by a group of students and professors from the Federal University of Minas Gerais, MINER is an advanced Internet search engine. In 1999, MINER was acquired by Universo Online (UOL), Brazil's largest Internet service provider, for a two-digit multiple of the initial investment.
 - Akwan Information Technologies** – this is an internet research tool for Brazil-based searches. Akwan has been later acquired by Google.
 - Escol@24Horas** – based in Rio de Janeiro, this is an e-learning portal and a developer of education contents for the web.
 - Syst** – a software development firm which provide applications operating with Metasys technology—a system that allows to use Windows and Linux operating system at the same time on the same machine.
 - ISM** – pioneer of internet access for corporate clients, ISM is currently specializing on solution for the management of internet contents.
 - Leme Informática** – this is a firm operating in the healthcare vertical, providing resource management solutions and other application for healthcare institutions.
 - Meantime Mobile Creations** – a value-added services provider, specializing on information and entertainment. It is based at C.E.S.A.R. – Centro de Estudos Avançados do Recife.
 - Most** – operates in the field of database management solutions, developing tools for commercial enterprises for the remote information exchange with the sales force through palmtops.
 - Newstorm** – based in Recife, this is a software developer which specializes on content management systems.
 - Smart Price** – a software company whose activities include vast range of solutions for e-transactions including e-commerce, auction on-line, brokerage etc.

Sources on the Web

- Website: <http://www.fircapital.com/>

Brazil – Decisão Gestão de Fundos

Salient Features

<i>Nature</i>	DGF is a risk capital and private equity funds manager firm. Since 2001 DGF administer the REIF – Returning Entrepreneur Investment Fund, an investment scheme for emerging Brazilian SMEs.
<i>Location</i>	DGF is headquartered in São Paulo.
<i>Geographical Coverage</i>	DGF operates nationwide.
<i>Establishment</i>	DGF was established in 2001.
<i>Funding</i>	The DGF-administered REIF is funded by: (i) IADB / MIF (50,0%); Banco Sudameris (18,2%); Sebrae Nacional (25,0%); Sebrae SP (6,8%). The total capital under management is of some US\$ 10 million.
<i>Investment Policy</i>	<p>DGF mainly focuses on SMEs. Its mandate provides that 75 percent of investments should focus enterprises with annual sales below US\$ 5.0 million. DGF does not operate though at seed stage but preferably with firms ready to debut on the market or already commercializing their products. Other favorable items are a strong growth potential and an orientation to export. The REIF is a generalist scheme addressed to innovative firms but de facto, ICT/ICTE and hi-tech companies account for the major part of the activities. In terms of deal size, the maximum investment allowed is of US\$ 1.0 million, and the share of participation must be below 50% of the investee's total assets.</p> <p>DGF's financing instruments include the purchase of ordinary shares, redeemable debenture, warrants and other quasi-equity instruments. Possible exit strategies include IPO, strategic sale, MBO. The targeted IRR is of 30 percent p.a.</p>
<i>Operations</i>	So far, DGF has invested in 11 enterprises out of which 8 are active in the ICT/ICTE sector.

Other information

- Beside the administration of the REIF, DGF is also active as a financial advisory firm. In this capacity, DGF carries out operations such as: (i) company financial assessments; (ii) business value analysis; (iii) structuring of business and financial plans; and (iv) business intermediation.
- The REIF's funders are:
 - Multilateral Investment Fund (MIF)** – created in 1993 by IADB with a capital of US\$ 1.3 billion. Through the MIF, IADB aims at supporting small investment project throughout Latin America and Caribbean.
 - Banco Sudameris** – part of the large Sudameris Group, Sudameris Asset Management is one of largest of its kind in Brazil with a capital of some US\$ 4.0 billion. In 2003, it was acquired by ABN AMRO.
 - Sebrae Nacional** – The Sebrae (Serviço Brasileiro de Apoio às Micro e Pequenas Empresas), is the national agency for the support and promotion of micro and small enterprises. It is organized as a non-profit organization, formally independent from the State administration.
 - Sebrae-SP** – this is the local chapter of Sebrae Nacional active in the State of São Paulo. Although it is a part of the Sebrae Nacional, it enjoys a wide autonomy from the central institution.
- Some examples of ICT/ICTE deals financed under REIF:
 - Neovia** – established in 2001 it is a data network operator which adopts wireless technology to provide access to broadband internet for residential and corporate clients.
 - Direct Talk** – emerged from the fusion of two small software companies, it is currently involved in the development of solutions for customer relations through chat, e-mail and voice.
 - Bry Tecnologia** – created in 2001, it focuses on electronic security solutions. In particular, it is involved on items such as digital certification, e-identity, and protection of digital documents.
 - Image Technology** – a typical software development and IT solutions company, with a vast range of solutions e.g. for business intelligence and E-training.
 - Rede Camp** – established in 1991, the company operates mainly in the field of mobile-based products and services with two main lines of business: (i) security tools for personal properties enabled with mobile technology devices; (ii) mobile and fixed-phone interfaces for internet navigation, fax sending etc.
 - DH&C** – founded in 2000, is one of the leading BPO providers of Brazil. It operates both for national and international clients and has 70 employees.

Sources on the Web

- <http://www.dgf.com.br/>

Philippines – ICCP Ventures Partners, Inc

Salient Features

<i>Nature</i>	IVP is private direct investment management firm. IVP is a member of the ICCP Group that is an aggregation of companies whose activities also includes: investment banking, industrial estate development, township development, and exposition facility complex management.
<i>Location</i>	IVP is based in Manila, the Philippines, and has an office in the Silicon Valley, USA.
<i>Geographical Coverage</i>	IVP operates globally, with a special focus on East Asia and USA.
<i>Establishment</i>	IVP's first fund was launched in 1998. Subsequent rounds of financing occurred in 2000 and 2004.
<i>Funding</i>	IVP's major investors are: i) the Investment & Capital Corporation of the Philippines (ICCP), ii) Ionics Circuits Inc, iii) Concepcion Industries group, iv) Panay Electric Co., and v) Fremont Investors Inc. (Bechtel Group). The IVP managed funds are three. The first one, created in 1998, is currently in the process of harvesting; the second one (2000) is now fully invested; while the most recent one (2004) is currently making its initial investments.
<i>Investment Policy</i>	<p>IVP's deals are in a broad range of industries, with the exclusion of property or real estate. IVP typically seeks for partners with high potential of growth (15–25% pa) and with at least three years of profitability in the previous years' record. But it may also consider investing in promising startup companies. Its share of investment in the ICT/ICTE industry amounts to about 60%.</p> <p>The amount of money invested by IVP in a single deal is typically comprised between US\$ 1.0 and 3.0 million, but they have also a couple of deal US\$ 0.5 million worth.</p>
<i>Operations</i>	IVP's portfolio includes 17 companies worldwide, four of which based in the Philippines. Investees' activities mainly refer to the various ICT/ICTE and HI-Tech sectors, e.g.: ICs design and development, GPS solutions, Call centers, Software, on-line gaming platforms etc.

Other information

- The ICCP Group is headed by the Investment & Capital Corporation of the Philippines, a domestic leading investment bank, who's active as well in projects development. ICCP's shareholders includes foreign and domestic institutions, namely: i) Development Bank of Singapore, ii) Bank of the Philippine Islands, and iii) Philippine American Life and General Insurance Company (a subsidiary of American Insurance Group). Others member of the ICCP group are the Science Park of the Philippines, the Pueblo de Oro Development Corp, and The World Trade Center Metro-Manila.
- IVP targets two type of companies: i) Asian-based business and ii) non-Asian business with significant Asian applications. In the first case IVP usually acts as the sole VC investors (or the leading one), and the typical business focused are in the field of BPO, Contact centers and IT in general. As regards non-Asian companies, IVP usually acts as a co-investor along with US partners, in companies interested in establishing deals with the Philippines for outsourcing purposes.

Sources on the Web

- www.iccpventurepartners.com

Philippines – Narra Venture Capital

Salient Features

<i>Nature</i>	Narra VC is a venture capital firm who specializes in ICT/ICTE and Hi-tech products and services.
<i>Location</i>	Narra VC is based in Manila, the Philippines
<i>Geographical Coverage</i>	Narra VC operates in South Asia and in the USA.
<i>Establishment</i>	Narra VC was established in 2002
<i>Funding</i>	Narra VC has an established group of founding partners led by TallwoodVC—a US-based VC focusing IC and IC-related products, and Ayala Corporation—one of the largest Filipino business conglomerates. The funds are managed by a the Narra's affiliate BGN Ventures, Inc.
<i>Investment Policy</i>	<p>Narra VC focuses on Hi-tech and ICT sectors. Typically, Narra VC's deals are in the following fields: semiconductor and related product, computing platforms, software, electronic manufacturing and design services. Narra VC's investments in the Silicon Valley are usually carried out in partnership with Tallwood VC and other co-investor, while in the Philippines and neighboring countries it also incubates its own project.</p> <p>The average size of Narra VC's investment is US\$ 1.0 million, both through equity and quasi-equity instruments.</p> <p>Narra VC usually invests over a 4 to 7 years period. Typical exit strategy sought is through IPO or M&A.</p>
<i>Operations</i>	Narra VC's portfolio includes 8 companies most of which located in the US but with significant strategic relation with South-East Asian partners.

Other information

- Narra VC's main funder and co-investor—Tallwood VC—is a venture capital firm based in Palo Alto. Tallwood VC focuses on semiconductor and related products industry. It manages two funds amounting altogether to US\$ 430 million. So far Tallwood VC has invested in some 20 deals.
- The main Filipino company in Narra VC's portfolio is Stratpoint Technologies. This is a lead IT consulting and software design & development company. Stratpoint Technologies provides its services and products to MN and large corporations in various sectors, including: telecom, banking, pharmaceuticals, transportation, logistics, manufacturing, broadcast media, energy, retail and distribution.
- Narra VC, along with BGN Ventures, supports the Philippines' "Brain Gain Network", that is a network of Filipino technopreneurs, which aims to increase the level of high value-added technology business in the country.

Sources on the Web

- www.narravc.com

Vietnam – IDG Ventures Vietnam

Salient Features

<i>Nature</i>	IDGW is a venture capital firm specialized in ICT and hi-tech investment. The firm is a wholly-owned subsidiary of International Data Group, the world's largest IT media company.
<i>Location</i>	IDGW is based in Hanoi and operates a decentralized office in HCM City
<i>Geographical Coverage</i>	IDGW operates in Vietnam
<i>Establishment</i>	IDGW established its presence in Vietnam in 2004, and begun operating in early 2005
<i>Funding</i>	The overall capital available for IDGW is US\$ 100 million that will be mobilized in subsequent phases. The target period for completing investment is 5 years, while the harvest phase will be likely finalized in 11 years.
<i>Investment Policy</i>	<p>IDGW is mainly involved in seed and early stage financing, with a specific orientation to the ICT and ICTE sectors. In this initial phase they seek for small but promising enterprises in particular in telecoms and internet value-added services. For the first round the average size of investment is around US\$ 200,000, but through subsequent round of financing overall size of deals may reach US\$5 million. Financing involves straight equity, as well as convertible debt instruments. IDGW typically takes a stake ranging from 15% to 40%.</p> <p>As regards exit strategy the stock market appears not enough developed to represent a viable option for exit through IPOs, therefore IDGW typically target to sell to MNC.</p>
<i>Operations</i>	So far IDGW has invested in 6 deals, all of which are still undergoing the first round of financing. The portfolio includes enterprises active in internet services, and software developers, such as: Peace Software Solution Company (Peacesoft), iSphere Software Company, VinaGame and VietnamWorks

Other information

- The Vietnamese facility is one of the 5 independent funds established by IDG worldwide. The network includes USA, EU, China and recently India. The Chinese fund, which started operation in 1992 and saw several rounds of financing, reached particularly outstanding performances, and the Vietnamese facility has been established with the aim of replicating this successful experience. Vietnam is in fact perceived as a promising candidate in the field of ICT. Compared to China's, the Vietnam's IDG fund currently focuses on smaller and less sophisticated deals, due to the still scarce familiarity of the local financial market with VC operations.
- The investment decisions are mainly based on the quality of promoters. IDGW's management establishes relations with the would-be investees that could last for some times before the final decision is taken. During this period the officers test the promoters in various ways in order to assess their capabilities and attitudes. Once the investment is finalized, IDGV continues to play an active role in the enterprise.
- IDGW receives 30–40 proposal per week (including very general business ideas), but it also actively seeks for business opportunities through various channels.
- IDG plans to diversify the investments in different sub-sectors as follows:
 - 35% Internet (E-Learning, E-Commerce, Content)
 - 20% Telecom/Wireless Services
 - 15% IT/Software
 - 15% Technology Manufacturing
 - 15% Biotechnology

Sources on the web

- www.idgw.com.vn

Morocco – Upline Technologies

Salient Features

<i>Nature</i>	Upline Technologies is an investment fund, specifically targeted at high tech sector, the only one of this type active in Morocco. The fund is managed by Upline IT Management, a subsidiary of the Upline Group
<i>Location</i>	Both the fund and the management company are based in Casablanca
<i>Geographical Coverage</i>	Upline Technologies operates in Morocco
<i>Establishment</i>	Upline Technologies was established in 2000, with the first investment taking place in the same year
<i>Funding</i>	Upline Technologies has a capital of MAD 50 million. The capital is provided by the Upline Group, CDG, MAMDA-MCMA, Proparco, and Investia (connected with JP Morgan and FundsHub)
<i>Investment Policy</i>	Upline Technologies is a specialized fund, specifically targeted at ITC companies. The fund tends to target medium sized companies, with investments in the order of MAD 5 to 20 million. Investments in smaller firms are not ruled out a priori, but they are perceived as not particularly attractive due to the high transaction costs. Upline Technologies invests in equity and quasi equity (convertible bonds).
<i>Operations</i>	Upline Technologies has reviewed a pipeline of over one hundred projects and invested in four companies. Total investment is not known, but probably in the range of MAD 40–45 million. The portfolio includes: <i>Mughamrat</i> (a developer of software packages in Arabic language, unspecified amount), <i>Involys</i> (ex <i>Batisoft</i> , a leading developer of IT applications for the construction and real estate business, unspecified amount, corresponding to 33% of capital), <i>Redstone Technologies</i> (advice and development of web and e-commerce solutions, unspecified amount), and <i>HPS</i> (a leading developer of IT applications for the banking sector, with an investment of MAD 20 million).

Other information

- Upline Technologies is part of the Upline Group. When it was founded in 1992, Upline published financial, economic and political research and analyses for foreign investors, including international banks in the English-speaking world. As time went on it began to specialize in the brokerage, fund management and venture capital sectors. Shareholders include the four founders, an American trust, and Gulf States interests.
- Upline has well developed contacts with institutional investors in the region and beyond. They cooperate with SIPAREX in the management of the Maghreb Private Equity Fund (MPEF) and could consider the establishment of a regional equity financing facility for ITC/innovative firms.

Sources on the Web

- www.upline.co.ma (not operational at the time of writing)

Morocco – Fonds Sindibad

Salient Features

<i>Nature</i>	Fonds Sindibad is a seed capital fund, aimed at supporting innovative SME.
<i>Location</i>	Fonds Sindibad is based in Casablanca, hosted by the Casablanca Technopark
<i>Geographical Coverage</i>	Fonds Sindibad operates in Morocco
<i>Establishment</i>	Fonds Sindibad was established in November 2002 and started operations in March 2003
<i>Funding</i>	Fonds Sindibad was established with an initial funding of MAD 48 million. However, 50% of this amount was intended to cover operating expenses, leaving a total of MAD 24 million for investment operations. Funds were provided by a group of Moroccan and international investors, including: (i) the state-owned development finance institution CDG, (ii) Maroc Telecom, (iii) Morocco's leading private group ONA, (iv) France's CDC PME, and (v) the European Investment Bank.
<i>Investment Policy</i>	Fonds Sindibad is Morocco's first seed capital fund, specifically targeting innovative and newly established enterprises (i.e. entities that are in the process of being formed or that have been in operation for less than 2 years). Fonds Sindibad is definitely oriented towards small enterprises: the maximum investment cannot exceed MAD 4 million (US\$ 400,000), with a shareholding of 35–40%.
<i>Operations</i>	Out of the 50–60 investment opportunities considered, at end 2005 Fonds Sindibad had invested in 5 companies, with 2 more investments expected to take place in current year. Investee companies include at least one ICT company (<i>Lead Tech Design</i> , subsidiary of a French company specialized in software development, which received a MAD 3.5 million financing).

Other information

- Fonds Sindibad was registered as a *société anonyme* (joint stock company), combining the functions of the fund proper and of the management company. A second version of Fonds Sindibad is reportedly under preparation, with the bulk of financing to be provided by CDG. If implemented, this would involve a separation between the fund proper and the fund management company.
- In the feasibility and initial operational stages the fund benefited from the support of SIPAREX, on contract with CDG
- *Vivendi Universal*, one of Fonds Sindibad's shareholders through *Maroc Telecom*, is also reportedly considering the establishment of a seed capital fund.

Sources on the Web

- www.fondssindibad.co.ma (not operational)

Ukraine – TECHINVEST

Salient Features

<i>Nature</i>	TECHINVEST is a venture capital firm with a focus on seed and startup financing of Ukrainian technology firms with a potential to enter the global market.
<i>Location</i>	TECHINVEST is based in Kiev and operates a network of offices located in London, Moscow, New York and in the Silicon Valley.
<i>Geographical Coverage</i>	TECHINVEST is a national scheme.
<i>Establishment</i>	TECHINVEST was established in 2004, by an Ukrainian innovation entrepreneur.
<i>Funding</i>	TECHINVEST is a 100% private-sector scheme, established with the support of Aventures Group—an Ukrainian holding company in the retail and distribution fields. The total capital under management is reportedly of US\$ 6.5 million, but TECHINVEST is not a closed fund and can raise investment capital on a case by case basis thanks to an established network of relations with international VC. TECHINVEST is currently exploring the possibility of setting up a fund in collaboration with the Silicon Valley VC firm, Draper, Fisher and Juverston (DFJ), which will be denominated DFJ TECHINVEST fund.
<i>Investment Policy</i>	TECHINVEST operates mainly at the early stage, seeking for promising businesses in various technology sectors: ICT, nanotechnologies, life sciences, energy technologies etc. TECHINVEST leverages on the quality and the abundance of engineers and technology R&D specialist in the country, to set up globally successful projects. By preference, TECHINVEST target IP-based projects of almost US\$ 300,000. TECHINVEST is a smart-money provider, as equity investments are accompanied by a deep involvement of the investor in the strategic orientation of the invested company. For instance, TECHINVEST helps re-organizing the production scheme, provides legal assistance for the IP protection, assist in the creation of the marketing and sales international network, finds experienced executives to be recruited, support the establishment of a company's presence overseas etc.
<i>Operations</i>	So far, TECHINVEST has completed five deals. In two cases the investees are firms active in the ICT/ICTE sector. The amounts invested are not disclosed but probably around US\$ 0.5 million

Other information

- As of today, TECHINVEST's portfolio includes the following enterprises:
 - APowerCap Technologies** is a US-registered startup with R&D facility in Ukraine. The company operates in the field of nanotechnologies developing novel power sources on the basis of proprietary IP.
 - Center for Innovations Development (CID)** was established in 1998 by the Ukrainian International Management Institute. CID is a business incubator offering services to technology startups. It also organizes roadshows and annual business presentation in the Silicon Valley.
 - Financial Algorithmics (FA)** is an ICT firm whose activities focus on the development of complex mathematical algorithms for financial markets. FA operates through a proprietary platform on which several applications for traders have been developed.
 - United Software Corporation (USC)** is a global IT services and technologies provider. USC was incorporated in California in 2004. Among the rest, USC specializes on the establishment of development centers, and outsourced R&D services. Fields of expertise include: Mainframe technologies; Financial engineering; Telecom solutions (incl. wireless technologies); GIS-based Disaster Management solutions; Applied Algorithmics etc.
 - USC Technology Center.** Connected to the above TECHINVEST has supported the establishment of the USC Technology Center in Kyiv.
- Every year TECHINVEST organizes with the support of various sponsors the Ukrainian High-Tech Competition. This is a competition on business ideas which regards in particular four fields of technology: ICT, energy, nanotechnologies & new materials; life sciences & biotechnologies. The finalists of the Competition are invited to present their projects to the VC community during a roadshow in Silicon Valley, USA. The winners may receive equity investment from VC to develop their business ideas and support to the commercialization of their projects.

Sources on the Web

- www.techinvest.com.ua



ANNEX D – BUSINESS ANGELS GROUPS

D.1 INDIA

India is home to numerous business angels. Their presence dates back to nineties and, after a downturn in the early 2000s, their activities are rapidly regaining momentum partly thanks to the establishment in April 2006 of the Band of Angel (BoA). BoA is an umbrella organization that brings together entrepreneurs and high net worth individuals from both India and overseas with the aim of making joint investments in seed and early stage deals. In less than one year BoA have brought together more than 50 individuals and 3 institutions and closed 5 deals in ICT/ICTE and media & entertainment sectors. The BoA is organized around a Secretariat which coordinates the operations but also strongly leverage on the proactive commitments of its members as regards both project scouting and deals processing and monitoring. The BoA typically seeks for transaction in the US\$ 100,000 to 1.0 million range but exceptionally may consider also investments above this threshold. Frequently BoA has acted as co-investors along with other VCs for larger operations. Within BoA all members operate in their exclusively individual capacity and are ultimately free on their investment decision. Interesting deals are proposed to the group by one BA acting as a mentor or directly by the Secretariat. Those who are interested in going ahead with the investment then form a sub-group which will autonomously take its decision and finalize the operation. Normally, within a sub-group of angels the investments are made on a *pari passu* basis, but sort of premiums may be foreseen for those member who spend consistent additional time and effort in providing assistance to the invested enterprise. BoA seeks to exit after a 3 to 5 year period by means of an IPO, M&A or strategic sale. Besides BoA, there

is evidence of a restored interest in seed financing also by isolated angels. These are typically senior executives of large corporations, which sponsor with private money promising startups which have difficulties in obtaining financing from institutional VC (i.e. the amount sought is too small). A recent example is provided by *Moveo System*, a movie ticketing application on mobile provider, which secured in early 2007 an equity investment from an undisclosed angel for setting up sales and marketing team.

D.2 PHILIPPINES

In the Philippines business angels' activities appear to be in an expansion phase. A study conducted between 2003 and 2004 by E.S. Isidro and W. Scheela on 29 Filipino angels provided an overview of their role and operations in early stage financing of local SMEs¹⁹. The bulk of angels' investments are in sectors where they hold a previous entrepreneurial experience. Usually, angels take an active role in the management of the invested enterprises with tasks including for instance, the (i) provision of expertise; (ii) financial control; (iii) strategic planning; and (iv) recruitment of key-personnel. Angel's deals range typically from US\$ 100,000 to 250,000, but could also amount to as little as US\$ 50,000. Every angel usually invests in more than one enterprise at the time (5–6 on average), while each enterprise is usually invested by more than one angel (three on average). Commonly, the duration of Angels' investments is higher than VC's, with an average tenure of 5 to 8 years. The vast majority of the invested companies are start-ups or companies at early stage of development. As regards the sectors in which angels operate, ICT represents only a marginal share in angel's portfolio, due to a scarce understanding of the technical aspects of these business models. In fact, angels are often retired businessmen having little familiarity with the latest technologies. ICT-enabled businesses are fairly more

¹⁹ William SCHEELA and Edmundo S. ISIDRO, *Business Angel Investing in the Philippines: an Institutional View*.

understandable and therefore receive more attention. Filipino angels are generally focused on the domestic market; however a minority of them invests also in larger scale businesses with operations overseas. In terms of profitability, the operations financed so far by registered a positive balance. Two-third of the Angels included in the 2004 survey claimed having achieved a substantial return on investments (typically 25% per year). Recently some Angels have started grouping together, giving birth to the Philippines Venture Capital Investment Group that is a forum which gathers investors, promoters, and other stakeholder.

D.3 BRAZIL

Business Angels are becoming increasingly popular in Brazil. Especially over the past few years the involvement of Angels in early stage operations in the ICT/ICTE sector has multiplied. This has coincided with the emergence of organized BA groups, the most recent being the Sao Paulo Anjos established in earlier 2007 by 30 Angel investors. But the first and most known example of Angels' group in Brazil is represented by Gavea Angels. This group was founded in Rio de Janeiro at the *Pontificia Universidade Catolica* (PUC) in 2004, by 13 local investors. Gavea Angels is a non-profit organization whose goal is to promote the development of national young enterprises situated in the Rio de Janeiro region, by means of facilitating access to capital and through other forms of assistance. The role of the organization is to scout enterprises with growth potential and present them to its members which can decide to individually or jointly make an investment. In other words Gavea Angels does not manage a fund and does not perform transactions but its responsibilities are limited to the identification of possible interesting projects and the organization of presentation events (Angels Forum) with investors and promoters. Gavea Angels cooperate with business incubators to ensure a constant project flow, and is supported by experts from PUC for the assessment of proposals. BA are attracted by innovative business, and ICT/ICTE enterprises are among the preferred options. The deals targeted are in the US\$ 200,000–500,000 range for a duration of about three years. So far, three deals have been closed by BA connected to Gavea Angels, one of which regarded an ICT/ICTE firm.

D.4 ARGENTINA

Argentina is home to a business angels club established in 2005 by a group of alumni of IAE Business School and the Centre of Entrepreneurship of Universidad Austral in Argentina. The Club is an association which activities include: (i) scouting and assessment of investment opportunities in startups enterprises; (ii) managing relations among promoters, investors, incubators and other stakeholders; (iii) organization of monthly presentation of projects; (iv) assistance to its members throughout the various phases of the investment process. The Club does not operate a fund and each member decides by itself either participating or not to the investment opportunities presented. When there is consensus among some members on a deal a specific Fiduciary Fund is created to effectuate the investment. As of today, the Club has 60 members. Every month some 8–10 projects are screened and 2–3 are presented to them during monthly meetings. In terms of amounts the deal proposed usually range from US\$ 50,000 to 150,000 but exceptionally even larger transaction may be considered. So far, the largest project financed amounted to US\$ 600,000. Since its inception seven projects presented by the Club have received financing, for a total amount of US\$ 1.75 million, while another US\$ 1.0 million worth transactions are currently under discussion. BA operates in all sector, and beside a companies involved in e-commerce, ICT/ICTE does not seem to receive special attention.

D.5 KENYA

Angel investing is quite a novelty for Kenya. The concept is currently being developed by IFC, which started in 2005 to work around the idea of a *Business Angel Group* (BAG). The project is still in its initial stages and so far the activities have concentrated on the identification of possible participants and the analysis of the relevant legal framework. In summary, the model put forward by BAG would combine three aspects: (i) investments (possible deal-size: US\$10,000 to 70,000); (ii) mentoring; and (iii) technical assistance. The first company presentation was held in March 2006, at the presence of 4 promoters and some 15 BAG's members.

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About *infoDev*

infoDev is a partnership of international development agencies, coordinated and served by an expert Secretariat housed at the World Bank, one of its key donors and founders. It acts as a neutral convener of dialogue, and as a coordinator of joint action among bilateral and multilateral donors—supporting global sharing of information on ICT for development (ICT4D), and helping to reduce duplication of efforts and investments. *infoDev* also forms partnerships with public and private-sector organizations who are innovators in the field of ICT4D.

infoDev's mandate is to help maximize the impact of ICTs in global efforts to achieve the internationally-supported Millennium Development Goals. These include improving education and health services, making public institutions more efficient and transparent, supporting rural livelihoods, and contributing to economic growth by supporting small and medium-sized enterprises that use ICT for their business.

For more information visit www.infoDev.org or send an email to infoDev@worldbank.org

