+ INNOVATION & ENTREPRENEURSHIP

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

VIETNAM
Country Study

AN *info*Dev PUBLICATION PREPARED BY

Roberto Zavatta

Economisti Associati SRL in collaboration with

Zernike Group BV

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ABBREVIATIONS AND ACRONYMS

ADB	Asian Development Bank
ASMED	Agency for SME Development
BCC	Business Cooperation Contract
BPO	Business Process Outsourcing
CRC	Center for Research and Consulting on Management
CDMA	Code Division Multiple Access
CGF	Credit Guarantee Fund
EC	European Commission
ERP	Enterprise Resource Planning
EU	European Union
GTZ	Deutsche Gesellschaft für Technische Zusammenarbeit (German development cooperation agency)
HCA	Ho Chi Minh City Computer Association
HCMC	Ho Chi Minh City
IC	Integrated Circuit
ICT	Information and Communication Technology
ICTE	ICT Enabled
IDRC	International Development Research Center
IFC	International Finance Corporation
IFI	International Financial Institutions
ISP	Internet Service Provider
IXC	Internet Exchange Carrier
IT	Information Technology
JBIC	Japan Bank for International Cooperation
MNC	Multinational Corporation
MPDF	Mekong Private Sector Development Facility
MPT	Ministry of Posts and Telematics
MST	Ministry of Science and Technology
QTSBI	Quang Trung Software Business Incubator
SBV	State Bank of Vietnam
SME	Small and Medium Enterprise
SOCB	State-Owned Commercial Bank
SOE	State-Owned Enterprise
TOR	Terms of Reference
UNDP	United Nations Development Program
UNIDO	United Nations Industrial Development Organization
USAID	United States Agency for International Development
VC	Venture Capital
VINASA	Vietnam Software Association
VoIP	Voice over Internet Protocol
WTO	World Trade Organization

Exchange Rates
US$ 1 = VND 15,967.53 (average 2005)
EUR 1 = VND 19,886.14 (average 2005)

EXECUTIVE SUMMARY

Over the last few years, the Vietnam's ICT/ICTE sector has grown considerably and evidences suggest that this process is destined to keep the pace or even accelerate in the near future. Vietnam holds a strong vocation in Hi Tech industry and, compared to its neighbors, it has the advantage of being less expensive. Concrete signals of the increasing international confidence can be identified in the recent establishment of several IT 'giants', such as *Intel, Jupiter, IBM*. Leaving aside telecoms, the bulk of ICT activities in Vietnam are related to hardware manufacturing and assembling. This sector is largely dominated by foreign Multinational Corporation (MNC). In the software and IT services sector, the domestic market accounts for the most. The offshore outsourced services segment is still small but it is growing at a rate of 50% per year. In this respect, many consider Vietnam as the most promising Asian economy for offshore operations. Vietnam is currently home to a dozen national IT 'champions' active in the production of locally branded PCs, software, and BPO services, as well as to more than thousand small ICT/ICTE business. The Government acknowledged the strategic importance of this sector. Over the past few years, several infrastructural projects for the promotion and the development of technology and ICT have been financed with the State's budget.

In the transition process from a centrally planned economy to a market economy, Vietnam is closely following the Chinese model, especially regarding privatization. The private sector is increasingly perceived as the main driver for boosting the national economy, and several State-owned enterprises are being 'equitized' and sold. Recently, the financial sector has witnessed important liberalizations. As a consequence, the flow of FDI is constantly growing and venture capitalists, who left in the aftermath of the late nineties financial crisis, are back in the country. The banking sector, which is still dominated by State-owned commercial banks, has a distinct conservative approach to lending, and the access to financing for SMEs is far from being an easy task. Some donors and IFI programs, as well as Government's direct initiatives, address specifically the issue of SME financing, but these efforts have only a limited impact on ICT/ICTE firms. Evidence from the fieldwork showed the existence of a financing gap for SMEs in their development and first expansion stage. This gap can be perceived by enterprises that need from as little as US$50,000 up to US$1.0 million, but appears particularly severe in the US$200,000–750,000 range.

The main determinants for the existing financing gap can be summarized as follows:

- ***Financing Policies***: Conservative attitude of banks: 'heavy' collateralization strictly necessary. Most of the Government's and donors' programs in support of the SME financing focus on sectors other than ICT;
- ***Limited Diffusion of Alternatives***: Financing instruments like credit guarantees schemes or leasing are scarcely widespread. 'Angel' investments have a very marginal diffusion;
- ***Constraints on the Demand Side***: Substantial opacity and informality of SMEs. Poor quality of projects submitted to institutional VC;
- ***Understanding of ICT***: Bank officers are seldom familiar with ICT/ICTE business models, and therefore many are reluctant to concede loans;
- ***Business Environment Constraints*****:** Economy is not completely liberalized. Some restrictions persist on operations made by foreigners. There is a poor protection of investors. The existing credit information system is limited and unreliable.

Bridging the gap would require a major reform of the overall business environment, including the creation of a reliable and comprehensive credit information system, the enforcement of regulation for the protection of minority shareholders, and the removal of caps on foreign capacity to operate in Vietnamese economy. Evidently, direct intervention in these fields falls out of the scope for this study. Nonetheless, concrete measures can be envisaged to reduce the gap and facilitate access to financing for ICT/ICTE SMEs. To begin with, increasing the amount and accessibility of ***equity financing*** represents a first important step to reduce the dependence from traditional banks lending which does not always fit well with the needs of the technology businesses. The demand expressed by Vietnamese ICT/ICTE industry appears sufficiently strong to justify the mobilization of further investments that could take the form of a dedicated venture capital fund. However, the nature and functioning of such a scheme should be carefully adjusted to a young and fast-changing business environment. Ideally, the financial resources made available by IFIs and donors should match with Vietnamese Government's funding, and the financial support should be combined with the provision of technical assistance to the invested companies. At the same time, the importance of ***bank financing*** for SMEs should not be denied. In this sense, the credit guarantee model could represent a valid instrument to improve the access of ICT/ICTE SMEs to banks lending. Incidentally, Vietnam is not new to initiatives in this field, but very little has been done so far to ensure a widespread diffusion of such instruments. Another obstacle to SME financing is determined by the scarce ability of entrepreneurs to prepare quality projects and present them to bank officer in an adequate manner. This could be improved by enhancing the capacity of incubators to provide assistance on these matters, or through the establishment of dedicated schemes. Finally, ways should be devised to remove obstacles generated by the information gap on ICT/ICTE. To this end, it could be worth supporting initiatives of various nature aimed at improving and circulating the comprehension of the various ICT/ICTE business models among potential investors.

1. INTRODUCTION

This report (the "Report") has been prepared by *Economisti Associati* (the "Consultant") within the framework of the assignment on "Scaling up Innovation and Entrepreneurship in Developing Countries: The Role of Private Sector Finance" (the "Assignment" or the "Study"). The overall objective of the Assignment is to analyze issues in the financing of small and medium enterprises (SME) in developing and emerging countries, with special reference to small businesses active in the information and communication technology (ICT) sector as well as in ICT-enabled (ICTE) activities.

This Report is part of Phase 2 of the Assignment and reviews recent developments in the ICT/ICTE sector in Vietnam, with special emphasis on current conditions for the financing of ICT/ICTE small enterprises. The Report is based on the results of a field mission in Vietnam (July 22–29, 2006) as well as on the analysis of a variety of secondary sources.

The Report is structured as follows:

- Section II presents a country overview including the ICT/ICTE industry, the relevant policy and institutional framework, and the financial system;
- Section III analyzes the main issues related to the financing of small ICT/ICTE enterprises;
- Section IV offers conclusions and recommendations.

The Study also includes a series of Annexes, providing additional information and supporting evidence for the elements presented in the main text. In particular:

- Annex A provides additional information on the ICT/ICTE sector;
- Annex B illustrates the institutional setting for the ICT/ICTE sector;
- Annex C reviews the Vietnam's financial system;
- Annex D provides the list of entities and persons met during field work;
- Annex E presents the profiles of some SME financing organizations;
- Annex F presents the profiles of small ICT/ICTE enterprises interviewed during fieldwork.

II. THE COUNTRY BACKGROUND

II.1 THE ICT/ICTE SECTOR

Overview[1]**:** In 2005, the estimate ***turnover*** of Vietnam's ICT sector—including telecoms—was around US$3.1 billion. The bulk is represented by revenues of telecom operators, which account for 60% of the total, followed by the hardware industry—manufacturing, assembling, and sales—which has a turnover of nearly US$1.0 billion. Software development and other IT services account for about 10%. Total ***employment*** in the sector is not known, but is probably 50,000–70,000 workers, with the telecom and hardware industries accounting for the most. The number of specialized programmers is around 15,000, and it is growing at a rate of 15–20% per year. According to the largest ICT association in Vietnam, the overall number of companies active in the ***ICT/ICTE industry*** is 1,400. This includes: (i) a few large foreign-controlled IT equipment manufacturers; (ii) a dozen medium to large state-owned companies; and (iii) a vast number of small and micro-enterprises, which conduct activities ranging from simple sale & maintenance to more sophisticated processes in software development and IT services. BPO is also an increasing business—the value of exports of software and IT services is estimated at US$80–100 million, with an annual growth rate of 40–50%.

Telecom: Vietnam's fixed-line telephony market includes one large operator and three minor competitors mainly active on a local basis, which together serve 6.5 million clients. The sector is expanding at a relatively slow pace—20% per year on average in the period of 2000–05. The penetration rate remains among the lowest in the region—less than 8%. Recently, some operators have introduced the wireless fixed connection technology, which could potentially have a significant diffusion. The mobile sector is growing rapidly, especially over the past two years. The total number of subscribers recently reached 22 million, with a penetration rate of 25%. Although it is not completely liberalized, the mobile industry is characterized by a more competitive environment, with six operators active. Overall, Vietnam's telecoms generate an annual turnover of US$1.9 billion.

Internet Services: There are nine active ISPs in Vietnam, serving a market of four million subscribers. The sector includes subsidiaries of the main telecom operators, state-owned IT enterprises, and a handful of small private ISPs. Including those who access the Internet through cybercafés, the estimated number of Internet users is 15 million. This translates to a penetration rate of 17.5%. High speed connection—ADSL—was introduced in 2003, and had an immediate impact on diffusion, topping 300,000 subscribers in 2006. Over the past few years, the market for value-added services has expanded, with VoIP, chat, and on-line gaming accounting for the most. The wave of liberalization expected with the entrance of Vietnam into the WTO, is likely to determine a major shift in the Internet market. Several foreign players are looking with increasing interest at the potential offered by this sector, and preparing to enter the market—as evidenced by the multiplying of investments and share acquisitions.

ICT/ICTE Activities: Hardware manufacturing and assembling accounts for the bulk of the revenues in the ICT sector. This is mainly due to the presence of manufacturing plants that are owned by large multinational IT companies', such as *Intel, Fujitsu* and *Canon*. The domestic hardware industry includes a dozen medium-sized to large players, which produce and assemble PCs and peripherals. Most of the production is destined to be exported, which accounts for more than US$1.0 billion. Around 700 enterprises operate in the software segment. This includes enterprises that

1 Figures related to ICT/ICTE activities are mainly drawn from the Vietnam ICT Directory 2006, published by the *HCM Computer Association*, and the World Bank's Report on *Vietnam's Infrastructure Challenge*. Other data are drawn from a variety of sources—mainly articles appearing in the press and company websites.

focus primarily on the domestic market, and companies that provide various BPO services. As of 2006, the domestic-oriented activities generated a turnover of nearly US$150 million, and the consolidated value of offshore outsourcing was about US$100 million. The outsourced activities include: (i) development of ERP applications; (ii) software localization; (iii) remote testing; (iv) transcription services; and (v) provision of a number of Internet-based services, such as online gaming, Internet libraries, and various e-contents.

II.2 LEGAL AND INSTITUTIONAL FRAMEWORK

Overview: Vietnam is following a pattern very similar to China's. The transition from a centrally-planned economy to a market economy started in the 1980s with the *Doi Moi*[2] policy, which introduced reforms in trade and investment regulation. The process accelerated significantly: (i) after 2001, when Vietnam signed the first Bilateral Trade Agreement (BTA) with the US; and (ii) more recently, with the negotiations to enter the WTO. This transition is expected to remove the residual restrictions to the expansion of the private sector and the access of foreign companies to the local market. The development of ICT is a top priority in the Vietnam Government's agenda. The ambitious ICT industry plan for the current five-year period, foresees a 20–25% average annual growth. The plan is to reach a revenue of US$ 5–6 and a workforce of 500,000 by 2010. The authority in charge of monitoring the implementation of the plan is the *National Steering Committee* on ICT. The mandate includes the intermediary organization of enterprises.

Legislative Framework: There are several pieces of legislation that govern the telecom and ICT sector[3], most of which have been issued over the past two years. The most important regulations are as follows:

- The major regulation act in the ***telecom sector*** is the "Post and Telecommunications Law", which passed in 2002. This act: (i) provides the general legislative framework; (ii) defines the typology of services; and (iii) determines the licensing procedure for telecom operators. It also introduced important rules that favor liberalization and market competition;
- The PM's Decision no. 246 in 2005 defines the strategy and goals for the development of ***ICT sector*** in the short-term (up to 2010), and in the medium-term (up to 2020). In late 2006, the "Information Technology Law" was promulgated, providing a basic and comprehensive legal framework for all IT activities;
- In March 2006, the "Electronic Transaction Law" was put into effect. It regulates matters such as the legal value of electronic contracts and signatures, e-governance, and security in electronic transactions. Tthis Law plays a primary role in stimulating the diffusion of ***e-commerce*** practices;
- According to the *Business Software Association* (BSA), Vietnam is the worst country in the world for the diffusion of software piracy: 90–95% of the installed software is illegal. Some improvement is expected with the approval of the "Intellectual Property Law", which entered into force in July 2006.

Support to ICT/ICTE Sector Development: The ICT/ICTE sector, and especially telecom, is still largely dominated by the State-Owned Enterprises (SOE). However, several important measures for the growth of an independent private sector are under preparation. These include the equitization of several SOEs. Public support to ICT also takes the form of fiscal advantages, such as a tax holiday for software companies, and facilitations for exporting enterprises. One of the foremost initiatives of the government, is the establishment of a series of Software Centers and Science Parks nationwide. As of today, there are eight main facilities of this kind, which together host more than 100 companies, the vast majority of which are start-ups.

IT Education: As indicated by several entrepreneurs, the shortage of a qualified workforce may represent a severe obstacle to the growth of the ICT industry. The problem is partly qualitative—the education system is old-fashioned—it is not oriented to the market. The problem is also partly quantitative—the number of engineers and technical personnel is not sufficient to cope with the fast-growing demand recorded over the past two to three

2 Literally: 'economic renovation'.
3 An overview of Vietnam's relevant laws and regulations on ICT and telecoms is provided in Llewellyn Toulmin and Peter Smith, *Telecommunication Sector—Current Status and Future Path*", published by the World Bank in the series *Vietnam's Infrastructure Challenge.*

years. Significant investments are planned to upgrade the overall IT education system.

At present, there are three major universities providing specific education in information technologies:

- FPT University, which is privately owned—it is associated with one of the largest IT companies in Vietnam;
- Ho Chi Minh City Information technology University, which is publicly owned;
- Hoa Sen University, which is privately owned.

Cooperation with Donors: Several programs sponsored by international donors, are focusing on the development of the private sector and SMEs. A number of these programs are particularly focused on the ICT/ICTE sector. A brief summary of existing initiatives is provided below:

- The *Mekong Private Sector Development Facility* (MPDF) is an IFC program that was launched in 1997 and co-financed with several multilateral and bilateral partners. The MPDF implements activities along three main axes: (i) activities aimed at improving the overall business environment; (ii) initiatives for business development, such as training and capacity building initiatives; and (iii) direct assistance to companies and business organizations;
- The *info*Dev Program is currently supporting the *Center for Research and Consulting on Management* (CRC), which runs a business incubator for ICT enterprises at the Hanoi University of Technology. The project started in late 2004. CRC has accepted seven incubatees. CRC has strategic relations with several key ICT stakeholders, including: (i) the Ministry of Science and Technology; (ii) IDG Venture Vietnam; and (iii) the ICT national champion FPT;
- The USAID-funded *Vietnam Competitiveness Initiative* (VNCI) is a US$5.6 million project focusing on: (i) supporting pilot cluster initiatives in selected sectors, including ICT; (ii) improving the business environment, especially in the field of investments and competition; and (iii) facilitating access to financing for SMEs, through initiatives involving Vietnamese Joint Stock Banks;
- The *Private Sector Support Program* (PSSP) is a EUR9.0 million initiative that is funded by the European Commission, which includes the establishment of pilot technology business incubators. In HCM City, the PSSP supports the SBI incubator that is an ICT-specialized facility located within the *Quang Trung Software Park*. The local counterparts for this program are ASMED and the MPI;
- The World Bank is currently planning a US$100 million program that envisions MPTs among the counterparts. The program will implement several initiatives that do not specifically address ICT, but will nonetheless have a positive impact on this sector. These initiatives include: (i) support to e-government practices; and (ii) support to the reform of education system, with a particular focus on higher education and universities.

II.3 THE FINANCIAL SECTOR

The Banking Sector: The Vietnamese banking industry includes 75 banks, 900 *People's Credit Funds,* and seven finance companies. The banking industry is dominated by four large state-owned commercial banks (SOCB), whose combined assets amount to US$35–38 billion—representing 80% of the total. The private sector is highly fragmented. There are 37 joint-stock commercial banks (JSCB) and 30 foreign bank branches, which account for 20% of the total assets. Overall, the performances of Vietnamese banks have significantly improved over the past few years. The volume of deposits and credits has constantly increased, and the total assets have grown by an annual average of 25% during the period of 2000–05. The banking sector is currently undergoing important changes. Three major SOCBs are under equitization—49% of the state's shares will be sold to the public by 2009. At the same time, SOCBs are receiving conspicuous resources from the state budget in order to raise their capital adequacy ratio to international levels. The private banking sector is witnessing a consolidation process, due to market forces, and to specific measures adopted by the regulatory authority to hinder the phenomenon of family-owned small banks serving only the interests of the ownership. Vietnam has enacted a number of crucial reforms, including a law in 2006, which permits foreign bank's fully-owned subsidiaries to register under Vietnamese Law. However, there are still major obstacles to the growth and diffusion of foreign bank subsidiaries. For example, stringent restrictions are placed on the amount of deposits in local currency that can be held. Fortunately, with the accession of Vietnam to the WTO, it seems clear that the removal of these residual limitations should only be a matter of time.

Venture Capital: Vietnam witnessed a first wave of foreign equity investments during the 1990s. At that time, eight VC firms were established, mobilizing a consolidated capital of US$400 million[4]. With the 1997 financial crisis, most of these early players departed. Until the beginning of 2000, no major operation was finalized in this field. Over the past five to six years, equity investors have progressively resumed their interest in the fast-growing Vietnamese economy, and several new schemes have been established. As of mid-2006, about 10 private investment funds were reportedly active, totaling US$1.0 billion[5]. The present equity industry includes a couple of VC funds that are specifically orientated toward the technology and ICT sector. These are: (i) *IDG Venture Vietnam* (IDGVV); and (ii) *DFJ VinaCapital* (DFJV), which together mobilize US$150 million. These two schemes have different strategies for investing in the booming market of technologies. DFJV plans to invest large sums in businesses at the mezzanine stage—it displays a more cautious approach. IDGVV plans to invest in businesses at various stages of maturity—it will consider start-ups and small enterprises as well as businesses at the mezzanine stage. The number of ICT businesses financed thus far has been limited, because these two funds were established so recently. However, the demand of equity financing from the technology sector is very high and, in the near future, more VCs are likely to deal with this sector. The government is considering a direct intervention through a publicly-owned venture fund for high-tech companies, which would pursue technological development rather than mere profit.

Business angel operations are very limited and fragmented. They do not seem to represent a valid financing option for ICT/ICTE SMEs, due to a legal and institutional framework that is ill-suited to this type of operation.

Government and Donor Schemes: In order to facilitate access to financing for SMEs, the government set up the *Development Assistance Fund* (DAF). With a total investment of US$5.0 million and more than 6,000 projects financed, the DAF is by far the largest non-banking financial institution owned by the state. In addition, SME financing is also the main objective of a series of other programs, which are financed by international donors and IFIs. These include:

- *SME Development Fund* (SMEDF): This scheme is funded by the EU, and managed by the DAF. It is a refinancing scheme, with a budget that includes EUR20 million for lending activities and EUR1.0 million for technical assistance. SMEDF was launched in 2003—it will be soon terminated;
- The *SME Development Program Loan*, which is currently being implemented by ADB: This US$100 million project was started in 2004. It has three main components: (i) supporting the enhancement of the policy and regulatory framework; ii) facilitating the access of SMEs to financing; iii) facilitating the access of SMEs to domestic and international markets through leveraging industrial and technical standards. The project is co-financed by KfW and AFD;
- The JBIC's *SME Finance Program*: This is a US$35 million fund that was established in order to provide medium and long-term credit to SMEs, channeled through local commercial banks. This program also includes capacity-building assistance to the State Bank of Vietnam.

4 Source: Nick Freeman, "Expanding Horizons: Equity Finance in Vietnam", MPDF-IFC, July 2004.
5 Source: The Ministry of Finance of Vietnam. See article "New wave of FII to flow into Vietnam", Sept. 2006.

III. ISSUES IN THE FINANCING OF ICT/ICTE SMALL BUSINESS

III.1 SME FINANCING NEEDS – THE DEMAND SIDE

Vietnamese ICT/ICTE industry is characterized by a high variety of players. The financing needs voiced by entrepreneurs reflect the different business models and the diversity in the nature and in the maturity of their companies. Therefore, the amounts sought by ICT/ICTE companies inevitably range from as little as US$25,000 to several million. The rationale for these financing needs is also varied. Evidence from the fieldwork indicates that investment in qualified human resources is probably the top priority for most entrepreneurs, followed by the development of marketing activities. Table 1 summarizes the salient features of financing needs voiced by ICT/ICTE enterprises in their various stages of development[6].

III.2 ISSUES IN ACCESSING FINANCING – THE SUPPLY SIDE

Issues in Accessing Bank Financing: Access to bank financing is difficult for Vietnamese SMEs in general, and ICT/ICTE firms in particular. The banking industry is characterized by a very conservative lending approach, and with few exceptions, the strict policies adopted discourage most potential borrowers. Commercial banks are fiercely risk–averse. The extension of loans is typically subordinated to a proper securitization, normally through real estate properties. The collateral requested usually falls in the range of 140–160% of the amount borrowed, but in some cases, it may rise to 200–250%. The problem is even tougher when the proposed collateral consists of land property. Under Vietnam's judicial system, it is extremely difficult for banks to seize borrowers' land properties in case of default. Therefore, some banks do not concede loans covered by land guarantees, or only do so to a very limited extent.

A number of other factors contribute to the difficulties for SMEs in accessing bank financing:

- The leading banks of Vietnam are all state-owned. Typically, SOCBs favor state-owned enterprises with which they are particularly familiar. Therefore, a large part of the economy is excluded from mainstream lending;
- For many years the legal framework for the Vietnamese banking sector has presented a number of restrictions for the private sector, particularly for foreign operators. This reduced the overall competitiveness, and particularly hampered the scaling-up of SME financing. Recently, these restrictions have largely been lifted, and major changes are expected in the coming years;
- In Vietnam a credit information system exists but it only covers a limited number of cases, and SMEs are commonly not included (see Box 1 in Annex C). The absence of a tracked credit history of the would-be borrowers, and the high cost of performing due diligence under these circumstances, are discouraging factors for bank officers;
- Vietnamese banks are generally more willing to loan on a short-term basis rather than on a medium or long-term basis. This represents a major obstacle for SMEs that aim to expand their business, or need financial assistance for the implementation of new projects;

There are also a number of constraints on the demand side. Private entrepreneurs often have a

6 For more details on the enterprises cited in this section, please refer to the company profiles presented in Annex F.

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

Timeline	Amount Sought	Rationale	Examples from Fieldwork
Early-Stage	US$30,000 to 100,000	The initial phase goes from the seed stage to the moment when commercialization begins. The financing needs at this stage are very limited for software developers, IT consultants, and web-designers, because they generally do not require a large investment in physical assets. The amounts sought may increase for business models that require more expensive instruments, such as the 3D animation industry, and embedded software developers.	■ ***Dreamsoft*** – e-commerce, web design and IT consulting ■ ***VNIS*** – websites, e-learning tools. (CRC incubatee)
Development	US$100,000 to 500,000	Enterprises at this stage have successfully developed their product/services—they need to improve their capacity to tap into new markets. This typically requires hiring new personnel—both technical and commercial staff—improving marketing activities, and building up adequate working capital.	■ ***VIMES*** – software applications for health institutions (CRC incubatee)
First Expansion	US$500,000 to 2.0 million	The first expansion phase usually entails a diversification in the company's activities. This often involves the introduction of new products or services that build upon the technical expertise acquired and on the connections established with certain clients. In other cases it is limited to an upgraded version of the original product, which incorporates and systematizes the improvements gradually introduced during the first commercialization phase. Depending on the nature of the business, financing needs at this stage range from US$500,000 to well over US$2,000,000.	■ ***PeaceSoft*** – BPO, web design, e-commerce. ■ ***VNHCN*** – e-security, Intranet services, e-gov projects (CRC incubatee).
Second Expansion	More than US$2.0 million	This stage is usually characterized by a significant change in the nature of the business, or in the scope of activities. Sometimes it entails expansion to overseas markets, with the establishment of subsidiaries abroad. In the case of Vietnam, this is the stage when a big MNC acquires the company and injects fresh capital to exploit opportunities on the global market.	■ **none**

negative bias vis-à-vis the commercial banks. In particular, these entrepreneurs often view the rules and procedures involved in applying for a loan as too stringent and difficult to comply with—therefore, promoters feel discouraged from the very beginning. The inability of entrepreneurs to prepare and present adequate business plans and financial statements is among the primary reasons for the rejection of loan applications. Sometimes the lack of skill is also accompanied by the promoters' unwillingness to disclose information on the financial status of their business for fear of taxation[7].

Presently, only one-fifth of Vietnamese SMEs have received a loan from a bank, and in most cases, it has been guaranteed by the owner's personal assets. In the SOCB segment, there are a couple of banks significantly involved in SME financing: *Agribank* and *Vietcombank*. In the private sector, the banks most significantly involved in SME financing are Sacombank and ACB. In the ICT/ICTE sector, the bank with the highest share of technology firms in its portfolio (10 to 20%) is *Techcombank*. However there are two major limitations First, start-ups are excluded from lending—a minimum of three to four years of operations are required. This means that possibly 50% of ICT/ICTE SMEs are not eligible. Second, physical assets-based securities are required. In practice, this means that the only ICT enterprises that normally have access *TechcomBank* financing are in the field of sales and distribution.

Issues in Accessing Equity Financing: After a long period of limited or no operations, the presence of VCs in Vietnam is gaining momentum. For the ICT industry, the establishment of IDGVV and *DFJ VinaCapital* are not only an opportunity in terms of

7 It is worth to mention that the *Financial Markets Development* (FMD) program of MPDF actually addresses some of the above-mentioned obstacles, focusing in particular on three issues: (i) training of bankers in the field of SME and private sector financing; (ii) improving the credit information system; (iii) improving the transparency of the private sector, and transferring best practices to would-be borrowers.

financing, but also represent a signal that there exists a tremendous confidence in the potential of this sector. The present situation appears to be the initial stage of a very promising process. Despite the limited amount of capital invested thus far, the private equity industry is expected to have a major impact on the development of the ICT/ICTE sector over the next three to four years. It is highly likely that other important international IT players will become established in Vietnam.

The Vietnamese market is still largely unfamiliar with private equity financing—and current operations are not very sophisticated. This is particularly true of IDGVV, which has been focusing on relatively small and simple businesses, and adjusting its strategy to the actual needs and stage of maturity of Vietnamese firms. However, there are plans to shift to more sizeable and complex projects, as soon as the market is ready.

Another issue concerns the current opportunities offered by the exit market. At present, IPOs are not generally considered to be a viable option, given the limited development of the Vietnamese Stock Exchange. In few cases, a successful IPO could be achieved in other regional markets, such as Hong Kong, Singapore, or Tokyo. However, for the majority of investments, the most practical exit strategy is represented by M&A, which is encouraged by the increasing presence of foreign MNC in the country.

In order to create an environment conducive to equity investments, important legislative reforms are urgent. In particular, an improvement of the regulations for the protection of investors appears necessary. In fact, Vietnam ranks today among the worst economies on this subject, as reported by the World Bank's "Doing Business" survey[8].

From the supplier's perspective, the major constraints for SME financing are the limited skills of promoters in financial matters, and the low quality of business plans. In addition, entrepreneurs commonly have a limited comprehension of the various financing options offered by VCs and of the mechanisms governing equity or quasi-equity schemes. Finally, SMEs sometimes lack managers specifically placed in charge of financing matters, and the subject is therefore left to accountants, who are often not well versed enough to deal with those matters effectively.

Government and Donor Schemes: In Vietnam, there are nearly 250,000 SMEs—this represents one-third of the country's GDP, and one-fourth of the employed workforce. This segment is of paramount importance to the national economy. This is largely acknowledged by the government, whose recent policies aim to support its growth and competitiveness, mainly through fiscal and export facilitations. Regarding access to finance, a significant initiative launched in late 2004 provided for the establishment of credit guarantee funds in the main cities. However, the results have been below expectations, and thus far, only the facility located in HCMC is fully operational. In the ICT/ICTE sector, the support of the government has thus far been limited to the set-up or the co-financing of technology incubators and science parks—the establishment of a dedicated financing scheme is still under discussion.

As will be seen in section IV, various international organizations and donors are also implementing projects in this area. These are usually refinancing schemes or soft loan schemes, with advisory services attached. The funds are channeled through local banks, and address virtually all sectors. Therefore, they have had little impact on ICT/ICTE enterprises. There are specific initiatives for technology SMEs in the field of incubation, for example, the *info*Dev-supported CRC and the EC-supported *Quang Trung Software Business Incubator*. However, these initiatives do not foresee the direct funding of incubates—their contribution in this area is limited to the identification of possible sources of financing and support in the preparation of the files.

III.3 THE FINANCING GAP – NATURE AND SEVERITY

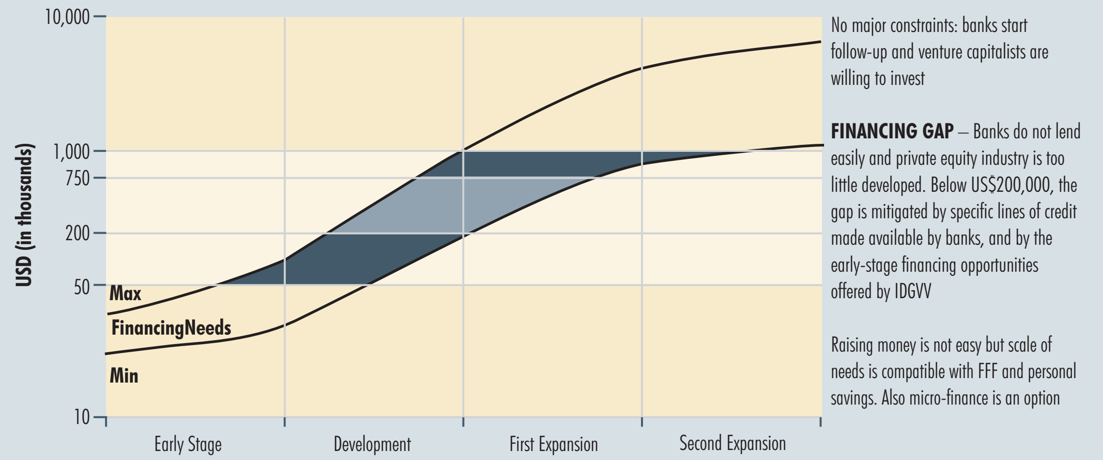
Overview: As discussed above, there are various factors that contribute to a financing gap for Vietnamese ICT/ICTE SMEs. Figure 1 illustrates the extent and the severity of this gap in the various stages of enterprises' development:

8 Source: *www.doingbusiness.org*. The 'protection of investors' is measured by taking into account three elements: (i) the transparency of transactions, (ii) the liability for self-dealing; and (iii) the ability of shareholders to sue officers and directors for misconduct.

As indicated in Figure 1, financing constraints faced by ICT companies appear comparatively more severe in the development and first expansion phases. The situation is more nuanced in other phases. In particular:

- Firms in the early-stage usually have recourse to the owner's savings and FFF channels as a source of financing. Sometimes this is complemented by a personal loan obtained by the owner through institutional sources. The government provides incentives to technology start-ups, such as a four-year tax holiday, and a 50% reduction of income taxes for four more years;
- A financing gap emerges when enterprises seek amounts of US$50,000 to 1,000,000. Usually, this coincides with a critical stage of growth. At this stage, enterprises have developed their business at a small but profitable scale, and they need to scale-up in order to fully exploit the possibilities offered by the market. Typically, they do not have an established commercial network and do not hold enough experience in dealing with banks and other financial institutions. Therefore, they are largely excluded by the mainstream sources of credit, unless they have sufficient collateral to securitize the loan. Few banks have specific lines of credit for SMEs, which provides loans normally ranging from 60,000 to 150,000, but in most cases these are limited to agriculture and trade sectors. Regarding VCs, the size of investments is normally above US$1.0 million—there are only a few examples of deals below this threshold. By contrast, IDGVV has deals in this phase that are normally below US$200,000;
- The development of the ICT sector in Vietnam is a recent phenomenon, and there are few enterprises that have reached the second expansion stage**.** Access to financing for mature enterprises with a track record and a consolidated position is less difficult. Commercial bank requirements are comparatively less stringent, and enterprises are generally eligible for equity investment schemes. Most of the companies that have reached this stage are either distributors or hardware manufacturers and assemblers.

Figure 1. *Nature and Severity of Financing Gap*



IV. CONCLUSIONS AND RECOMMENDATIONS

This study confirmed the existence of a financing gap for SMEs operating in the ICT/ICTE sector. The gap is particularly acute for enterprises at the development and first expansion stages, which are typically seeking financing ranging from US$50,000 up to US$1.0 million. Close to the lower end, the gap is somewhat mitigated by banks' lending schemes dedicated to SMEs. The operations of a couple of technology VCs ease the severity of the issue for firms seeking less than US$200,000 or above US$750,000. Other government or donor initiatives are of help in mobilizing funds for generic SME development, or for specific projects in support of the ICT/ICTE industry. However, none specifically addresses the lack of financing in this sector, via direct lending or equity financing schemes.

Interviews with key local stakeholders indicated a series of measures that could facilitate the ICT/ICTE SMEs' access to financing. Vietnam's political and financial environment is changing very fast, and a number of projects are already in place or in the pipeline. Therefore, it is recommended that any new initiative builds on the existing experiences, possibly teaming up with local and international players who are already active in the sector. The present section summarizes possible measures that could be useful in bridging the financing gap described previously.

IV.1 MEASURES AIMED AT FACILITATING ACCESS TO EQUITY FINANCING

The key role played by VCs in the development of the ICT industry has been widely demonstrated. This is not only the case in the often-cited Silicon Valley model, it is also true of Asian countries such as Singapore, Taiwan, and India. In Vietnam, the flow of VC investment in the technology sector has rapidly increased over the past two years, in concomitance with: (i) a government shift toward the market economy; and (ii) the formal acknowledgement of the technology sector as a key ingredient for the country's economic development. The overall amount mobilized by the technology-oriented VC funds is US$150 million. This is not an impressive sum, but it appears broadly adequate for the fledging Vietnamese ICT market. Due to the recent establishment of these funds, it is too early to judge their performances. At first glance, it is clear that the potential demand is far larger than the current capacity. On the one hand, this would suggest the existence of room for the establishment of other equity financing schemes. On the other hand, it must be remembered that the Vietnamese ICT/ICTE sector is very young and largely informal. Therefore, an excessively sophisticated or conspicuous initiative in this field could be premature or disproportionate to the actual needs.

***Establishment of a Facility Combining Financing and Technical Assistance*:** Ideally, a dedicated facility should focus on the range in which the financing gap appears most severe—for investments in the US$200,000–750,000 range. In practice, a good share of small businesses, especially in the field of software development and BPO service provision, would content themselves with even smaller amounts. This is, of course, true of enterprises that have terminated the incubation stage and need financial support to build a market capacity for their products and services. Bearing in mind the technopreneurs' limitations in terms of management and financial skills, it could be beneficial to put financial services and technical assistance under the same roof. Building on the existing experiences of business incubators and science parks could be envisaged. These facilities are the center of networks of relations, including big IT firms, international donors, private investors, and the public sector. They represent an enabling environment in which initiatives of this kind could grow and bear fruit. Concretely, the matching funds model is inspiring.

It is a model in which the public sector co-finances private equity schemes that operate in areas that have a strategic value for country development. Under this model, management is typically entrusted to professional VCs that have the necessary experience to guarantee good performances, and the role of public institutions is *inter alia* to safeguard the strategic finalities of the initiative. In Vietnam, the environment for these types of schemes seems particularly favorable—in fact, the government is presently discussing the idea of allocating resources to set up an equity fund in the technology sector.

***Support to Business Angels*:** As discussed previously, angel investors are not widespread in Vietnam. This is probably due to constraints in the overall business environment. It may also be due to a lack of pioneer experiences in this field. At present, few Vietnamese angels are active on a purely individual basis. They operate mainly through informal channels, and their outreach is very limited. Therefore, it could be effective to support the establishment of an organized business angels group, similar to those existing in other countries. This would not only improve the matching of investment proposals, but it would also help promote the model, and indirectly contribute to the adjustment of regulations in this field.

IV.2 MEASURES AIMED AT FACILITATING ACCESS TO BANK FINANCING

Commercial banks represent by far the most important source of financing for the private sector. However, as described previously, the bulk of Vietnam's banks—especially SOCBs—are quite wary of lending to SMEs, and in particular to ICT/ICTE SMEs. The rationale for this attitude is mainly linked to information problems that could be partly overcome with the creation of an efficient and comprehensive credit information system accessible to all banks. At the same time, some measures could be devised to improve the relations between banks and SMEs. These measures would basically take two forms: (i) support to the credit guarantee industry, and (ii) assistance to SMEs in dealing with financial institutions.

Support to Credit Guarantee Schemes: There are many examples of credit guarantee facilities in Vietnam. For example, USAID has implemented a scheme of this kind in cooperation with two local private banks, ACB and EACB. Recently, the government included the establishment of credit guarantee funds in the major cities of Vietnam, as a key feature of its pro-SME policy. However, these initiatives have thus far had only a marginal impact, and evidence from the fieldwork indicates that many stakeholders virtually ignore these experiences. They often have a very limited knowledge of credit guarantee mechanisms. The concept of credit guarantees has been applied in different ways across the world, and there are various examples of concrete facilities from which to take inspiration. A first useful initiative could focus on improving the awareness of this type of instruments among bankers, entrepreneurs, business associations, and other stakeholders. It could also be useful to explore the possibilities of a direct intervention in this field—supporting existing facilities, or designing new ones. This issue was discussed briefly with government representatives, donors and incubator managers during the fieldwork. There is a substantial and widespread interest in the subject.

Provision of Direct Assistance to Promoters: As observed in previous sections, bank officers often lament the inadequate quality of the proposals they receive from SMEs. Promoters are often unfamiliar with bank policies, and fail to provide reliable financial statements. In the technology sector, difficulties may also arise in making plans understandable to bankers. Incubators provide a valuable support in this respect, but this is generally limited to their tenants. Therefore, it could be envisaged to enhance the capacity of incubators to extend this type of support, or to set up specific facilities that provide technical assistance directly to entrepreneurs.

IV.3 IMPROVING THE UNDERSTANDING OF THE ICT SECTOR

In many cases, bankers admit to having a limited understanding of the fundamentals of the ICT/ICTE sector, which makes it difficult for them to assess enterprises' assets and form an accurate perspective. With the likely growth of the ICT industry, and the establishment of large MNCs in the country, the number of highly specialized firms performing complex operations should increase dramatically. If the bankers and other investors are not able to fully understand the new business models, the financing gap for these types of enterprises will inevitably worsen. The following types of concrete support could be useful: (i) technical assistance in designing and implementing training initiatives; and (ii) implementing exchange sessions that increase the understanding of ICT in various sub-sectors. Such initiatives would ideally involve: (i) business associations operating in the ICT/ICTE sector, such as *HCM Computer Association* and *VINASA*; and (ii) business incubators and science parks.

ANNEXES

ANNEX A – THE ICT/ICTE SECTOR

A.1 TELECOMS

Over the past five to six years, many developing countries have witnessed a rapid growth in the telecoms industry especially driven by the diffusion of mobile telephony. Vietnam, with its 83% teledensity growth rate in the mobile telephony, and 20% in fixed line telephony is no exception, andranks among the world's fastest growing. In 2005, the telecom industry total revenues by are estimated at US$1.88 billion , and are expected to reach US$5 billion by 2010. In absolute terms, this amount is still among the smallest in the region, but in terms of growth, its 16.5% rate is in line with India and Indonesia, the two regional fastest-growing markets.

The fixed line market includes 6.85 million lines active. *Vietnam Post and Telecommunications* (VNPT) is presently enjoying a largely dominant position, with a 90% market share. However, with the Government's licensing of new operators, the competition will likely increase in the near future. Today, the main competitors in this segment are *Saigon Post and Telecommunication* (SPT) and *Viettel*. VNPT virtually holds a monopoly even in the international communications services, through its subsidiary VDI. The company operates international gateways in Hanoi, Danang, and HCM City. iI also provides satellite connections and submarine cable connections. Since 2002, *Viettel* and *EVN Telecom* are licensed for international telephony, but their market shares are marginal.

Five operators offer mobile telephony services. *Viettel* emerged recently as the leader in this sector. The company, which belongs to the *Military Telecom* of the Ministry of Defense, grew at a breakneck pace over the past two years. Today, it controls one-third of the marked, ahead of *Mobifone* (32%) and *Vinaphone* (24%), which are held by the industry giant VNPT, the former through a joint venture with Swedish *Kinnevik*. The fourth largest player, *S-Fone* is the first mobile company to adopt CDMA technology instead of GSM. In 2006, *S-Fone* pioneered a video-on-demand service on mobile phone platform. The most recent competitor in the mobile segment is *EVN Telecom*, an affiliated of *Electricity of Vietnam* which also utilizes CDMA technology.

The salient features of main telecom operators are provided in Table 2 below.

A.2 INTERNET SERVICES

Internet connection was established in Vietnam for the first time in 1997. Today Internet users are estimated being 15 million, with a penetration rate of 17.5%. The international bandwidth available is also rapidly increasing, and reached 7,076 Mbps in 2006.

The Internet market is dominated by State-Owned Enterprises (SOEs), and particularly by VNPT, whhich holds via its subsidiary—the *Vietnam Data Corporation* (VDC)—almost half of the market share. The dominant position of VNPT is however slowly eroding, and the major competitors, such as FPT and *Viettel* have gained increasing market power over the past two to three years. Officially, there are 16 licensed ISPs, but some are not active or have very marginal shares. Three main players control 86% of the Internet market: VNPT, *Viettel*, and FPT. FTP is one of the largest IT companies in Vietnam, and is also active in hardware manufacturing, software development distribution, and IT services. Among the small scale operators there are private-owned enterprises. This is the case of *Tham Tam*, OCI, *Viet Khang* and *Network Technologies*, but their market share is marginal. The ISP market structure as in 2005 is summarized in Figure 2.

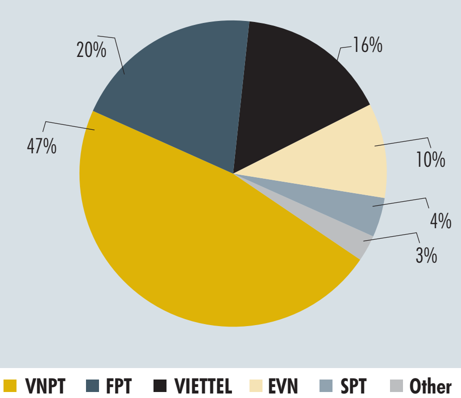
Until 2002, VNPT was detaining a monopolistic position as Internet exchange carrier (IXC). Later

TABLE 2. *Main Telecom Operators*

Operator	Line of Business (subscribers)	Comments
Vietnam Post and Telecommunications	■ Fixed telephony (5.5 million) ■ Mobile telephony (7.1 million Mobifone and 5.3 million Vinaphone)	VNPT was created in 1993 as the State's monopoly operator for the national communication network. *VNPT* is active in all the telecoms sub-sector through a set of affiliated companies or BCCs ventures with foreign partners. Estimates on VNPT's fixed telephony market share ranges from 90 to 95%. VNPT operates various subsidiaries including: (i) VTN—national network company; (ii) VTI—international communications; (iii) VDC—data transmission and Internet; and VMS—mobile telephony, holding the carriers *Vinaphone* and *Mobifone*.
Saigon Post and Telecommunications	■ Mobile telephony (1.0 million)	SPT is 87% publicly owned, State's and various government agency including also VNPT—18%; while the remaining is held by private sector individuals and corporates. The mobile division, branded *S-Fone*, was established as a BCC with a Korean partner: *SLD Telecom*, for a total investment of US$230 million. S-Fone adopts CDMA technology.
Viettel Corporation	■ Mobile telephony (7.3 million)	*Viettel* is owned by the *Military Telecom JSC*, who belongs to the Ministry of Defense. In only two years of activity it *Viettel* has become the leader operator in mobile sector, with 5 million new subscribers only in 2006. Since early 2006, *Ericsson* has become the Viettel's supplier for GSM systems.
Hanoi Telecom Company	■ n.a.	*Hanoi Telecom* is a joint venture between *Hanoi Telecom Company* and Hong Kong-based *Hutchison Telecommunications*. The BCC foresees an investment of US$655.9 million from the foreign partner to set up the first third-generation mobile network build on CDMA technology.
EVN Telecom	■ n.a.	Controlled by *Electricity of Vietnam*, *EVN Telecom* is a major player in Vietnam's telephony. The fixed wireless phone, *E-Com*, service, as well as the inter-provincial mobile phone, *E-Phone*, and mobile phone, *E-Mobile* services have a nationwide diffusion. In particular, EVN is the main provider of wireless fixed connection in Vietnam. The EVN's network is being set up in partnership with US-based *Lucent Technologies*.

on, the government liberalized the sector and licensed new operators. Today, there are four more licensed IXCs: *Viettel, EVN Telecom, Hanoi Telecom*, and SPT.

Figure 2. *The CLIP Framework*



A.3 ICT/ICTE ACTIVITIES

Over the past five years, the Vietnam's ICT/ICTE industry has attracted several major technology firms. Big corporation such as *Fujitsu*, *LG*, *Canon*, *Samsung* have already established their manufacturing plants, and, in some cases, the value of the investment is sizeable, like *Intel* which has reported a US$1.0 billion investment in its facility based in HCMC. This trend is favored by a number of factors, including: (i) the relaxing of limitation on foreign investment and the shift to a market economy; (ii) the active support of IT sector by the Vietnam's Government, like in the fields of infrastructure, taxation and education; (iii) the comparatively low cost of the workforce combined with a relatively high literacy and skills. In parallel with the scaling up of foreign technology firms, the domestic ICT/ICTE industry is rapidly developing. The precise number of active enterprises is not clear, but according to the data published by the *HCMC Computer Association* it could be 1,400.

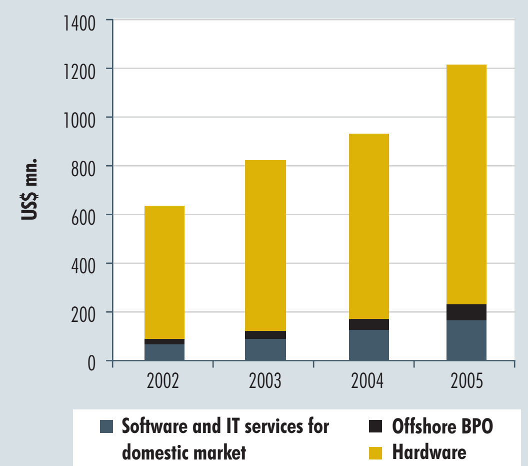
In the ***hardware*** sub-sector, there are an estimated 400 small manufacturers and assemblers of IT equipment, mainly performing outsourced functions for foreign companies established in the country. The manufacturing industry includes a dozen of domestic medium and large companies, mostly State-owned, which produce locally branded PCs and peripherals, such as *Thanh Gong*—produced by *FPT Elead*, and CMS, produced by *Trung CMS* company. The number of PCs produced per year is well above 100,000 units. The hardware industry is by far the one which generates the highest revenues. In 2005, it topped US$1.0 billion, being 81% of the overall ICT industry turnover. The estimated data for 2006 is above US$1.5 billion. The bulk of the revenues are generated by large multinational companies installed in the country. For instance, the *Fujitsu*'s integrated circuit industry has a turnover of nearly US$400 million. The domestic companies' revenues are smaller. In 2004, like the turnover of FPT was of US$10 million.

The broadly defined Vietnamese ***software*** industry includes 700 enterprises for an annual turnover of US$250 million (2006). The activities in this field range from software development, performed by 350–400 enterprises, to IT consultancy and services, 300 players. Internet/intranet services are provided by 200 companies, while less than 100 businesses are active in e-contents development. Off-the-shelf packages are sold by 300 resellers. Overall, two-thirds of the revenues of the software industry are generated on the internal market. Value-added services and, in particular, the provision of e-contents, appear as the most profitable business in this field. This segment employs 10,000 workers and includes: online gaming, mobile phone contents, e-learning, and multimedia digital resources. The least lucrative segment is the sale of off-the-shelf software. This is due to the widespread diffusion of piracy whose rate is well above 90%. In 2005, the net loss caused by software piracy was estimated at US$55 million.

An increasing share of the software industry's earnings comes from offshore ***outsourced*** activities. In 2005, the revenues of this segment reached US$70 million, with a 50% growth rate. In absolute terms, the volume of outsourced activities is still limited, but the trend indicates that , over the next years, these types of services will become increasingly important for the domestic ICT/ICTE industry. The activities outsourced include the development of ERP applications, software localization, testing services, code transcription services . The development of e-contents and Internet-based services, like telecom messaging, e-entertainments, is also a growing line of business. Business process outsourcing (BPO) is particularly developed among the medium-large IT SOE where it may account for nearly the totality of activities, as in the cases of FPT Software, TMA, GCV and Silkroad.

The Figure 3 below summarizes the data on the turnover generated by ICT/ICTE activities over the past four years.

Figure 3. *The Turnover of the Vietnam's ICT/ICTE Industry (2002–2005)*[9]



9 Figures do not include the telecom sector, whose data was reported in section A.1

ANNEX B – THE ISTITUTIONAL SETTING

B.1 INSTITUTIONAL SETTING – PUBLIC ENTITIES

Ministry of Posts and Telematics[10]**. The** Vietnam's *Ministry of Posts and Telematics* (MPT) is the body in charge of all regulative and policy-making matters in telecommunications, IT, electronics, Internet, radio transmission and national information infrastructure. Its mandate includes the management of several public services and State's shares in relevant SOEs. Its functions include: i) the preparation of laws, regulations and plans on telecom and ICT; ii) the regulation of access and interconnection between telephone networks, and the relevant tariffs; iii) the issuance of licenses for telecom and Internet operators; iv) the definition of development plans for electronic and ICT industries; and v) the settlement of disputes among the various operators.

Ministry of Science and Technology[11]. The *Ministry of Science and Technology* (MST)'s mandate include various functions in support of the ICT sector. During the 2000–2005 period, the MST's involvement in ICT focused on the creation of an enabling environment for the development of the ICT industry. Among the , concrete measures, it is worth to mention the establishment of six software parks—some of which are acting as business incubators, as well as numerous investments in education and training of IT professionals, and the fiscal facilitation for start-ups in ICT /ICTE sector. As for the future, MST will promote: i) the establishment of an equity fund and other financing schemes dedicated to the ICT/ICTE enterprises; and ii) a US$1,5 million fund to support business incubation.

Vietnam Internet Network Information Center[12]**.** The *Vietnam Internet Network Information Center* (VNNIC) was founded in 2000 under the Ministry of Posts and Telematics. VNNIC is a not-for-profit body whose main functions and duties are regulated by the law (Decision no 28 / 2003). These include:
i) management and allocation of IP address, and Internet domain name at the national level;
ii) participation in Internet-related initiatives promoted by associations and non-governmental organizations; and iii) promotion of Vietnam's Internet on a global scale and development of the Vietnam,'.vn', domain.

Agency for SME Development[13]**.** Established in 2003 under the auspices of Ministry of Planning and Investment, the *Agency for SME Development* (ASMED) is the authority in charge of the coordination of the various programs in support of Vietnam's SMEs. ASMED acts as the local counterpart for several projects financed by international donors, such as ADB, EU, UNIDO, Danida, and GTZ. ASMED has three main objectives: i) the definition of an SME Development Strategy to meet the target of 500,000 registered SMEs by 2010; ii) the extension to the whole country of the *National Business Information System,* the business registry; and iii) the promotion of three *Technical Assistance Centers* for SMEs, recently-established.

B.2 INSTITUTIONAL SETTING – NON-GOVERNMENTAL ORGANIZATIONS

HoChiMinh Computer Association[14]**.** The HoChiMinh Computer Association (HCA) is the largest ICT association of Vietnam. Established in 1988, HCA has today more than 1,300 members,

10 For more information, please refer to the MPT's website, www.mpt.gov.vn
11 For more information, please refer to the MST's website, www.most.gov.vn
12 For more information, please refer to the VNNIC's website, www.vnnic.net.vn
13 For more information please refer to the Ministry of Planning and Investment's website, www.mpi.gov.vn
14 For more information, please refer to the HCA's website, www.hca.org.vn

including individual (89%) and corporate (11%)—both domestic and foreign-owned. HCA's corporate members altogether generated a US$395 million turnover in 2005, and employ 7,000 staff. HCA's activities range from the organization and participation to promotional initiative, like *Vietnam IT Outlook*, *Vietnam Computer World*, *Softmart* , to the provision of consulting services and assistance to its members, in particular for start-ups. The HCA set up two affiliated companies:

- *Information Technology Promotion Ltd* – which assists members in market development, and in other enabling services;
- *Software Business Incubator (SBI)* – created in partnership with *Quang Trung Software City* and enjoying the support of the HCM City People's Committee and of an EU-funded program.

HCA publishes every year the *Vietnam ICT Directory* in partnership with *PC World Vietnam.*

Vietnam Software Association[15]**.** Established in April 2002, the *Vietnam Software Association* (VINASA) is a non-governmental organization whose 110 members are among the leading software firms in the country. VINASA's members represent 50% of the professional workforce employed in the sector and 60% of the industry's production. Most of the members belong to SMEs with less than 50 employees, while only 10% belong to large companies. VINASA promotes the development of Vietnam's software industry. Its activities include: i) organization of business missions oversea to promote Vietnam's enterprises, (in particular in US and Japan); ii) organization of training programs for IT professionals and managers at subsidized price; iii) issuing of publications and circulation of information; and iv) advocating and lobbying the government for policies in favor of the software industry—VINASA is in fact connected to the MPT and is member of the *National Steering Committee* on ICT. VINASA plays also a role at the regional and global level, being member of IT organizations, such as WITSA (*World IT and Services Alliance*), ASOCIO (*Asian-Oceanian Computing Industry Organization*) and AICTO (*Asia Information Communication Technology Organization*).

B.3 SOFTWARE CENTERS AND TECHNOPARKS

The government has adopted concrete measures r by to support the development of ICT and it is worth to mention the establishment of several Software Centers and TechnoParks. These IT-enabled facilities provide entrepreneurs with premises at a subsidized price. Some centers benefit from the proximity with education institutions, like university and training centers, and others are equipped to implement incubation programs for enterprises at the seed stage. Altogether, the eight existing software centers offer 60,000 m² of available space. At present, they are hosting 116 firms, 80 of which are start-ups. Most of the hosted firms are small, and only five have more than 150 staff. One-third of the hosted firms are foreign-invested. The salient features of the existing Software Centers and TechnoPark are provided in Table 3 below[16].

15 For more information, please refer to the VINASA's website, www.vinasa.org.vn
16 Figures mainly drawn from HCA and PC World's *The Vietnam ICT Directory*, 2006.

TABLE 3. *Software Centers and TechnoParks*

Denomination	Location	Year of foundation	Management	Facilities	No of Member Companies
Saigon Software Park	HCM City	2000	Saigon Electronics and Informatics Company	3500 m² of office space; broadband; satellite connection; 2 training centers	15
Da Nang Software Park	Da Nang City	2001	Softech	5200 m² of office space; IT infrastructures; satellite connection; training center	9
Quang Trung Software City	HCM City	2000	QTSC Development Corporation	20,000 m² of office space; broadband; conference facilities; research laboratories; 6 training centers	61
Can Tho Software Park	Can Tho	2001	Can Tho Software Technology Center	1000 m² of office space; ADSL, leased line;	5
E-Town	HCM City	2001	REE Corp.	30,000 m² of office space; IT infrastructures;	107 (20 in IT sector)
Hue Software Park	Hue	2001	Thua Thien Hue IT Center	2,000 m² of office space; IT infrastructures;	n.a.
Unisoft	HCM City	2003	National University of HCM City	5,000 m² of office space; IT infrastructure;	5

ANNEX C – THE FINANCIAL SECTOR

C.1 BANKING AND RELATED ACTIVITIES[17]

The Vietnamese banking system presents two characteristics. The strong position occupied by the four largest SOCB which account for 80% of the total assets, and the substantial fragmentation of the private banking sector, with 70 institutions disputing over crumbs. Over the past few years, the total value of deposits and credits grew steadily at a 33% and 42% rate in 2005. The overall penetration of the banking system is still low, only 5% of population have a bank account, and a large untapped market exists. Other performance indicators confirm the favorable situation of the banking industry with a profit rate growing at a pace of 50% per year, and the main joint stock banks recording a 25% average return on equity (ROE).

The sector regulator is the *State Bank of Vietnam* (SBV), which is also the legal owner of the SOCB. Created in 1988, SBV has played a prominent role in the reform process occurred over the past 10 years in the banking sector. The main piece of legislation in this field is the "Law on Credit Institutions" issued in 1998 and subsequently amended in 2004, which provides the general legal framework for banking activities. In brief, Vietnamese legislation recognizes three types of banks: (i) the SOCB; (ii) the domestically-owned Joint-Stock Commercial Banks; (iii) the foreign-owned branches and the joint ventures.

State-Owned Commercial Banks: There are five SOCB in Vietnam, four of which are the largest banking institutions of the country: *Agribank, Vietcombank, BIDV* and *Incombank*. Altogether the SOCB account for 77% of the overall lending activities, and collect 75% of the total deposits. These sub-sectors suffer from a severe undercapitalization, with capital adequacy ratio (CAR) well below the 8% determined under the Basel II agreement. In order to help the SOCB to meet the international standard, SBV has therefore settled to inject US$700 million in the banks' capital over the period 2006–2008. At the same time, over the past five years an important effort has been devoted to reduce the incidence of non-performing loans from nearly 13% in 2000, to 7.7% in 2005. These interventions aim at achieving a rapid and effective equitization of three among the major SOCB. This process has already started and entails the sale of 49% of the shares to the public by 2009.

Domestic Joint-Stock Banks: As of mid-2006, 37 entities were registered as joint-stock commercial banks (JSCB). These domestically-controlled banks serve the interest of one major shareholder, normally a State-owned enterprise. While the bulk of JSCB are small and often poorly performing, a handful of private banks are emerging as class competitor, slowly eroding the dominant position of SOCB. This is typically the case of *Asian Commercial Bank* (ACB) and *Sacombank*, and to a less extent of *Techcombank* and *East Asia Bank* (EAB). In 2005, JSCB accounted for 12% of the total credit. The number of JSCB grew steadily in the nineties, reaching the top in 1997 with 51 registered entities. Since then, the trend reversed and the number of JSCB decreased to the actual level. A further consolidation is envisaged for the near future, as the SBV anticipated the intention to raise the minimum level of capital and to modify the regulation on ownership to reduce the influence that a single majority of shareholders can bear.

Foreign Banks and Joint Ventures: Until early 2006, the only possibility for a foreign bank to operate in Vietnam was either through branches fully dependent on the parent institution, or

17 Data and figures in this section are mainly drawn from: (i) the Vietnam Chamber of Commerce and Industry (VCCI), (see *www.vcci.com.vn*); (ii) the "Vietnam Development Report 2006—Business", a joint donor report prepared in partnership with ADB, DFID, JBIC, MPDF, UNDP, USAID and the World Bank; (iii) "Vietnamese Banks: A great growth story at inflated prices", published by VinaCapital Group Ltd, August 2006; and (iv) the websites of the major Vietnam's commercial banks.

through joint-venture with a local partner. Recently, the SBV has allowed the establishment of 100% foreign-owned subsidiaries registered under Vietnam's law as independent entities. However, important restrictions persist, the main being a ceiling in the amount of deposits in local currency that may be raised by foreign-owned banks fixed at 350% of the chartered capital. Evidently, the removal of this cap would allow a dramatic expansion of these operators well beyond the marginal role played today. The recent WTO accession of Vietnam appears to be of much help in this sense, and the elimination of the residual restrictions seems only a matter of time. Large foreign banks like *HSBC, Standard Chartered, Deutsche Bank, ANZ, Citigroup* are actively preparing to this by establishing their presence in the country and acquiring minority stake, 10% is the maximum allowed, in domestic JSBC like *ACB, Sacombank* .

The salient features the main Vietnamese banks are summarized in Table 4.

In summary, although the Vietnamese banking system has recently taken important steps in the right direction, there is still significant room for improvement. To begin with, most of Vietnamese banks, and especially SOCB, are undercapitalized. The average capital adequacy ratio (CAR) is estimated at 4.5%. The issuing of bonds by the Government will help three major SOCB to raise US$700 million by 2008, but, at the current pace of growth of lending activities, it is not clear whether these banks will manage to reach the 8% hurdle for the CAR, by 2010. Secondly, the dual role of SBV is considered by many to be a serious obstacle. A more substantial independence of the SBV from the government will reduce unduly interferences and may enhance its competences as the supervisor of the banking industry. To this end, the SBV should be lifted from the task of representing the state's interests in SOCB. Another critical issue to be addressed is the absence of a widespread credit information system, as illustrated in the Box 1 below. Finally, training of bank officers and upgrading their competences vis-à-vis the new challenges is a widely recognized priority. The diffusion of IT systems is crucial to this end[18].

Credit Guarantee Schemes: At the beginning of 2006, the government has taken a significant step in the institutionalization of credit guarantees. The Decision 26/2006 allows banks and entities operating under the Credit Organizations Law to carry out credit guarantee activities. In five provinces, the government is also currently setting up credit guarantee funds (CGF) specifically dedicated to SMEs, such as in HCM City, Dong Thap, Yen Bai, Tra Vinh, and Tay Ninh. The HCM City CGF is already active but no enterprise was reportedly succeeding in securing a guarantee from the US$3.1 million scheme, due to the excessive stringent requirements.

Another experience in this field is the USAID's program aimed at encouraging bank lending to SMEs by means of the provision of credit guarantees. The partner banks for this program are the *Asia Commercial Bank* (ACB) and *Eastern Asia Commercial Bank* (EACB). The total amount of guarantees available for each institute is US$5.0 million. The guarantees issued under this program may not exceed US$0.5 million, and can cover up to 50% of the loan requested.

Leasing: Financial leasing is not new in Vietnam. Leasing schemes are in fact active since 1995, and, in 2001, the Ministry of Finance, with the Decree 16/2001, properly regulated the matter. Today there are 10 financial leasing companies, most of which are SOCB divisions. Established in July 2006,

BOX 1. *The Credit Information System*

The Credit Information Center (CIC) established under the SBV represents the only example of Credit Bureau existing in Vietnam. The CIC however, covers only a limited number of cases large corporate or important individual borrowers. SMEs are not included in the database; therefore assessing their repayment capability as well as other relevant information on their credit history might be a difficult and costly exercise. In a number of instance, banks prefer not to lend to SMEs because of the extra cost associated to the due diligence, or charge heavy fees that typically SMEs cannot afford. Another issue relates to the potential conflict of interests arising from the collocation of CIC under SBV, which is the owner of the SOCB. For this reason many stakeholders support the establishment of a Credit Bureau privately owned and managed, along the lines recently proposed by IFC.

18 An interesting project in this area, is the Bank Training Center (BTC) set up in 2001 by a consortium of commercial banks with support from MPDF. So far BTC has organized 300 courses and trained 7000 staff.

TABLE 4. *Salient Features of Selected Banks*

Bank	Total Assets (US$ billion)	Comments
Vietnam Bank for Agriculture and Rural Development	11.8	*Vietnam Bank for Agriculture and Rural Development* (Agribank) is the largest Vietnam's bank. It is fully State-owned and employs a 28,500 staff. Agribank's total outstanding loans are worth US$11.2 billion. Its network is the most capillary, with branches in almost every small town. As of 2005, the profit margin was 7.6%.
Vietcombank	8.7	*Vietcombank* (VCB) is a SOCB who specializes on trade finance, international payment, and foreign exchange transactions. Outstanding loans account for US$3.2 billion. Through controlled subsidiaries, VCB also operates in specific sectors, like securities, leasing and asset management. In 2005, VCB posted a profit margin of nearly 18%. VCB is expected to issue an IPO in 2007.
Bank for Investment and Development of Vietnam	8.3	With around 200 branches and 8,400 employees, the *Bank for Investment and Development of Vietnam* (BIDV) is the third largest Vietnam's SOCB. BIDV specializes in development investment and project financing. Total outstanding loans exceed US$4.2 billion. Compared to other SOCB, BIDV is currently operating less profitably, as of 2005, margin were below 4%, and has a 10.5% higher share of non-performing loan . BIDV will be listed in 2007.
Industrial and Commercial Bank of VietNam	7.3	The *Industrial and Commercial Bank of Vietnam (IncomBank)* was established in 1988 after being separated from the *State Bank of Vietnam*. Its network includes: i) *Incombank Leasing Company*; ii) *Incombank Securities Company*; iii) *Incombank Asset Management Company*; and two non-profit units: i) *Incombank Information Technology Center*; and ii) *Incombank Training Center*. Outstanding loans: US$4 billion. IncomBank will be likely "equitized" starting from 2008.
Asian Commercial Bank	2.0	The *Asian Commercial Bank* is a joint stock company whose major foreign shareholders are: i) *Connaught Investors (Jardine Matheson Group)*; ii) *Dragon Financial Holdings*; iii) *International Finance Corporation*; and iv) *Standard Chartered Bank*. ACB operates a network of 63 branches nationwide. Outstanding loan are nearly US$0.8 billion. ACB is specialized in consumer loans and credit to SMEs, respectively accounting for 60% and 40% of the overall credit.
Sacombank	1.2	*Sacombank* was established in 1991 from the consolidation of four credit cooperatives. Today *Sacombank* is a joint stock company whose shares are held by *Dragon Financial Holdings* (UK), IFC, ANZ (*Australia and New Zealand Bank*), and by other 6,800 small local shareholders. *Sacombank* was the first commercial joint-stock bank receiving investment funding from a foreign financial institution (IFC).
Techcombank	0.8	*Techcombank* was established in 1993. Recently, a 10% share has been acquired by HSBC. *Techcombank* is mainly active in individual and SME lending. In particular, with more than 10,000 deals, SMEs represents 65% of the Bank's total loan portfolio. 10 to 15% of *Techcombank's* portfolio is made by ICT/ICTE enterprises.

Sacombank Leasing, is the first private company to be licensed for leasing activities. Leasing is diffused principally among SMEs, and is perceived as a valid alternative to medium and long-term financing. The interested rate applied are on average the same, 14%, but most entrepreneurs are still not familiar with this instruments. In 2005, the leasing industry mobilized a total amount of US$344 million.

C.2 VENTURE CAPITAL

Overview: Venture Capital (VC) is present in the country since the early 1990s. The VC's industry in that period included eight players for a total invested amount of US$400 million, divided into several funds[19]. Regulation at that time was particularly stringent and the foreign acquisition of stakes in domestic enterprises was not allowed. The early VC firms were primarily focused on FDI projects in various fields, like tourism, real estates, commodities and to a lesser extent joint stock banks. By the end of 1990, the presence of VCs in Vietnam was dramatically reduced, due to a mix of unattended expectations and difficulties related to the business environment. Over the past five years, a new wave of

19 More information on the Venture Capital industry in Vietnam during the nineties in Nick Freeman, *Expanding Horizons: Equity Finance in Vietnam*, MPDF-IFC, July 2004.

VC firms have established in the country. The ICT industry appears to be among the top interests of these new players. In 2001, the *Mekong Enterprise Fund* was launched with a capital of US$27 million. In 2005, the US$100 million *IDG Venture Vietnam*'s equity fund started operation, specifically addressing business in telecom and ICT. In early 2006, *Mekong Capital* launched the *Mekong Enterprise Fund II*, which has a capital of US$50 million. At the end of 2006, *VinaCapita,* in partnership with an US-based VC, established the *DFJ VinaCapital* fund, which is aUS$ 50 million scheme focusing on enterprises active in the technology sector and ICT. Reportedly, the government might also consider setting up a venture capital fund for ICT and high-tech enterprises. The proposal was elaborated by the *Science, Technology and Environment Committee*, and discussed by the National Assembly in January 2007. This fund, which could be around US$30 million, will invest in high-tech enterprises. The main aim of this fund will be not profit, as for private VC, but the nurturing of the domestic advanced technology sector.

A summary description of these operators is provided in Table 5.

The renovated interest in private equity financing that emerged over the last few years, is motivated of course by the potential of the Vietnam's economy but also by the improvement in the regulatory framework. In this respect, it is worth to mention the issuing the Enterprise Law in 2000, that recognizes the importance of the private sector and provides incentives for its growth, as well as the Decision 36 in March 2003, that improved significantly the environment for private equity investors, like less restrictions on investment typology and less authorizations requirements. Another enabling factor is represented by the establishment in 2000 of the *Ho Chi Minh Security Transaction Center* (HOSTC)—Vietnam's official stock exchange market—which offers to VC firms an alternative exit options for their investments. A second facility has been opened in 2005 in Hanoi—the *Hanoi Security Transaction Center* (HASTC). The HASTC is a special financial institution which specializes on trading the share of SOE which have been 'equitized' and other unlisted companies. The overall size of the stock exchange market is however still very limited and only 75 companies are listed. The government is then providing incentives to enterprises for going public, like a tax-holiday for the two years after listing.

As discussed above, the environment for private equity financing has certainly improved over the past five to six years, however there are persisting

TABLE 5. *Salient Features of Main Venture Capital Firms*

Fund	Funding (US$ million)	Deals	Comments
IDG Venture Vietnam	100	6	Operational since 2005, IDG *Venture Vietnam* (IDGVV) is the first equity fund in Vietnam specialized in ICT sector. IDGVV is one of the five ICT fund established by the *International Data Group* (IDG) the world's leader in IT media sector. Recently established, it has invested so far only in small deals, US$200,000 on average, but overtime the size of investment may well reach up to US$5.0 million.
Mekong Enterprise Fund (I & II)	77	12	Established in 2001 and managed by *Mekong Capital, the Mekong Enterprise Fund* (MEF) is a US$27 million generalist equity fund active throughout the Mekong Region. MEF was funded by several international institutions, such as ADB, FMO, NDF, SIFEM, FinnFund, BIO. So far it has invested in 10 deals ranging from US$0.7 to 1.8 million. Recently, a second fund has been launched (MEF II), with a capital of US$50 million. MEF II closed its first deal in November 2006.
VinaCapital	50	1	*VinaCapital* is an investment banking and management fund company. Recently, VinaCapital has launched a venture capital fund dedicated to the technology sector—the DFJ VinaCapital (DFJV) fund. The scheme will focuses on operations in the field of Internet, wireless technologies, software, BPO, digital media, and ICT infrastructure. The total capital is US$50 million. The fund is a partnership with Draper Fisher Jurveston, which is a VC based in the Silicon Valley.

obstacle that reduces its potential impact on Vietnam's economy. The major constraints are as follows:

- The 30% cap on the ownership of shares in domestic listed enterprises by foreign individuals or companies forces investments above this threshold to take the form of non-equity financing;
- The enforcement of provisions for the protection of minority shareholder is reportedly a major issue;
- Under the legislation in force, the mechanisms "to bring profits home" for foreign investors appear not to be properly regulated;
- The widespread opacity of the private sector negatively affects the investment decisions of VC and other equity investors.

Business angels do not play a significant role in financing technology SMEs in Vietnam. Although some operations are reported, angels' investing appears as an isolated and spontaneous phenomenon, without intermediary organizations or periodical meeting events. To a certain extent, Vietnam is progressively raising the interest of regional angels, particularly in Singapore, where angel investing is a common practice. But the Vietnam's legal framework and, in particular, the regulation for the protection of investors still represent major obstacles for the scaling up of their operation.

C.3 OTHER FINANCIAL INSTITUTIONS

The Development Assistance Fund[20]: Established under the auspices of the Ministry of Finance (MOF), the *Development Assistance Fund* (DAF) is the major State-owned non-banking financial institution. So far, the DAF has invested US$4.9 billion in 6,363 projects nationwide, with a strong commitment on socio-economic development. At present, DAF's outstanding loans amount to US$2.6 billion. The sources of capital are manifold and include: Government bonds, postal savings funds, social insurance and government ODA. DAF is also seeking for investment from various IFIs. In this regard, a partnership with the *Japan Bank for International Cooperation* (JBIC) is in the pipeline.

A plan to transform the DAF into an independent bank was recently submitted to the MOF. If approved, this would help the DAF to mobilize capital from other sources. This will result in more autonomy from the government in the decision making process for loans concessions and projects financing.

20 For more information please refers to the Ministry of Finance's website, www.mof.gov.fn

ANNEX D – LIST OF ENTITIES INTERVIEWED

D.1 BUSINESS INCUBATORS AND TECHNOPARKS

Center for Research and Consulting on Management (CRC)
- Mr. Pham Minh Tuan – Vice Director
- Ms Hoang Thu Ngan – Project Manager
- Ms Thai Minh Hanh – Project Manager

Quang Trung Software Business Incubator
- Mr Wolf Rienow – EU Senior Adviser
- Mr Le Van Hieu – Administrator
- Dr Tran Vu Binh – Business Development Manager
- Mr Bui Duc Tu – Business Development Manager

Quang Trung Software City Development
- Mr Lam Long – Chief of Investment and Trade Promotion

D.2 FINANCIAL INSTITUTIONS

IDG Ventures
- Mr Landon Schmitt – Associate
- Ms Hoang Tra Mi – Associate

Techcom Bank
- Ms Nguyen Thi Thien Huong – Executive Vice President

Asia Commercial Bank – ACB
- Ms Le Thi Thuy Duong – Credit Officer Corporate Banking Dept

Note: *The list does not include the details of other interlocutors who asked to keep confidential the meeting held during the fieldwork.*

D.3 ICT / ICTE ENTERPRISES AND BUSINESS ASSOCIATIONS

Vietnam Software Association (VINASA)
- Mr Tran Doan Kim – Head of Office

PeaceSoft Solutions Corporation
- Mr Nguyen Hoa Binh – President and CEO

Vietnam Hosting Network Company Ltd. (VNHNC)
- Mr Trieu Tran Duc – Technical Director

DreamViet Corporation
- Mr Nguyen Minh Hieu – Director

Vietnam Medical Software (VIMES)
- Mr Phan Van Hanh – Director

Vietnam Integrated Solution Company (VNIS)
- Mr Pham Quang Vinh

D.4 PUBLIC INSTITUTIONS

Ministry of Science and Technology – IT Office
- Dr Do Van Loc – General Director

D.5 IFIS AND DEVELOPMENT ORGANIZATIONS

The World Bank
- Mr Tran Thanh Son – PSD Specialist

International Finance Corporation
- Mr Lam Bao Quang – Investment Officer

Mekong Private Sector Development Facility
- Ms Nguyen Hanh Nam – Business Development Officer

ANNEX E – PROFILES OF SME FINANCING ORGANIZATIONS

PROFILE #1. *IDG Ventures Vietnam*

Salient Features

Denomination	**IDG Ventures Vietnam**
Nature	IDGVV is a venture capital firm specialized in ICT and high-tech investment. The firm is a wholly-owned subsidiary of International Data Group, the world's largest IT media company.
Location	IDGVV is based in Hanoi and operates a decentralized office in HCM City.
Geographical Coverage	IDGVV operates in Vietnam.
Establishment	IDGVV established its presence in Vietnam in 2004, and begun operating in early 2005.
Funding	The overall capital available for IDGVV is US$100 million that will be mobilized in subsequent phases. The target period for completing investment is five years, while the harvest phase will be likely finalized in 11 years.
Investment Policy	IDGVV is mainly involved in seed and early-stage financing, with a specific orientation to the ICT and ICTE sectors. In these initial phases, 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 US$200,000, but through the subsequent rounds, overall size of deals may reach US$5million. Financing involves straight equity, as well as convertible debt instruments. IDGVV typically takes a stake ranging from 15% to 40%. Regarding the exit strategy the stock market appears not enough developed to represent a viable option for exit through IPOs, therefore IDGVV typically target to sell to MNC.
Operations	Thus far, IDGVV has invested in six 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

Narrative Description

- The Vietnamese facility is one of the five independent funds established by IDG worldwide. The network includes USA, EU, China and recently India. The Chinese fund, which started in 1992 and had several rounds of financing, reached particularly outstanding performances. 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 the promoters. IDGVV'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, IDGVV continues to play an active role in the enterprise.
- IDGVV receives 30–40 proposals 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

(continued on next page)

PROFILE #1. *IDG Ventures Vietnam* (*continued*)

20% Telecom/Wireless Services
15% IT/Software
15% Technology Manufacturing
15% Biotechnology

Sources on the web

- www.idgvv.com.vn

PROFILE #2. *VinaCapital*

Salient Features

Denomination	**VinaCapital**
Nature	VinaCapital is an asset management and corporate financing company.
Location	VinaCapital's head office is in Ho Chi Minh City; decentralized offices are in Hanoi, Hong Kong and San Francisco.
Geographical Coverage	VinaCapital operates in various Asian countries, but most of its activities are based in Vietnam.
Establishment	VinaCapital was established in 2003
Funding	VinaCapital is currently managing two closed-end funds—the Vietnam Opportunity Fund (US$560 million) and ii) the Vinaland (US$205 million) 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 DFJ VinaCapital L.P. (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 has been set up in collaboration with a Silicon Valley partner, the venture capital firm Draper Fisher Jurveston.
Investment Policy	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. The typical investment will have a tenure of four to seven years, and a maximum value of US$5.0 million. Regarding 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. VinaCapital can adopt financing instruments such as equity or quasi-equity schemes—typically convertible bonds—and debt financing.
Operations	The DFJV fund has invested so far one deal, in the Internet sector. The Opportunity Fund holds stake in less than 40 companies, including one ICT company. Vinaland has closed two investments.

Narrative Description

- The DFJV is incorporated in the Cayman Islands as a limited partnership venture capital fund. The US-based partner—Draper Fisher Jurvetson (DFJ)—is a VC firm specializing in technology, with an extensive global network (30 offices worldwide). Overall, DFJ's committed capital is of US$3.5 billion.
- One of the main axis of DFJV's strategy is to invest in Vietnamese enterprises well-positioned to replicate US or China successful business models . This is especially true for Internet companies, as the local market offers good opportunity in the 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 does 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

PROFILE #3. *Mekong Capital*

Salient Features

Denomination	**Mekong Capital**
Nature	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).
Location	Mekong Capital is based in Ho Chi Minh City. The Funds are domiciled in the Cayman Islands.
Geographical Coverage	MEF and MEF II are regional schemes covering the "Mekong Region", Vietnam, Laos and Cambodia.
Establishment	Mekong Capital was formed in 2001.
Funding	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: 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).
Investment Policy	MEF is a generalist fund, investing in unlisted private Vietnamese companies, active in various sectors, like plastics, packaging, wood processing, garments. 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, about US$3.0 million.
Operations	The MEF's portfolio includes 11 enterprises. Only one deal is in the ICT/ICTE sector, *Lac Viet*, a leading IT companies providing a wide range of Hardware and Software products and services. The amount invested is US$745,000. Lac Viet is the smallest of MEF's investment, the largest being US$1.85 million, while the average is US$1.4 million. MEF II closed its first deal in November 2006.

Narrative Description

- 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 the investee companies has been 34.6% between the investment time and December 31, 2005. Meanwhile, the average annual net profit growth has been 43.9% over the same period.

Sources on the web

- www.mekongcapital.com

ANNEX F – PROFILES OF ICT/ICTE SME

PROFILE # 1. *DREAMVIET*

Salient Features

Denomination	**DreamViet Corporation**
Location	DreamViet is based in Hanoi.
Establishment	DreamViet was established in April 2005.
Areas of activity	DreamViet's is a typical e-commerce enterprise. Other activities includes, design of websites, and IT consulting in particular in ERP application domain.
No. of Employees	DreamViet currently employs eight staff.
Operations	Recently established the company is in the start-up phase. Thus far, they have developed a portal for e-commerce at AHA.com.vn. Another DreamViet's product is the on-line auctioning website Denthan.com. The website design activity for corporate customers, represents on average two deals per month. Typically, customers are ICT and electronic retailers.
Financing Issues	The seed financing came from typical FFF sourcesthe family. Later on, the firm financed its operation with the cash flow. The firm's source of revenue is twofold: i) advertising and sponsored links within the portal, ii) website design activity, priced each at US$700. The 40% of the costs refers to salaries, that are however very low, US$200 per month, the remainder being office rent and other running costs. Very limited resources are left for investment. For this reason, DreamViet is seeking for US$50,000 that will allow the company to: i) hire new personnel in the marketing area to expand the business; ii) hire an editor to improve the contents quality; iii) purchase a new server. To this end, DreamViet contacted a bank to apply for a loan, but it was rejected for lack of collateral. At present, a soft agreement is in the pipeline with IDG that is interested to invest in the company. This year, the expected turnover will be US$10,000.

Other

- The AHA portal managed by DreamViet has 6,000–10,000 visitors per day. The merchants reviewed are 400 mainly located in the Hanoi area. The typology of the products covered includes cell phones, cameras, TV sets, Hi-Fi, and other high-tech products. The services provided are: i) price comparisons; ii) products availability; iii) Retailers directory; iv) product tests and reviews. The site is not enabled for e-payment. This technology is not developed in Vietnam, but recently the government and large commercial banks have addressed the issue of e-security as a priority for the near future.
- Plans for the future are centered around the expansion of their market, and the improvement in the contents' quality. A technology upgrade is also necessary; in fact the connection is presently quite slow. DreamViet is also planning to open a presence even in the Southern Region.

Sources on the web

- www.DreamViet.com

PROFILE # 2. *PEACESOFT*

Salient Features

Denomination	**PeaceSoft Solutions Corporation**
Location	PeaceSoft's headquarter is in Hanoi. It operates a subsidiary in HCM City.
Establishment	PeaceSoft was established in 2000, but the operations started in 2003.
Areas of activity	PeaceSoft is a software development company. Activities include: outsourced software solutions, design and set up of business portals and websites, IT consulting services, e-commerce.
No. of Employees	PeaceSoft globally employs 72 staff, 60 are based in Hanoi and 12 in HCM City.
Operations	The enterprise was created by a Vietnamese engineer while he was still a student. It took three years to develop the product and to establish the relations and partnerships necessary to launch the business. At present, PeaceSoft is technical partner of MicroSoft with whom it has implemented various e-gov projects. The set up of portals is the most profitable part of the business. In this respect PeaceSoft has worked for Universities and the Vietnamese television. It recently launched an e-commerce site. Other products include a GIS-based system for disaster early warning.
Financing Issues	In the initial stage PeaceSoft employed only four people, and bootstrapping was the only option to finance operations. At that time, the enterprise was not eligible for traditional bank loan, so the founder cultivated relations with other possible investors and eventually managed to sign a deal with IDG in 2005. It took a long time to secure the investment. The deal is currently undergoing the first phase of a step-by-step process, and the amount provided is limited. But plans are that finally the overall investment will be US$2–5 million over the next three years. The IDG's investment is a mix of equity and straight loan; for the latter current market conditions applies. PeaceSoft is currently generating a yearly turnover of US$0.5 million.

Other

- Plans for the future are centered around the expansion of the ICT service activities, portal and web-based services, and outsourced solutions development. The software development division will be closed.
- PeaceSoft witnessed a dramatic growth over the past 2 years. In 2005, the turnover nearly tripled compared to the previous year, while for 2006 the expected figure is close to 100%.

Sources on the web

- www.peacesoft.net

PROFILE # 3. *VIMES*

Salient Features

Denomination	**Vietnam Medical Software jsc – VIMES**
Location	VIMES is based in Hanoi.
Establishment	VIMES was established in 2005.
Areas of activity	VIMES is a small joint stock company which specializes in software applications for health institutions.
No. of Employees	VIMES presently employs 12 staff.
Operations	Among VIMES's clients there are Vietnamese hospitals and health institutions. VIMES products include various ERP application, like LIS (Labo Information System), PACS (Picture Archiving and Communication System), and CIS (Clinical Information System).
Financing Issues	VIMES is a typical bootstrapping enterprise. The access to finance is perceived as a constraint, in fact health institutions usually apply long-term payments, and the resources available for investment are usually scarce. Although the operating costs are limited,to US$60,000 per year, an investment of US$100,000 would be necessary to expand the business. VIMES has never tried to obtain a loan from a commercial bank because it ise aware of not having the necessary requisites.

Other

- Recently established, VIMES is currently one of the tenants of the infoDev's supported incubator Center for Research and Consulting on management (CRC) located at the Hanoi University of Technology.
- Plans for the future entails emancipating from the single-product model that characterized the initial stage, and to venture into other fields, such as the development of software for smart-cards. A cross-border expansion of the market for the health institution application is also envisaged. But internationalization is still seen as hardly accessible for a Vietnamese company due to the partial isolation of Vietnam. The negotiation and the likely access to WTO by the end of 2006 are perceived as a big opportunity for BPO activities.

Sources on the web

- www.vimes.com.vn

PROFILE # 4. *VNIS*

Salient Features

Denomination	**Vietnam Integrated Solution Company ltd – VNIS**
Location	VNIS is based in Hanoi.
Establishment	VNIS was established in 2005.
Areas of activity	VNIS is active in two main areas, the development of websites, and the e-learning.
No. of Employees	VNIS presently employs eight staff.
Operations	VNIS's core business is the design and implementation of e-learning solutions. However the revenues from this activity are still to low and do not allow to rely completely on this line of business. For that reason, the website design activity has been set up. They decided to target the low end of the market, offering low-cost solutions, (US$400 is charged per site, because of the high competition for more sophisticated services.
Financing Issues	VNIS is a bootstrapping entreprise. It benefits from a four-year tax-holiday under a government program to promote entrepreneurship. The business is still too small to search for outside investors or to incur debt with commercial banks. Financing needs voiced are in the order of US$25,000–30,000 to be employed in R&D to upgrade the e-learning products.

Other

- Recently established, VNIS is currently one of the tenants of the infoDev's supported incubator Center for Research and Consulting on management (CRC) located at the Hanoi University of Technology.
- VNIS is composed 100% by young professionals who recently graduated. Initial salaries are quite low, and a 6-months training is usually necessary. The scarcity of skilled human resources is considered at present as the major constraint by VNIS's management.
- Plans for the future are to progressively reduce the website design activities and concentrate in innovative e-learning products.

Sources on the web

- www.vnis.com.vn

PROFILE # 5. *VNHCN*

Salient Features

Denomination	**The Vietnam Hosting Network Company ltd – VNHNC**
Location	VNHCN is based in Hanoi.
Establishment	VNHCN was established in 2001.
Areas of activity	VNHCN is mainly active in e-security and anti-intrusion systems. Other areas of activity include networking, and e-gov projects.
No. of Employees	VNHCN presently employs 40 staff but it is in the process of hiring 40 more.
Operations	Initially conceived as a hosting network companies, the core activity quickly turned to e-security. In this field, VNHCN holds a strong competitive advantage because is the only firm who design and implement customized solution, while other companies are simply adapting Cisco's or other systems. Because the public institutions usually ask for the source coded for this kind of contracts, they are practically the only firms able to provide them. Their clients are therefore 90% from the public sector. In particular, they have signed a framework contract with the Ministry of Defense.
Financing Issues	It was not easy to find the initial resources to set up the company, but they eventually managed to raise the start up capital trough non-institutional sources. At present, the firm is quite consolidated, the major source of operating capital is still the cash-flow. Recently had a contact with IDG but they did not finalize the deal, so VNHCN is seeking for possible investors to inject US$2–3 million to expand the activities. Today VNHCN generates an annual turnover of US$5 million, and a net profit of US$1 million.

Other

- VNHCN is currently undergoing a major change in the nature of the company from limited to joint stock. Even the denomination will change but the new name is not decided yet.
- Regarding the plans for the future, VNHCN is exploring the possibilities of expanding overseas. The targeted markets are Singapore, Japan, and the US. VNHCN is currently seeking for strategic partnership with local promoters.
- The major constraint is the shortage of skilled human resources available. The management declares that they are ready to pay salary five to 10 times higher than the minimum, nevertheless it is very difficult to find qualified professional and, once hired, to retain them.

Sources on the web

- www.vnhcn.com

About *info*Dev

*info*Dev 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. *info*Dev also forms partnerships with public and private-sector organizations who are innovators in the field of ICT4D.

*info*Dev'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.

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www.infoDev.org