

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

UKRAINE
Country Study

AN *infoDev* PUBLICATION PREPARED BY

Roberto Zavatta

Economisti Associati SRL in
collaboration with

Zernike Group BV

Meta Group SRL

June 2008

Information for
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ABBREVIATIONS AND ACRONYMS

BPO	Business process outsourcing	ISP	Internet Service Provider
CGF	Credit Guarantee Fund	IT	Information Technology
CRM	Customer Relationship Management	MNC	Multinational Corporation
EBRD	European Bank for Reconstruction and Development	NBU	National Bank of Ukraine
EC	European Commission	NCCR	National Commission on Communication Regulation
EDP	Electronic Data processing	SECO	Swiss State Secretariat for Economic Affairs
ERP	Enterprise Resource Planning	SME	Small and Medium Enterprise
EU	European Union	TOR	Terms of Reference
FMO	The Netherlands Development Finance Company	UMLP	Ukraine Micro Lending Programme
GTZ	German Development Cooperation Agency	UNDP	United Nations Development Program
IC	Integrated Circuit	USAID	United States Agency for International Development
ICT	Information and Communication Technology	VAS	Value-added Services
ICTE	ICT Enabled	VC	Venture Capital
IFC	International Finance Corporation	VoIP	Voice over Internet Protocol
IFI	International Financial Institutions	WTO	World Trade Organization

Exchange Rates

US\$ 1 = UAH 5.22046 (average 2006)

EUR 1 = UAH 6.55945 (average 2006)



EXECUTIVE SUMMARY

Ukraine is becoming an increasingly important player in the global Information and Communication Technology/ Information and Communication Technology Enabled (ICT/ICTE) industry. This is mainly due to: (i) the availability of a large pool of highly qualified human resources; (ii) a fast growing outsourcing of ICT services in the past few years; and (iii) the proliferation of software houses and ICT/ICTE service providers. As of 2006, more than 1,000 enterprises have been active in this line of business. One-third of these are primarily involved in the outsourcing segment. In addition, there are at least 600 dealers of hardware and packaged software, about 50–100 manufacturers and assemblers, about 300 Internet service providers, and about 3,000 cybercafés. Most Ukrainian ICT/ICTE firms are very small. The relatively few medium and large-sized firms are principally Multinational Corporation (MNC) affiliates and foreign-owned firms. This is especially true of hardware assemblers and dealers, and software outsourcing companies.

Ukraine can count on a solid outsourcing industry, which likely encompasses about 300 major players. Ukrainian professionals are especially versed in fields such as software engineering and automation. Therefore, outsourcing activities tend to concentrate on the areas of R&D, software testing, application developments, infrastructure software, etc. Traditional Business Process Outsourcing activities, such as customer centers and back office services, are comparatively less developed. Due to the large degree of informality that prevails, precise data on the turnover of the ICT/ICTE industry is difficult to estimate. In 2006, it was estimated to be around US\$2.0 billion, with the bulk in hardware manufacturing and sales, and about one-third related to software development and other ICT/ICTE services. Software and IT services comprise most of the exports, which in 2006 amounted to US\$0.5–0.6 billion. Ukraine also exported US\$100 million worth

of hardware equipment. About 40,000–50,000 people are involved in the ICT/ICTE industry.

The banking industry dominates the Ukrainian financial system. As of today, there are 173 commercial banks active, with total assets in excess of US\$70 billion. Lending activities have steadily increased over the past few years, particularly long-term loans (above one year), which represent a considerable share of the banks' assets (about US\$37 billion). The banking industry is very fragmented, and the largest institutions have recently passed under the control of foreign banks. Few banks offer credit schemes for Small and Medium-sized Enterprises (SMEs). These schemes have most often been developed through the Ukraine Micro Lending Program, which is an International Financial Institution (IFI) sponsored facility that provides refinancing and technical assistance. Ukraine hosts a relatively developed venture capital industry, which has mobilized nearly US\$1.0 billion. Most facilities are development-oriented operations financed by IFIs (EBRD, IFC, SECO, FMO, etc.) or foreign-owned schemes. Ukrainian's venture capital (VC) firms tend to focus on well-established enterprises that have reached a certain point of development: most of deals are in the range of US\$3.0 to 10.0 million. Except for one small technology-oriented fund, all other VC firms appear to be little interested in the ICT/ICTE industry. Less than ten out of 200 transactions closed in the past decade were related to enterprises in this sector.

Evidence from the fieldwork suggests that Ukrainian ICT/ICTE enterprises face severe obstacles in accessing financing. This financing gap is evident for enterprises that are at the development or first expansion stages, and for amounts ranging from US\$50,000 to above US\$1.0 million. It is particularly severe in the US\$100,000–500,000 range. The main factors that describe this situation can be summarized as follows:

- **Financing Policies:** Banks tend to have very conservative attitudes. SME-lending schemes, although expanding, still have a limited diffusion. Venture capitalists are oriented toward late-

stage deals and ‘established’ operators, and with few exception are not interested in the ICT/ICTE industry;

- **Limited Diffusion of Alternatives:** Financing instruments such as credit guarantees and leasing are still in their infancy. There are few business angels, and they are scarcely visible.
- **Constraints on the Demand Side:** Informality is widespread among SMEs, and many operate in the ‘grey’ economy. Entrepreneurs are often unfamiliar with the various financial instruments available, and lack strategic vision.
- **Understanding of ICT:** Bank officers often have little knowledge of the various ICT/ICTE business models, and are therefore more inclined to reject requests in this area;
- **Business Environment Constraints:** The existing credit information system has a very limited coverage. The protection of investors in the Ukraine is reportedly poor—a legislative reform in this field is needed.

To bridge this gap, a major reform of the overall business environment would be required. This would include the following steps: (i) the development of a reliable and comprehensive credit information system; (ii) the enforcement of regulations for the protection of minority shareholders; and (iii) the deployment of fiscal and other incentives for the ICT/ICTE industry. Direct interventions in these fields fall out of the scope of this study. Nonetheless, some concrete measures can be

envisaged to reduce the gap, and to facilitate access to financing for small hi-tech firms.

First, concrete actions should be aimed at increasing the amount and the accessibility of equity financing in order to reduce the dependence on traditional banks. This could be achieved through the establishment of private-public matching schemes, that would grant incentives to venture capitalists, e.g. in the form of downside protections schemes, or leveraged returns schemes, etc. Initially, there should be a study to investigate the feasibility of such schemes. This study would identify the most suitable options, in light of legal framework and business environment in the Ukraine. Second, initiatives can be envisaged to strengthen and expand the operations of business angels, through the establishment of a Business Angels Network. Third, initiatives can be envisaged to promote bank financing for SMEs. The Credit Guarantee Fund model could represent a valid instrument to improve the access of ICT/ICTE SMEs to bank loans. The inability of entrepreneurs to prepare quality projects and present them to investors in a proper format is another obstacle to obtaining financing. Therefore, a fourth action would be to enhance the capacity of incubators to provide assistance, or to establish dedicated schemes. Fifth, obstacles generated by the information gap on ICT/ICTE should be removed. It could be worthwhile to support initiatives aimed at improving and circulating the information in this field with the support of the various intermediate organizations.

I. INTRODUCTION

This report (the “Report”) has been prepared by *Economisti Associati* in collaboration with *Zernike Group* (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-sized enterprises (SMEs) in developing and emerging countries, with special reference to small businesses active in the information and communication technology (ICT) sector and in ICT-enabled (ICTE) activities.

This Report is part of Phase 2 of the Assignment. It reviews recent developments in the ICT/ICTE sector in the Ukraine, 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 the Ukraine that took place in April 2006, and on the analysis of a variety of secondary sources.

The Report is structured as follows:

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

The Study also includes a series of Annexes that provide additional information and supporting evidence for the elements presented in the main text:

- Annex A provides additional information on the ICT/ICTE industry;
- Annex B illustrates the salient features of banks and the private equity industry;
- Annex C provides a list of entities and persons encountered during field work;
- Annex D presents the profiles of SME financing organizations encountered during fieldwork;
- Annex E presents the profiles of small ICT/ICTE enterprises interviewed during fieldwork.



II. THE COUNTRY BACKGROUND

II.1 THE ICT/ICTE SECTOR

Telecom¹: Over the past five years, the telecommunication sector recorded a double digit growing rate, which makes it one of the most dynamic sectors in the Ukraine. Revenues exceeded US\$5.0 billion, and accounted for about a 6% share of GDP. Mobile telephony and data transfer were the fastest-growing segments, with year-on-year rates above 100%. The *fixed-line* telephony is evolving at a much slower pace—about 6% per year. The penetration rate is still limited—less than 30 lines per 100 inhabitants. Despite the liberalization progress, this segment remains largely dominated by *Ukrtelecom*, the incumbent. *Ukrtelecom* has been set for partial privatization since the late 1990s, but it remains 100% state-owned. Its major competitors are: (i) *Golden Telecom*, which holds about 4% of the market share; and (ii) *Optima Telecom* and *Farlep*, which together account for about 6%. In addition, wireless local loop technology represents a small but growing threat for fixed line operators. This technology is offered by four companies, which have a combined 200,000 subscribers. The *mobile* sector exceeds 40 million subscribers—the penetration rate is around 80%. This market is shared by five licensed operators: (i) *Kyivstar*; (ii) *UMC*; (iii) *Astelit*; (iv) *Ukrainian Radio Systems*; and (v) *Golden Telecom*, all of which are privately owned. The major providers are *Kyivstar*, with 18 million subscribers, and *UMC*, with 16 million. That represents about 85% of the total. Thus far, only one 3G license has been assigned to *Ukrtelecom*, but the network is still under construction.

Internet Services²: The diffusion of the Internet in the Ukraine has been slow, and only recently appears to be gaining momentum. The major obstacles for Internet development can be sum-

marized as follows: (i) the overall low rate of connectivity penetration; (ii) the low quality of connections, especially outside of the big cities; (iii) the high prices of telecommunications; and (iv) the scarce diffusion of PCs, mainly due to the high costs. Recent economic growth and the subsequent rise of salaries have made the Internet more affordable. At the same time, policy reforms—such as the sector liberalization, and infrastructure improvements—such as the establishment of internet exchange points, have further helped with Internet diffusion. As of 2006, it is estimated that there are 6 million Internet users, representing about 13% of the population. The number of Internet hosts is still limited—below 200,000—and there are about 30,000 Ukrainian sites on the Web. Reportedly, the number of users is growing at a pace of 20% per year. The exact number of *Internet Service Providers (ISPs)* is not known, but according to some estimates it ranges between 250 and 400. The market is very fragmented, and most ISPs are extremely small and have an informal nature. However, the lion's share is held by a few large players, mainly owned by telecom operators, such as: *Ukrtelecom*, *Infocom*, which is controlled by *Ukrtelecom*, *Datacom*, *Golden Telecom*, *IP Telecom*, and *Lucky Net*. In 2004, the ISP industry generated almost a US\$200 million turnover. Most Internet connections are still dial-up, but broadband is rapidly gaining ground. In 2006, the estimated number of broadband ports available was 40,000 units. A number of the main ISPs are associated with the *Ukrainian Internet Association*, an intermediate sector organization established in 2000.

Internet access is also offered by about 3,000 small *cybercafés* which concentrate in the large urban areas of Kyev, Kharkiv and Dnipropetrovsk. After an initial boost, cybercafés are however facing a hard time, due to the increased diffusion of PC owners

1 The information provided in this section is drawn from: (i) FinRus Gateway, "Bulletin, May 2006"; (ii) the International Telecommunication Unit – ITU (www.itu.net); (iii) "Information & Communication Ukraine. Trends, facts & figures. 2005 Navigator". SoftPress Publishing House; (iv) the TMC network (www.tmcnet.com).

2 Information drawn from: (i) the Ukrainian Internet Association (www.inau.org.ua); (ii) *Ukrayinska Pravda* (www.pravda.com.ua); (iii) "Information & Communication Ukraine. Trends, facts & figures. 2005 Navigator", SoftPress Publishing House; (iv) the TMC network (www.tmcnet.com).

and the establishments of numerous and often illegal local networks. Some of the existing operators have recently gathered in the *All-Ukrainian Associations of Computer Clubs*.

ICT/ICTE Activities³: Ukraine hosts a moderately developed ICT/ICTE industry that generates an annual turnover likely in the order of US\$2.0 billion. Assembling and sales of PC and other IT equipments account for most of it, while the revenues posted by software and ICT/ICTE services are probably not exceeding US\$0.6 billion. Overall the ICT/ICTE industry encompasses about 2,500–3,000 entities, employing altogether about 50,000 units. Due to the large informality prevailing, precise estimates are hard to formulate. It is however clear that the average size of IT firms is very small, and apart from a handful of large operators in the outsourcing and hardware assembly segments, the industry is characterized by a significant fragmentation. With few exceptions, ICT/ICTE enterprises were mainly founded after 2000. Over the past five year the growth rate has been exceptional, ranging from 15% to 30% p.a. depending on the segment. The Ukrainian ICT/ICTE industry has developed a market export-orientation for software and IT services, while most of the hardware production is absorbed by the internal market. The trade balance is negative.

There are some 50 to 100 PC and IT equipments *assemblers* in Ukraine, mostly established after 2000. Altogether they produce about one million of PC per year mostly destined to the internal market. In the desktop segment, locally-assembled PC account for about 90% of sales, while in the notebook segment foreign brands largely prevail. Most of these players are quite small, with a capacity of few thousand pieces per year, but there are also some established players, such as Kvazar-Micro⁴, Everest, Incom, AMY, and MKS, and some Multinational Corporation (MNC) offshore factories, such as Hewlett Packard. The overall value of sales for hardware the assembly industry is not known, but it is probably around US\$0.4–0.6 billion. The Ukraine is also a moderate exporter of hardware and IT equipments. World Trade Organization (WTO) figures from 2005 indicate about US\$90 million worth of exported merchandise, including integrated circuits (about 25%) and various electronic data processing (EDP) equipments. At the retail level, there are about 600 active

companies. Three large distribution networks dominate the internal market: Unitrade, MKS, and Foxtrot. Over the past few years, the demand has grown at an average rate of 30% per year. Today, the estimated overall market value is in excess of US\$1.0 billion, with PC accounting for possibly two-thirds of the total. Although precise data is not available, it appears that the public administration's procurement accounts for most of the internal demand. Its importance is likely to further grow with the planned implementation of various e-Government projects, supported among others by the World Bank and EBRD. The profit margins on sales of equipment are notoriously thin. Therefore, most dealers and local assemblers are increasingly moving toward more value-added activities, such as maintenance, repair and system integration. Official sales of off-the-shelves software are minimal, because there is widespread piracy in the Ukraine.

Ukrainian enterprises offer a wide range of *software and IT services*. There are companies that specialize in each of the following areas: (i) ERP and CRM solutions; (ii) system integrators; (iii) data management and processing firms; (iv) industry-specific solutions providers; (v) internet companies; (vi) R&D; and (vii) software testing firms. Research conducted in 2003 estimated the number of active ICT/ICTE services providers at 1,300, but today that number has likely doubled. The largest ICT/ICTE companies operating in the Ukraine are MNC subsidiaries, such as Microsoft, Oracle, and SAP, or foreign-owned entities. These firms control the high-end of the market, and secure nearly all of the richest contracts. Medium-sized domestic companies, such as *Mirasoft*, and *Techpark* operate at an intermediate level. The vast majority of small service providers operate below the US\$2.0 million threshold. The bulk of the output of this segment is destined to be exports. The Ukraine is emerging as a major global supplier of outsourcing services. During the past few years, this sector of the IT industry has grown at a yearly pace of 40%. This makes it one of the most dynamic sectors of the

³ The information used in this section are drawn from various sources including: (i) "Information & Communication Ukraine. Trends, facts & figures, 2005 Navigator", SoftPress Publishing House; (ii) "Ukrainian IT Services and Products Export Market Research, 2003", Market Visio & Gartner; (iii) Ukrainian Hi Tech Initiative (www.hi-tech.org.ua); (iv) Techninvest (www.techninvest.com.ua); (v) IT Ukraine Association (www.itukraine.org.ua); (vi) the Ukraine Association of Software Developers; and various articles appeared on dedicated portals.

⁴ Kvazar-Micro was also funded by EBRD which provided a EUR 8.0 million financing for the building of plants.

Ukrainian economy. Experts from the *Ukrainian Hi-Tech Initiative* estimated that the value of the Ukrainian IT outsourcing market hit US\$500 million in 2005, and probably exceeded US\$600 million in 2006. The destination of exports is varied. The biggest importer is the US, but European countries such as Germany, Russia, and England are also big importers. Russia is the most formidable competitor in the region—emerging threats are posed by Hungary and Romania. Regarding cost-effectiveness, the Ukraine is ahead of all of its regional competitors, and its growth rate is unrivalled. The Ukrainian software industry is leveraged on the abundance of engineers and highly-skilled technicians in the domains of cybernetics, software and artificial intelligence. It has a level of wages that is among the lowest in Europe. Reportedly, the Ukraine ranks fourth—after the US, India and Russia—in the number of certified programmers. Since its infancy the Ukrainian outsourcing industry has developed unique characteristics—in particular, a marked orientation toward advanced IT-services in the fields of R&D and software engineering.

Conversely, **Business Process Outsourcing** activities such as customer centers, transcription services, administrative services and payroll services, remain limited. The Ukraine lacks some important prerequisites for the development of this sector: (i) linguistic advantages—in this respect Ukrainians cannot compete with Indians, Filipino, or Moroccans; (ii) supportive policies and legislation; (iii) infrastructures; and (iv) investments in large facilities. The industry is highly fragmented, and therefore, most of the players lack the necessary capacity to serve large outsourcing projects⁵.

II.2 POLICY AND INSTITUTIONAL FRAMEWORK⁶

Overview: Ukraine's legislative and policy framework for the telecommunication and IT sector have been improved with the recent adoption of new regulations and strategy papers aimed at: (i) enhancing market competition; (ii) enlarging the scope of ICT operations; and (iii) supporting a larger deployment of ICT in the country. However,

given the size and the potential of the ICT/ICTE industry in Ukraine, there is still much to do in this area. In particular, the telecom market is still dominated by the state-owned Ukrtelekom, whose privatization has been postponed several times. Competition is still marginal, and Ukrtelekom has not invested significantly in the renovation of the network. The *National Commission on Communication Regulation of Ukraine* (NCCR), which is the sector regulator, is not fully independent from the state's administration—according to some observers, the NCCR has only a limited power. A strategy for the ICT sector has been drafted, but specific sector measures—in particular for small enterprises, have not yet been implemented. The institutional framework is weak. Telecoms and ICT sector do not have their own Ministry, but competences are gathered under the Ministry of Transport and Communications. The private sector in the Ukraine encompasses various business associations connected to specific segments of the ICT/ICTE industry. These include: (i) the IT Ukraine Association (software developers and BPO); (ii) the Ukrainian Internet Association (ISP and VAS providers); and (iii) the All-Ukrainian Association of Computer Clubs (cybercafé and computer points). However, due to the strong fragmentation of this industry, their power remains quite limited.

Legislative and Policy Framework: The most recent piece of legislation on telecom is the “Law of Ukraine on Telecommunications”, issued in 2004. It provides a comprehensive regulation of: (i) access to the telecom market; (ii) rules regarding interconnection; and (iii) roles of the various institutions involved. Another important milestone was the issuance in October 2005 of the decree “On Priority Tasks in the Introduction of the Advanced Information Technologies”, which acknowledges the importance of the diffusion of ICT for the economic and social development of the country. The Ukraine Government has also prepared—in

⁵ It is estimated that in 2004 about 66% of the IT exporting firms had an annual revenue below US\$100,000.

⁶ The information provided in this section is mainly drawn from: (i) Conict Consultants, “Assessment of best practice options for the implementation of demand stimulation for electronic communications services in rural Ukraine”, Global ICT Department of the World Bank, March 2007; (ii) Lidia Wolanskyj, “ICT for Economic Development: Growing Public-Private Partnerships in Ukraine”, UNDP, April 2004; (iii) the websites of Government's agencies and business associations and (iv) various articles appeared on news portals and the press.

collaboration with other stakeholders—a National Strategy of the Information Society in Ukraine and an Action Plan indicating instruments and methodology for its implementation.

E-Government: The national strategy includes the deployment of ICT at the central and local government levels. Enabling public administration with e-government instruments is considered one of the top priorities for the state's modernization, and for an efficient support to the business sector. Various programs are already in place to accelerate the incorporation of ICT by the public administration. A number of these programs are co-funded through grants and loans provided by international donors and IFI. Recently, the *State Department of Communications* has issued a draft of a Measures Plan on the realization of the information society in the Ukraine for the years 2007–2015. A concrete example of collaboration between the public and private sectors is provided by the pilot project, “City of the Future”, which was implemented in the city of Sumy in partnership with Ericsson. This project involves the broadband connection of public services like schools, libraries and public offices, through WiMax technology.

IT Education: The Ukraine has a relatively developed high-education system in science and technology. The Kharkiv and the Kyiv Polytechnic train the majority of Ukrainian IT professionals. High-level training is also promoted by donors' projects of distance learning coordinated by UNDP. At a lower level, the government has recently announced the funding of more educational programs aimed at increasing the overall level of ICT readiness in the country.

Support to ICT/ICTE Development: The Ukrainian Government provides little support to the development of the ICT/ICTE sector. According to industry associations, an integrated and comprehensive plan in this field has not yet been put in place. The connectivity situation is far from ideal: the network is largely old-fashioned, with vast areas lagging behind and the diffusion of broadband still in its infancy. More efforts have been made regarding the establishment and upgrading of technology parks and incubators. The network of technology parks includes: (i) the “Yglemash” in Donetsk; (ii) the Technology Park of Kyiv; (iii) the “Ukrinfotech” in Kyiv; and (iv) the Javoriv's technopark.

The *State Committee for Regulatory Policy and Entrepreneurship* provides assistance for the development of SMEs, by formulating and implementing the public policies for the development of private sector entrepreneurship. The committee is also responsible for the rationalization of the legal framework, which is still a mix of old and new laws and rules. However, the scope of the Committee's activities encompasses the entire private sector, and thus far, little work has been done in the ICT/ICTE sector.

Cooperation with Donors: International organizations and donors support several ICT and innovation-oriented development projects in the Ukraine. A non-exhaustive list of the initiatives that have been implemented or are in the pipelines is provided below:

- The **World Bank** extended a loan of US\$5.0 million to the Ukrainian Government for the implementation of the Ukraine E-Development Project. This project extended from the end of 2003 until the end of 2006. Its goals included: (i) improving the efficiency of the decision-making process; (ii) supporting private sector development; and (iii) strengthening the role of the civil society through the adoption of innovative ICT solutions. This project had essentially three components. The first was the E-Government component, which was aimed at enhancing the efficiency and transparency of government actions by the introduction of E-Procurement and E-Documentation flow systems. The second was the E-Business Environment component, which was aimed at removing the obstacles in the existing legislation to the diffusion of on-line transactions and the development of e-business practices. The third was the Public-Private E-Dialogue component, which was aimed at facilitating on-line interactions between public authorities, business sectors, and civil society representatives.
- The **infoDev** program of the World Bank has supported the *Ukrainian Business Incubators and Innovation Centers Association* (UBICA) through a US\$500,000 grant. UBICA was established in Kyev in 1998. It is an association that encompasses 10 incubators, 24 Economic Support Centers, and three technology parks. UBICA's mission is to foster the establishment and growth of business incubators, entrepreneurial centers,

and other innovative facilities, by networking with public authorities and other national and regional stakeholders to implement specific projects. Part of the *infoDev* grant has been used to support the *Kharkov Business Incubator*, a facility of the *Kharkov Technologies Centre*, whose mission is to assist in the development of technology SMEs and support the commercialization of science-based Ukrainian technologies.

- Over the past years, the **International Finance Corporation (IFC)** has worked extensively on the improvements of Ukrainian business environment and the development of small and medium-sized entrepreneurship. In particular, through the “Ukraine SME Policy Development” IFC has provided assistance to the Ukrainian Government for the reform of the licensing and permits system, with the objective of simplifying the awarding procedures and helping SMEs to obtain the required authorizations without excessive burdens. The outcome of this project has been the adoption by the Ukrainian Parliament of the law on the “System of permits for business activity”, in September 2005. Other initiatives in support of SME include large scale surveys and impact analysis of the SME segment carried out by IFC on an annual basis. These are aimed at providing the Government with first-hand information on the constraints faced by small entrepreneurs and devising possible ways to overcome them. By converse, IFC is not directly involved in the ICT sector with technical assistance projects or direct investments in technology firms.
- **UNDP** has had a significant involvement in the Ukrainian ICT landscape. Over the past year, UNDP has financed, along with other international organizations and local authorities, several ICT projects involving development, e-learning initiatives, and universal access. Some instances of past and present UNDP initiatives are as follows:
 - **Transfer of IT technology to Ukraine** (ongoing): This is a multilateral initiative involving UNDP and the governments of Poland, Japan and the Ukraine. The main objective is to increase the availability of qualified technology specialists in the Ukraine by implementing high-level distance learning programs. The methodology adopted was successfully developed and

implemented by the Polish-Japanese Institute of Information Technology (PJIIT), in collaboration with the local Kiev Polytechnic Institute and Lviv Polytechnic National University. The program trains local professionals on the set-up and management of distant learning programs in computer science. It established, and has provided support to, two pilot e-learning facilities. The project started operations in 2004, and will expire in 2007.

- **Innovations Springboard** (concluded): This is an initiative focusing on ICT as an instrument for education and poverty reduction. The project focused on enhancing access to ICT and the Internet for the education, and established an incubating facility the “University Innovation Center”. The project had budget of about US\$ 3.0 million and was implemented in partnership with Ukrtelecom, Kyiv City Administration, and two local universities.
- **ICT for Development in Ukraine** (concluded): This project focused on three main activities: (i) provision of advisory services to the Ukrainian Government for the development of a national e-policy on education; (ii) upgrade of the ICT infrastructure, especially in rural and depressed areas; (iii) support within the framework of strategic PPP projects. UNDP’s partners in this project included UNESCO, ITU and WB. The total funding of this initiative was US\$4.0 million.
- Other UNDP programs in the pipeline include: (i) an initiative to boost Public Internet Access Points; (ii) further assistance to the Ukraine Government for the implementation of the e-Ukraine plan; (iii) advisory services for the privatization and restructuring of Ukrtelecom.
- In 2000–2001, **USAID** launched the BIZPRO program to support small-scale entrepreneurship and economic development in Eastern Europe countries such as the Ukraine and Moldova, and later in Belarus (2005). The program aims at improving the competitiveness of local SMEs to operate in domestic and regional markets. Various measures have been implemented at different levels, including: (i) assistance to entrepreneurs; (ii) fostering of business associa-

tions; and (iii) intermediate organization and support to the reform of the legal and regulatory framework. The bulk of the efforts undertaken by the BIZPRO program have concentrated on sectors other than ICT. USAID is currently implementing an initiative to set up a website for agribusiness, which provides information on prices and helps farmers to contact buyers. This website⁷ is quite popular in the Ukraine—about 1,000 entrepreneurs visit it per day.

- The European Neighborhood Program (ENP) of the **European Union** is planning a number of interventions in ICT policy. The program will focus on providing assistance in two main areas: (i) electronic communications policy and regulation; and (ii) development of the Information Society. Concrete actions to be implemented are related to: (i) the reform of the market of telecom and data transmission; (ii) the establishment of a national communication authority; (iii) the enlargement of the base of internet-users; and (iv) the diffusion of ICT in the public administration, the education system, the health system, and trade.

II.3 THE FINANCIAL SECTOR

Commercial Banks⁸: The Ukrainian banking system is regulated by the law “On the *National Bank of Ukraine*” (1991). The governing authority is the National Bank of Ukraine (NBU), whose prerogatives are defined by the Constitution of 1996. The system includes various types of commercial banks with different forms of ownership. The NBU has licensed 173 banks, which together have 1388 active branches nationwide. The total assets of Ukrainian banks amount to about US\$70 billion. Credit transactions account for 77% of the total assets. Long-term credits are constantly on the increase. They grew by 24% in the first half of 2007, for an excess of US\$37 billion. The five major banks in Ukraine are: (i) *PrivatBank*; (ii) *Raiffeisen Bank Aval*; (iii) *UkrSibBank*; (iv) the *State Export and Import bank*; and (v) *UkrSotsbank*¹⁰. Together these five banks account for no more than 38% of the market. The system is extremely fragmented, with at least 20 institutions holding a market share above 1%. Of the major banks, three are foreign-controlled: *Raiffeisen Bank Aval* is controlled by Raiffeisen

International; *UkrSibBank* is controlled by BNP Paribas; and *UkrSotsbank* is controlled by the Italian Banca Intesa. The *State Export and Import Bank* is 100% state-owned. Some banks have specific credit lines for SMEs. These have been introduced over the past few years mainly through programs financed by international organizations, such as the Ukraine Micro Lending Program (see box 1 below). Such schemes are offered by *Raiffeisen Bank Aval*, *PrivatBank*, and the *State Export and Import Bank*. The *ProCredit Bank*, formerly known as Microfinance Bank, is particularly active in the SME segment. *ProCredit Bank* was established in 2001. It is a member of an international network of 19 financial institutions that are controlled by a group of IFIs and investment companies. The main shareholders of *ProCredit Ukraine* are EBRD, the *Western NIS Enterprise Fund* and *ProCredit Holding*, which includes various private and public investors. ProCredit focuses on lending to small and medium-sized enterprises. It provides micro-loans of US\$6,000–10,000, but it currently has few IT companies in its portfolio.

Venture Capital: Ukraine hosts a relatively developed venture capital industry, which has thus far mobilized nearly US\$1.0 billion. The first operations date back to the mid-1990s, when investors

BOX 1 – THE UKRAINE MICRO LENDING PROGRAM

The Ukraine Micro Lending Program (UMLP) originated from the merging of two different schemes: (i) the German-Ukrainian Fund (GUF); and (ii) the EBRD Micro Lending Program (EMLP). The GUF was launched in 1996 as a grant program for the promotion of Ukrainian MSEs and German-Ukrainian joint ventures—it was financed by the German Government. The EMLP was fruit of the cooperation between EBRD and USAID. It started operation in 1999, and was also focused on micro and small businesses. Under the UMLP, six accredited local banks receive financing and technical assistance for the implementation of micro-lending schemes. The Ukrainian partners are: Raiffeisen Bank Aval, PrivatBank, Bank Forum, ProCredit Bank, Bank Nadra, and Kreditprom Bank. The technical assistance develops products tailored to clients’ needs, provides support for the creditworthiness appraisal of borrowers, and manages and develops loan portfolios. Since the program’s inception, about 320,000 loans amounting to nearly US\$2.0 billion were disbursed to Ukrainian micro and small enterprises.

⁷ See: www.lol.org.ua

⁸ Information are drawn from the National Bank of Ukraine’s periodical reports (www.bank.gov.ua), the Association of Ukrainian banks (www.aub.com.ua), and the official banks’ websites.

⁹ A brief profile of the five major Ukrainian banks is provided in Annex B.

concentrated on the privatization process—which involved many state-owned companies. The first scheme to be set up was the *Ukraine Venture Capital Fund*, a collective investment vehicle launched in 1992 by a few American banks and financing institutions in collaboration with the IFC. The fund had a second close in 1996, for an overall US\$18 million. In 1996, the first *SigmaBleyzer's Ukrainian Growth Fund* started operations. In the following years, *SigmaBleyzer* launched three more funds for an unrivalled total capital of US\$420 million. Several development-oriented schemes were established between the end of the 1990s and the beginning of the 2000s. These included: (i) USAID's *Western NIS Enterprise Fund*, with US\$150 million; (ii) the *Euroventures Ukraine I&II*, supported by EBRD, IFC, etc., with US\$114 million; and (iii) the *Emerging Europe Growth Fund* (EEGF), with US\$150 million. The first Ukrainian technology-oriented VC fund—*Techinvest*—was established in 2004. This is a small scheme with a corpus of US\$6.5 million, that targets startups and small firms in the ICT and hi-tech field. *Techinvest* is currently planning to establish a partnership with the large VC firm *Draper, Fisher and Juverston*, in order to extend its operations¹⁰.

Based on the information available through direct and secondary sources regarding the operation of VCs, the salient features of the Ukraine's private equity industry can be summarized as follows:

- **Origin of Funds:** The Ukrainian private equity industry is largely dependent upon funds provided by international investors, especially IFIs such as EBRD, IFC, SECO, FMO, and USAID. Domestic capital is involved only to a marginal extent, as in the case of *Techinvest* and INEKO;
- **Investment Policy:** Ukrainian's VC firms tend to focus on well-established enterprises, which have reached a certain point of development. Initially, there were schemes operating at lower levels, such as UGF I, whose investments averaged US\$300,000, or EVU I, which targeted deals

well below US\$2.0 million. However, over time, the average size of operations has grown, and today most of the deals are US\$3.0 to 10.0 million. Apparently, the only scheme left to operate with small firms and startups is *Techinvest*, whose investments rarely exceed US\$0.5 million. Except for *Techinvest*, all other VCs appear little interested in the ICT/ICTE industry. *Euroventures* only closed one deal in 2000 with an ISP and VAS providers, and it was not successful. *SigmaBleyzer* has ventured only once in the ICT field, financing a software developer. Other schemes, such as WNISEF and EEGF, have never invested in this sector;

- **Operating Modalities:** The VCs usually adopt investment models combining common shareholdings with quasi-equity instruments, such as preferred shares and convertible bonds. Straight debt instruments are seldom applied. *Techinvest* also provides additional services to its clients. Sometimes the invested firms are charged with a management fee of 1 to 2%, which covers transaction costs and monitoring expenses. The duration of investments is variable, usually ranging from three to seven years;
- **Performance:** Thus far, the Ukrainian VCs have completed nearly 200 transactions. The bulk is represented by *SigmaBleyzer*, which has managed four schemes over the past decade. However, the overwhelming majority focus on operations in sectors other than ICT/ICTE.

Information on the activities of *Business Angels* in the Ukraine is limited. They appear to be marginal players in the private equity industry. However, there are examples of their involvement in this field, such as *Technocom-AT*, a Kyev-based IT firm founded in 2001 that secured an undisclosed investment from an angel in 2004. Ukrainian business angels operate on a purely individual basis—no groups or clubs have thus far been established.

¹⁰ A brief profile of selected Ukrainian VC funds is provided in Annex D.



III. ISSUES RELATED TO FINANCING THE ICT/ICTE SME

III.1 SME FINANCING NEEDS – THE DEMAND SIDE

The Ukrainian ICT/ICTE industry is relatively diversified. It includes: (i) software houses; (ii) internet VAS providers; (iii) web developers; (iv) IT dealers and consultants; and (v) hardware manufacturers and assemblers. The financing needs voiced by the Ukrainian ICT/ICTE firms reflect this variety. They may range from as little as US\$10,000–30,000—as in the case of early stage web-designers—up to well above US\$1.0 million—for large IT outsourcing firms and hardware manufacturer and dealers. The rationale for these financing needs also varies. At the early stage, it may include R&D expenses, purchase of equipment and licenses, and hiring and training of personnel. In the intermediate stages, it may include building up of working capital, productive capacity, and marketing. At the late stages, it may include strategic operations (e.g. joint ventures and acquisitions), and sizeable investments to open up an overseas presence. The salient features of financing needs voiced by ICT/ICTE enterprises in their various stages of development are summarized in Table 1¹¹:

III.2 ISSUES IN ACCESSING FINANCING – THE SUPPLY SIDE

Issues in Accessing Bank Financing: According to the “Doing Business” report of 2006¹², the Ukraine ranks 65th out of 175 economies on the access to credit index. Ukraine is better positioned than several other countries in the region, mainly due to a relatively conducive legal framework. On the other

hand, until recently, Ukraine has not had a credit information system. Consequently, banks’ credit to the private business sector has remained significantly low for many years. It is estimated that the volume of outstanding loans—excluding loans to financial institutions—corresponds to about 40% of the GDP. In Western Europe this is normally in excess of 200%. Some significant improvements are expected with the enforcement by NBU of the “Common Information System for registering Delinquent Borrowers”. This is a credit bureau that provides banks with information on the creditworthiness of applicants, on the basis of their track record with other banks. Thus far, about 130 banks participate in the system. The volume of information available is still limited. The situation of access to credit for SMEs is much worse than for large companies. According to a study conducted by USAID in 2004, only 26% of SMEs have managed to obtain a loan from a bank—in most cases small entrepreneurs have to rely completely on their own savings, or from informal sources of capital¹³. This represents a big obstacle to their development. In developed countries, SMEs account on average for about half of the GDP. In the Ukraine, they represent only 10%. This is in part due to the widespread informality of the Ukrainian business environment, and especially SMEs. There is a significant effort on the part of IFIs and international donors, to focus on assisting banks in setting up credit lines for SMEs and helping SME to improve their creditworthiness through transparency, sound management, and auditing. In particular, foreign-owned banks and banks that specialize in SMEs have recently made steps in the right direction. For example, ProCredit provides micro-lending (i.e. up to US\$10,000) and small loans (i.e. up to US\$125,000), with terms up to 12 months for working capital, and 36 months for fixed-asset financing. *PrivatBank* and *Raiffeisen Bank Aval* also

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

12 For more information, see: www.doingbusiness.org.

13 Source: USAID, “SME in Ukraine: Performance Indicators and Strategies for Development – 2005 Survey”. According to this study the majority of SMEs (68.2 %) did not approach banks for loans in 2004. Another 5.5 % of enterprises attempted to obtain a loan but failed.

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

Timeline	Amount Sought	Rationale	Examples from Fieldwork
Early-Stage	Up to US\$50,000	This phase consists of the subsequent steps from the conception of the business idea to commercialization. The financing needs at this stage are relatively limited in particular for businesses based on immaterial assets, e.g. IT service providers, e-commerce firms, web designers, and most of software developers.	<ul style="list-style-type: none"> ■ Microcosmic Group – e-commerce, e-learning
Development	US\$50,000 to 500,000	At this stage the company is established, and it seeks financing to build up an adequate working capital, to hire new personnel and to expand commercial activities. The resources needed are typically limited for most of BPO and software developers, while comparatively higher amounts are sought by players who perform more complex IT engineering, or develop embedded and automation software.	<ul style="list-style-type: none"> ■ Interactive Systems – software dev., web design ■ Logis – embedded software, web application ■ Zept Group – IT Consultancy
First Expansion	US\$500,000 to 1.5 million	This phase usually entails a diversification in the company's activities and/or an upgrading of the original products. Rationale for investments at this stage include the expansion of the commercial network (including opening new branches), hiring new personnel, establishing new divisions, and purchasing of advanced software and hardware.	<ul style="list-style-type: none"> ■ InfoService Group – Internet VAS ■ Bonus Technology – software dev and IT services
Second Expansion	More than US\$1.5 million	The second expansion is commonly associated to a major change in the scale of operations. This may well involve the expansion abroad with the establishment of presence overseas. Companies that have reached this stage include large outsourcing firms, some ICTE providers and hardware manufacturers and assemblers.	<ul style="list-style-type: none"> ■ SoftPress – ICT Publishing house

have schemes for small businesses. These problems are compounded by the perception of a high-risk profile for businesses in the ICT/ICTE sector, and a higher degree of informality in certain type of business. Moreover, bankers rarely have a solid knowledge of the realities of the ICT/ICTE sector, and this inevitably translates into an even more cautious attitude.

Issues in Accessing Equity Financing: As indicated in Section II.3, the Ukraine's VC industry is not very developed. In particular, VC firms have the tendency to concentrate their equity investments on large and well-established companies. Ukrainian VC tend to have a quite negative perception of the ICT/ICTE sector. Apart from one small facility—*Techinvest*—the main funds in operation have been only marginally involved in the financing of ICT/ICTE companies. This situation can be ascribed to two types of constraints: (i) endogenous factors, i.e. related to the characteristics and attitudes of investors and promoters; and (ii) exogenous factors, i.e. determined by the overall business environment.

- The *endogenous factors* affecting the access of SME's to equity financing include: (i) VC's investment policies (e.g. the types of deals and size of operations); and (ii) SME readiness to deal with VCs and fulfill their expectations. VCs do not generally consider seed and early-stage financing, due to the long investment horizon typically required. They focus on companies that have already reached a significant scale of operations, and are operating on or ready to venture onto the international market. The presence of an experienced management with demonstrated capabilities, and the transparency of the organization are other important aspects required by VC. Ukrainian ICT/ICTE enterprises rarely match with these prerequisites. In most cases they are small businesses, and those who operate on the international market are often sub-contractors of Russian outsourcing companies. There are also large and established IT firms in the Ukraine, but these are mainly set up as captive operations of big MNC. However, the lack of interest from Ukrainian VCs in small

ICT firms is not only due to the risk-aversion of operators. Typically, small businesses have financing needs of limited size—nevertheless, for many VCs small deals are unattractive in terms of expected returns. As a rule of thumb, it is rare that a Ukrainian VC considers investing below US\$1.0 million. More often than not the ideal investments range from US\$3.0 to 10.0 million, which is far above the needs voiced by normal SMEs. Typically, this is the territory of business angels, but in the Ukraine their presence is very limited.

- The exogenous factors affecting the access of SME's to equity financing include: (i) the limited opportunities offered by the Ukraine stock exchange market—the rules make it too difficult for foreign investors to enter the market; and (ii) the inadequate protection of investors—according to the World Bank's "Doing Business" survey, the Ukraine ranked 142nd out of the 175 economies surveyed¹⁴.

the necessary investment capital, especially in the intermediate stages of development and the first expansion. This phenomenon cannot be ascribed to a lack of funds in absolute terms. Rather, it is due to the policy and nature of the financing options available in the Ukrainian market, and to the constraints existing on the demand side. ICT/ICTE industry is in fact highly fragmented, and enterprises are often too small to be of interest to investors. Evidence from the fieldwork showed that entrepreneurs dedicate little effort to improve their ability to deal with external financial institutions. They sometimes appear to be uninterested in setting up a growth strategy, opting instead to stay small and live on their resources. The financing gap in the Ukraine has a relatively wide range—about US\$50,000 to US\$1.5 million. The gap is particularly severe in the US\$100,000–500,000 range. That is where the demand is concentrated. Nevertheless, virtually no VCs are active at this stage and access to bank loans is difficult.

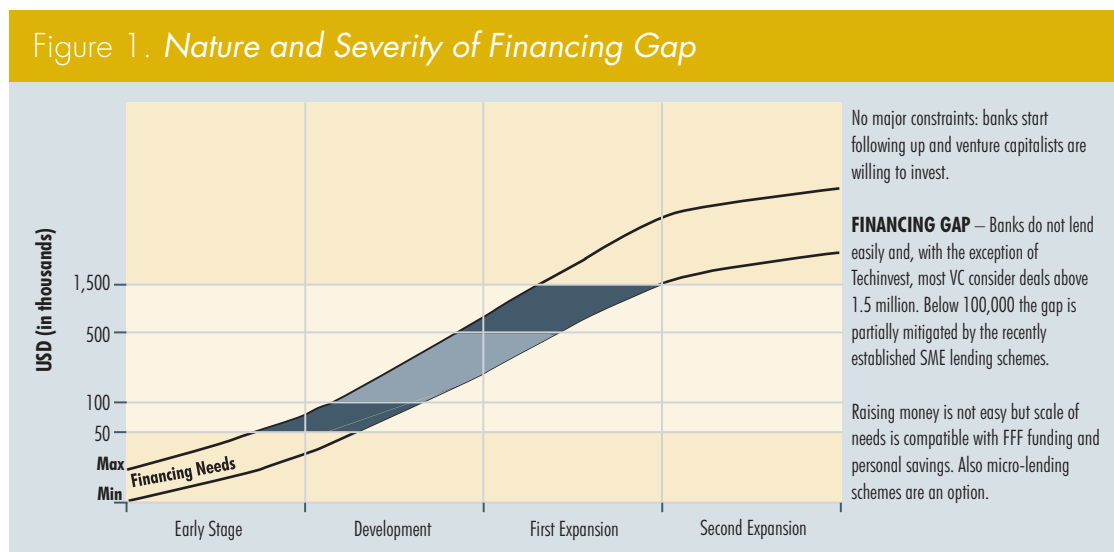
III.3 THE FINANCING GAP – NATURE AND SEVERITY

Overview: The available evidence suggests the existence of a substantial financing gap. Small and medium-sized ICT/ICTE firms with a significant growth potential, face severe obstacles in securing

Financing Gap & Stages of Development: A summary presentation of the financing gap faced by ICT/ICTE SMEs in their various stages of development is provided in Figure 1.

¹⁴ For more information, see: www.doingbusiness.org. The 'protection of investors' is measured taking into account three elements: the transparency of transactions, (ii) the liability for self-dealing; and (iii) shareholders' ability to sue officers and directors for misconduct.

Figure 1. *Nature and Severity of Financing Gap*



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

- At the **early stage** most Ukrainian entrepreneurs rely on personal and FFF resources to establish their business. The financing needs normally compatible with this strategy rarely exceed US\$50,000. These informal financing sources can be complemented with personal loans, which can be relatively easy to obtain through banks that participate in the UMLP program, such as *Raiffeisen Bank Aval* and *PrivatBank*. Another option is represented by the *ProCredit Bank*, which specializes in SME loans. In other words, for newly established enterprises, solutions for the financing problems can be found, though at the cost of considerable effort and some personal liabilities.
- Problems become more serious when the amounts sought are between US\$50,000 and US\$1,500,000. For many enterprises in the **development and first expansion stage**, the financing constraint can be forbidding. Enterprises at these stages are usually already in business, often trading profitably, but are not sufficiently 'established' to be considered as credible borrowers by commercial banks. For sums in excess of US\$100,000–200,000, the SME schemes do not apply, but the amounts are

still too small to be considered by VCs. The only VC fund that operates on this level is *Techinvest*, but it rarely operates below the US\$0.5 million threshold, and moreover the corpus of the fund is very limited. IT enterprises are compelled to rely nearly exclusively on bootstrapping, and some of them may find it convenient to remain in the grey economy and to adopt 'unorthodox' business practices. This can produce a significant slow down in the development process, which in a fast moving business such as ICT, may ultimately jeopardize the future chances of success.

- Few Ukrainian ICT/ICTE enterprises, in particular those backed by MNC and overseas partners, have managed to reach the **second expansion stage**. At this stage, conditions for accessing financing improve significantly. Commercial banks are more willing to lend to established firms, although proper collateralization is still necessary. Much more importantly, investment deals of US\$2.0–3.0 million and above can be of interest to most of the existing VCs. The majority of equity investments recently concluded in the Ukraine involve enterprises at this stage of development. However, the interest displayed so far by institutional VCs in the ICT/ICTE sector has been extremely limited even in the case of mature companies. Therefore, large Ukrainian operators typically rely for their investments on financial support from overseas parent companies or on the constant cash-flow granted by outsourcing contracts.

IV. CONCLUSIONS AND RECOMMENDATIONS

IV.1 INTRODUCTION

The Ukraine is home to a dynamic ICT/ICTE industry that has recorded impressive growth rates over the past few years, especially in the areas of software outsourcing, and hardware manufacturing and assembling. Despite this progress, the ICT/ICTE sector remains highly fragmented and partly connected with the widespread 'grey' economy. Under these conditions, access to financing for most Ukrainian ICT/ICTE enterprises is not an easy task, especially when their volume of operations is not sufficient to attract the few existing potential investors. The study confirmed the existence of a financing gap for operators who seek for financing ranging from as little as US\$50,000 up to US\$1.5 million. Close to the lower end, the gap is somewhat mitigated by some banks' micro-lending schemes established with the support of international organizations. The operations of small technology VCs help to ease the problem for firms seeking US\$0.5 to 1.0 million. Other donors' initiatives are of some help in mobilizing funds for generic SME development, or for specific projects in support of the diffusion of IT in the country. However, very little has been done so far to specifically address the issue of access to debt and/or equity financing for ICT/ICTE SMEs.

The results of the study indicate a series of measures that, in on different levels, could contribute to bridging the financing gap faced by ICT/ICTE SMEs. Some of these measures involve specific interventions in the area of access to equity and debt financing. Others are designed to improve the interactions between the supply and the demand sides of the financing market.

IV.2 MEASURES AIMED AT FACILITATING ACCESS TO EQUITY FINANCING

Venture capitalists are generally better equipped than banks to catch business opportunities in innovative sectors. They have played a crucial role in the development of ICT/ICTE clusters in several countries. In the Ukraine, the involvement of private equity capital in the local ICT/ICTE industry is still marginal. Therefore, the implementation of concrete measures aimed at multiplying VC's operations could prove beneficial to the development of this industry. In particular, efforts should be directed toward: (i) making early-stage operations in ICT more interesting through measures that reduce the overall risk; and (ii) fostering the growth of business angels networks.

Mitigating the Risk Associated with Early Stage Investments: In the wake of the late-1990s 'dotcom' financial crisis, venture capitalists worldwide became significantly more cautious with regard to startups and early stage ICT companies. Since the early 2000s, VC operations in the Ukraine have concentrated more and more on less-risky late stage deals. In order to attract equity investments in the lower segments, some incentives could be provided through public-private investment matching facilities¹⁵. These types of schemes are normally co-funded with public money through a fixed commitment or on a *pari passu* basis, but are fully managed by private sector professionals. The advantages provided by these schemes are manifold. For instance, some funds foresee a 'downside' protection mechanism for private-sector investors, with the public investor to bear a more than proportional share of potential losses. In other cases, the incentive consists of the provision of leveraged returns to private sector investors, or a conspicuous tax reduction on capital gains. A useful follow up to this

¹⁵ In this respect the most-cited example is represented by the programs supported by the US Small Business Investment Companies (SBIC).

study could be a review of the existing schemes of this kind and their applicability in the Ukrainian context.

Promote the Establishment of a Business Angels Network: As discussed in previous sections, business angels have a very limited presence in the Ukraine. This could be partly due to the constraints of the overall business environment, but also to a lack of pioneer experiences in this field. At present, the existing Ukrainian business angels are active on a purely individual basis. They operate mainly through informal channels, and their impact on the ICT/ICTE industry is marginal. Therefore, a useful initiative could involve promoting the establishment of an organized business angels group, akin to those existing in many other countries, such as India, the Philippines, and Brazil. The existence of a structured group of angels would facilitate financing operation through pre-screening services, match-making events, and assistance. It would also help raise the awareness of this model, and thereby contribute to resolving the existing regulatory constraints and bottlenecks.

IV.3 MEASURES AIMED AT FACILITATING ACCESS TO BANK FINANCING

In absolute terms, banks are and will remain the most important source of financing to the private sector. Therefore, it is important to devise ways to facilitate their relationship with ICT/ICTE firms. The establishment of credit guarantee schemes for SMEs could be particularly useful.

Support to the Establishment of Credit Guarantee Facilities: Credit Guarantee Funds (CGFs) aim at facilitating access to bank financing through the provision of a loan repayment guarantee that replaces, to a variable extent, the need for collateral. Several examples of facilities of this kind can be observed in various European countries, where they play an important role in helping SMEs to access credit. More recently, CGF are spreading into a number of emerging countries, from North Africa to East Asia and the Pacific, sometimes with the support of donors or local governments. In the Ukraine, these types of schemes apparently have not

yet made roots—only some credit guarantees for exports are reportedly active. Therefore, an intervention in this area should initially focus on assessing the feasibility of the establishment of a CGF for SME, including a specific focus on high-tech industries.

IV.4 IMPROVING THE INTERACTIONS BETWEEN SUPPLY AND DEMAND

Enhancing Capabilities to Deal with Financial Institutions: Banks and financing institutions are not solely responsible for the existence of the financing gap. Informal practices and unreliable financial statements are widespread problems among Ukrainian SME, including those in the ICT/ICTE industry. The projects presented to investors often lack the necessary accuracy and quality. For the enterprises undergoing incubation, these problems are partially mitigated by the support that the incubator provides in the form of training or technical assistance. Useful measures in this area should include: (i) programs that enhance the role and capacity of incubators in improving the entrepreneurs' ability to present their business ideas and meet the quality standards required; (ii) direct provision of technical assistance to ICT/ICTE SME through dedicated schemes.

Improving the Understanding of the ICT Sector: A lack of understanding of the fundamentals of ICT/ICTE often represents a major issue affecting investment decisions. In order to assess the scalability and/or the solvency of an enterprise, a basic knowledge of its business model is necessary. In the Ukraine, the problem is magnified by its substantial specialization in knowledge-based business models, such as software development and IT engineering. The scarce familiarity with ICT is more acute among bankers. Intervention in this area could take the form of presentations and dissemination initiatives, training-modules, and other similar instruments. For such initiatives, the involvement of the intermediary organization of both entrepreneurs and financing institutions, such as the *IT Ukraine Association*, the *Ukrainian Internet Association*, and the *Association of Ukrainian Banks*, would be beneficial.



ANNEXES



ANNEX A – THE ICT/ICTE SECTOR

TABLE 2. *Main Telecom Operators*

Operator	Line of Business (subscribers)	Comments
Ukrtelecom	Fixed-Line Telephony (~11 million)	Ukrtelecom is the incumbent telecom operator of Ukraine. It largely dominates the fixed-line sector with more than 90% of the market share and the Internet access provision, both through dial up and broadband (17,000 km of fiber optic cables laid so far). Ukrtelecom is 100% controlled by the State, as the often announced privatization has not started yet. In 2004, it generated profits in the order of US\$170 million. Recently, it acquired UTEL, a former international joint-venture, which control 70–75% of the long-distance and international calls market (whose value is estimated at US\$1.3 billion). Ukrtelecom is also the only 3G technology licensee, but operations have not started yet.
Golden Telecom	Fixed-Line Telephony (~500,000) Mobile Telephony (~50,000)	Formerly co-owned by Ukrtelecom and other international operators, in 2003 UMC was Mobile TeleSystems (MTS) an important Russian telecom operator. UMC is currently the second-largest mobile operator. It adopts GSM technology, but recently it was also licensed for CDMA. UMC has announced a plan of investment of about US\$500 million for 2007.
UMC	Mobile Telephony (~17.7 million)	Formerly co-owned by Ukrtelecom and other international operators, in 2003 UMC was Mobile TeleSystems (MTS) an important Russian telecom operator. UMC is currently the second-largest mobile operator. It adopts GSM technology, but recently it was also licensed for CDMA. UMC has announced a plan of investment of about US\$500 million for 2007.
Kyivstar	Mobile Telephony (~17.7 million)	Kyivstar is the largest wireless telephony provider in Ukraine. It is mainly controlled by the Norwegian Telenor (56.5%), while other shareholders include the large Russian Alfa Group. In 2007, Kyivstar plans to invest in the network some US\$600 million.
Astelit	Mobile Telephony (~4,5 million)	Astelit, is the third-largest operator, and the fastest-growing. In 1Q 2006 it has recorded a growth rate of 32%. Astelit trades under the brand “Life”. It is mainly owned by Turkcell (Turkey) with 54.4%, while the remainder is controlled by System Capital Management—a large Ukrainian financial-industrial group.

Figure 2. Features of the Ukrainian Telecom Market

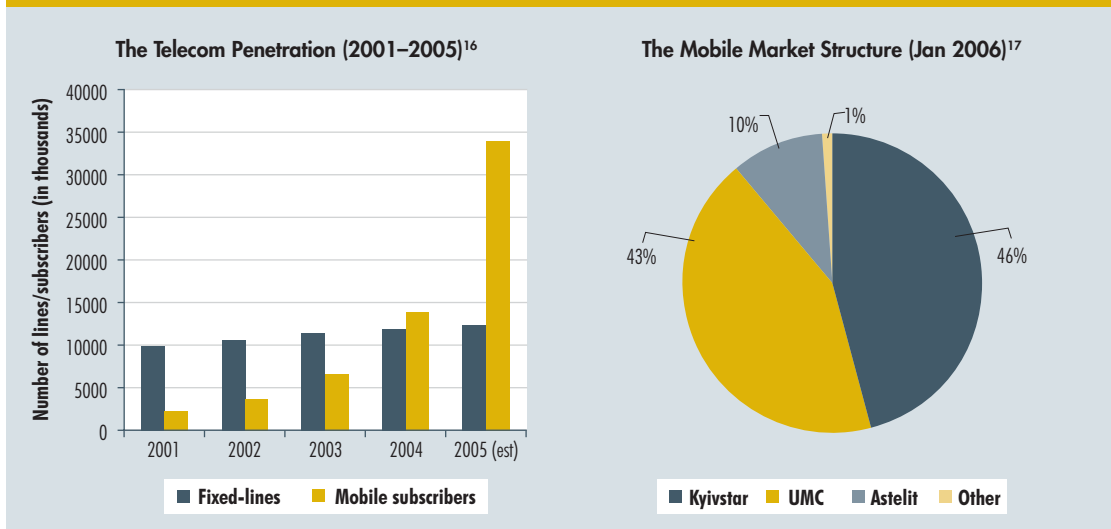
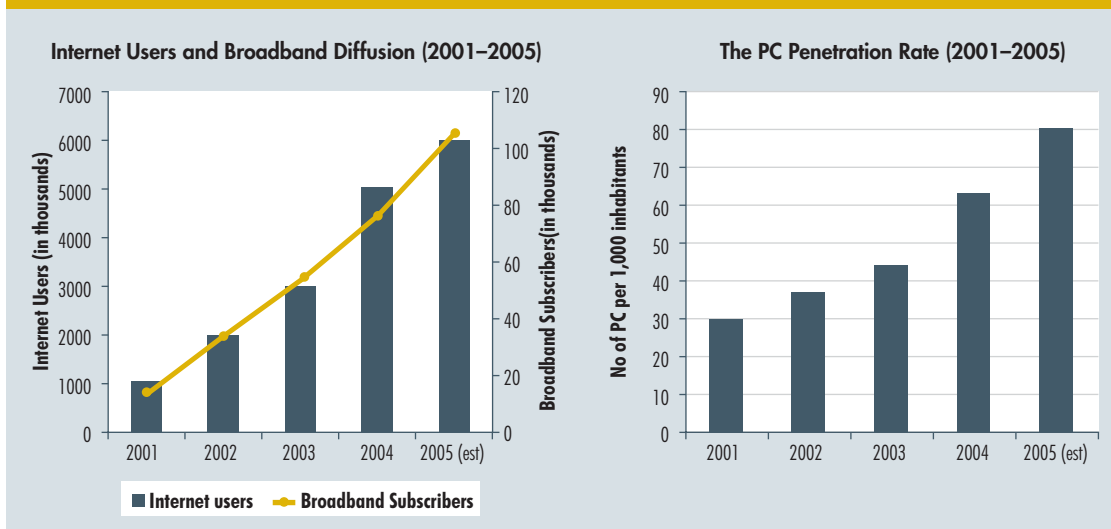


Figure 3. The Diffusion of Internet and PC¹⁸

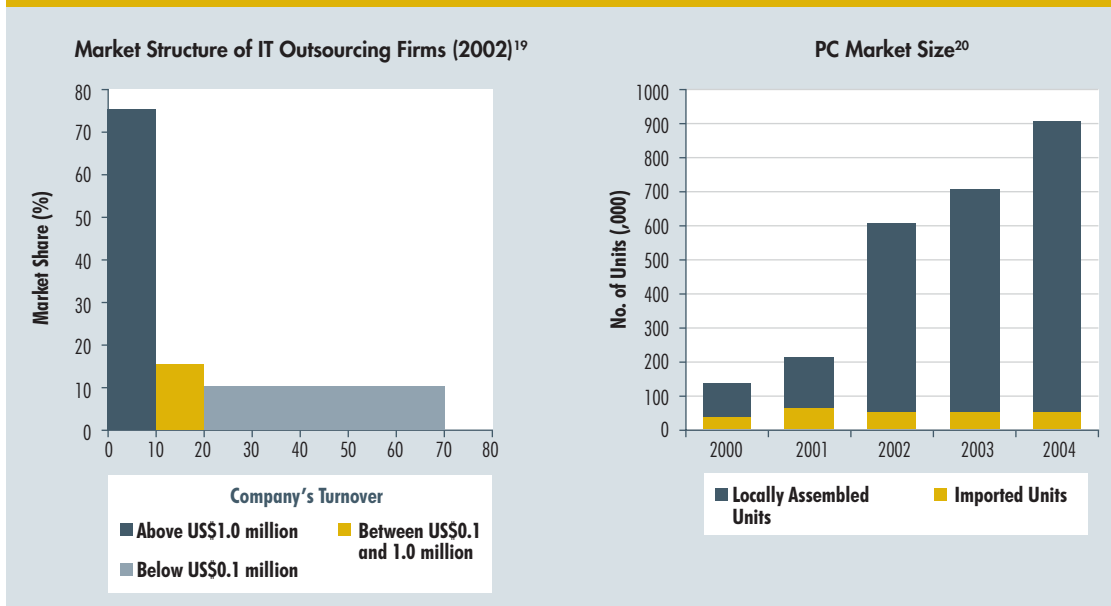


¹⁶ Sources: (i) Pyramid Research; (ii) Economist Intelligence Unit.

¹⁷ Data are drawn from FinRus Gateway, "Bulletin, May 2006".

¹⁸ Author's elaboration on data drawn from: (i) Pyramid Research; (ii) Economist Intelligence Unit.

Figure 4. Features of the ICT/ICTE Industry



19 Author's elaboration on data from "Ukrainian IT Services and Products Export Market Research, 2003", Market Visio & Gartner

20 Author's elaboration on data drawn from U.S. Foreign Commercial Services, 2004.



ANNEX B – SALIENT FEATURES OF FINANCING INSTITUTIONS

TABLE 3. *Salient Features of Selected Banks*²¹

Bank	Total Assets (US\$ billion)	Comments
UkrSibBank	5.0	The third largest bank in terms of assets, UkrSibBank (until 1992 known as Kharkovcombank) have been acquired in 2006 by BNP Paribas which holds the 51% of shares. Other shareholders include the Ukrainian Metallurgical Company (39.5%) and other minor actors. Today, it manages a network of 967 branches nationwide. It offers special micro-loans and loans for specific purposes to SMEs
Raiffeisen Bank Aval	6.1	The Aval Bank was established in 1992. In 2005, the 93.5% of the shares were acquired by Raiffeisen and the bank changed the name into Raiffeisen Bank Aval RBA is the largest bank in terms of paid-in capital and the second largest in terms of assets. It operates 1,300 offices throughout Ukraine. RBA is leader in the micro lending segment, for which RBA has set up dedicated scheme in cooperation with EBRD and Germany. In 2006, its SME portfolio grew by 62% over the previous year.
State Export and Import bank	4.2	Established in 1992, the State Export and Import Bank is a 100% state-owned institutions specializing on foreign trade. SEIB operates 29 branches and 64 outlets nationwide. It is partner of the World Bank under the largest Export Development Project in Ukraine and a partner of KfW under the Small and Medium Enterprises Program.
Privatbank	7.2	PrivatBank was founded in 1992. It is privately held by two major owners. Currently PrivatBank is the largest and the most dynamic commercial bank in Ukraine, servicing more than 16% of the population, through some 1,900 branches and offices all over Ukraine. PrivatBank is accredited to operate credit lines of the World Bank, EBRD and the German-Ukrainian Fund (GUF) of assistance to small and middle-sized businesses.
UkrSotsBank	4.1	Established in 1991, UkrSotsBank is the among the five major Ukrainian banks. Its network includes about 500 offices throughout Ukraine. UkrSotsBank specialized on consumers' loan. Since June 2006, it is controlled by the Italian Banca Intesa, which holds the 85.42% of share.

²¹ Information is drawn from National Bank of Ukraine's periodical report and from banks' official websites.

TABLE 4. Salient Features of Selected Equity Financing Operators

Fund	Funding (US\$ million)	Deals	Comments
Techinvest	6.5	5	Established in 2004, Techinvest focuses on seed and startup financing of Ukrainian technology firms. Funds mainly come from the Aventures Group (retail and distribution fields). Techinvest IP-based projects of relatively small size (around US\$0.5 million). It is currently exploring the possibility of a partnership with the Silicon Valley-based technology VC Draper, Fisher and Juverston (DFJ).
Euroventures Ukraine (I&II)	34 (1 st fund) 80 (2 nd fund)	10	EVU was incorporated in 1998 in Cyprus. The first fund was launched in 1999, while the second had a first close in 2005 and a second close in mid 2006. Funders include various IFI such as EBRD, IFC, SECO and FMO. Both EVU I & II are generalist equity funds. Particular interest is devoted to fast moving consumer goods and distribution, while ICT sector is seldom targeted.
SigmaBleyzer	~420 (total)	142	SigmaBleyzer has launched so far four funds: the Ukrainian Growth Fund I (UGF I) in 1996, the UGF II in 1997, the UGF III in 1998 and the Southeast European Fund in 2005. The first three funds have concluded operations. SigmaBleyzer's funds normally see the co-financing of several partners. In the case of the most recent scheme, some 40 investors were involved including EBRD, Goldman Sachs, UBS, Bank Austria, InvestKredit etc. SigmaBleyzer's funds are generalist, and operate in sectors like retail and distribution, media, food and beverages, naval industry, etc. Only one deal has been financed in the ICT sector.
Western NIS Enterprise Fund	150	29	Western NIS Enterprise Fund (WNISEF) is a regional private equity fund active in Ukraine and Moldova. With more than a decade of experience in the region WNISEF invests in small and medium-sized companies, in sectors like fast moving consumer goods, construction materials, packaging, retail, and financial services (e.g. the ProCredit Bank). WNISEF was established by the U.S. Congress and funded by the U.S. government via USAID. The amount typically invested in a single company ranges from US\$1–10 million, and the financing instruments include equity, quasi-equity and debt. WNISEF is managed by Horizon Capital.
Emerging Europe Growth Fund	150	3	Emerging Europe Growth Fund (EEGF) is a private equity fund focusing on expansion and buy-out opportunities in the fields of financial services, fast moving consumer goods, retail and industrial goods. Typical investments are in the US\$3.0–15.0 million range. As for WNISEF also EEGF is managed by Horizontal Capital.
INEKO Capital Partners	n.a.	n.a.	INEKO was founded in 1994, initially as a brokerage house specializing on transactions in the power energy sector. INEKO Capital Partners was created in 2002 as the private equity arm of the INEKO Group to operate in Ukraine and in the region. So far INEKO has completed several investments, mainly in the power generation & distribution sector but also in automotive production, transportation services, food & beverage processing, construction materials, real estate, financial services, etc. INEKO typically consider deals in the US\$1 million–10 million range.

ANNEX C – LIST OF ENTITIES INTERVIEWED

C.1 PUBLIC ENTITIES AND DONORS

- Kiev City Administration
- IFC
- USAID BIZPRO
- EBRD

C.2 FINANCIAL INSTITUTIONS

- Aval Bank
- Procredit Bank
- Fund “Euroventures Ukraine”
- Fund “Ukraine-Habitat”

C.3 BUSINESS INCUBATORS

- Kiev Innovation Business Incubator
- Ukrainian Association of Business Incubators and Innovation Centers

C.4 ENTERPRISES AND BUSINESS ASSOCIATION

- Information Technology Ukraine Association
- Bonus Technology Ukraine
- InfoService Group
- Interactive Systems Ltd.
- KDS Software Group
- LOGIS
- Microcosmic Group
- SoftPress
- Zept Group



ANNEX D – PROFILES OF SME FINANCING ORGANIZATIONS

PROFILE #1 . *Ukraine – TECHINVEST*

Salient Features

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

Narrative Description

- As of today, TECHINVEST's portfolio includes the following enterprises:
 - APowerCap Technologies** is a US-registered startup with R&D facility in Ukraine. The company operates in the field of nanotechnologies developing novel power sources on the basis of proprietary IP.
 - Center for Innovations Development (CID)** was established in 1998 by the Ukrainian International Management Institute. CID is a business incubator offering services to technology startups. It also organizes roadshows and annual business presentation in the Silicon Valley.
 - Financial Algorithmics (FA)** is an ICT firm whose activities focus on the development of complex mathematical algorithms for financial markets. FA operates through a proprietary platform on which several applications for traders have been developed.
 - United Software Corporation (USC) is a global IT services and technologies provider. USC was incorporated in California in 2004.

(continued on next page)

PROFILE #1 . *Ukraine – TECHINVEST (continued)*

Among the rest, USC specializes on the establishment of development centers, and outsourced R&D services. Fields of expertise include: Mainframe technologies; Financial engineering; Telecom solutions (incl. wireless technologies); GIS-based Disaster Management solutions; Applied Algorithmics, etc.

USC Technology Center. Connected to the above, TECHINVEST has supported the establishment of the USC Technology Center in Kyiv.

- Every year TECHINVEST organizes with the support of various sponsors the Ukrainian High-Tech Competition. This is a competition on business ideas, which encompasses in particular four fields of technology: ICT, energy, nanotechnologies & new materials; life sciences & biotechnologies. The finalists of the Competition are invited to present their projects to the VC community during a road show in Silicon Valley, USA. The winners may receive equity investment from VC to develop their business ideas and support for the commercialization of their projects.

Sources on the Web

- www.techinvest.com.ua

PROFILE #2. UKRAINE – Euroventures Ukraine

Salient Features

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

Narrative Description

- Since 2005, EVU has managed the Ukraine Opportunity Trust PLC (UKRO), a financing vehicle with an overall corpus of US\$61.8 million. The Fund will co-invest pari-passu and pro-rata with Euroventures Ukraine Fund II. Thus the total combined capacity for private equity investments is of US\$130 million dollars. Funds will be directed to companies operating in the field of consumable goods, value-added business services, media and entertainment, export-oriented manufacturing, logistics & distribution, and point-of-sale technologies.
- The only operation in the ICT/ICTE sector was made in November 2000 and regarded *P5 Communication* a company emerged from the merging of an ISP and a local e-commerce portal. The objective was to combine competitive Internet access with additional services in the field of payment systems. However, the initial target of 50,000 customers was not reached and after three years and some attempts to bring in strategic partners, EVU eventually decided to write off the investment. Afterwards, no other transaction in the ICT/ICTE sector was closed.

Sources on the Web

- www.evu.kiev.ua

PROFILE #3. UKRAINE – SigmaBleyzer

Salient Features

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

Narrative Description

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

Sources on the Web

- www.sigmapleyzer.com

ANNEX E – PROFILES OF ICT/ICTE SME

BONUS TECHNOLOGY

Operations

Since its establishment in 2002, Bonus Technology Ltd. has experienced a considerable growth and is currently employing some 300 people and registering a turnover of about US\$5.6 million. The company offers various products, among which: software development and testing; data simulators; systems analysis and business logics recovery (mining, documenting); constant software improvement; etc. and has a wide range of international clients, including countries like Russia, Canada and the United States of America. Lately, Bonus Technology has merged with Induslogic Inc. and became part of Globallogic, a market leader for outsourced product development worldwide.

Financing

Reportedly, the company has applied for a bank loan and also contacted a US venture capital fund to get a financing of some US\$300,000 in order to cope with the operational costs. Both tentative failed (in the former case, the cause of rejection was the bank's perceived lack of project feasibility; while in the latter, the venture fund did not believe in the companies' potentiality) and the company is now managing to cover the required sum through their USA based branch.

Comments

According to the interviewee, the main difficulties experienced by the company concern customs and trade regulations and time-consuming procedures. Additionally, facilities, especially access to land, are too expensive in Kiev. Insufficient and inconvenient legal regulations also perceived as a problem to the company's operations and business development.

INFOSERVICE GROUP

Operations

The core business of the company concerns the informational and analytical services. For the past seven years, InfoService Group has been publishing online daily digest. The company was established in 1999 and counts some 50 employees. At this time, various attempts made to expand the business to European and American countries have not succeeded.

Financing

The company is fully financed by the owner. The turnover ranges from US\$200,000–500,000. As all services are provided on a contract, paid on an “hours-worked” basis, there is no emergent need for external finances. InfoService Group has never applied for a loan, mainly due to the fact that banks offer only small credit products and that interest rates are too high. Moreover, macroeconomic instability makes such operations and future forecasts too risky. However, attempts to attract investments from the venture capital sector were made; the process is still on-going and results are to be seen.

Comments

Main InfoService Group is experiencing problems in the operational activities and business development due to regulatory policy uncertainty, skills and education of workers, cost of finances, as well as costs of rent for facilities.

INTERACTIVE SYSTEMS

Operations

Interactive Systems is an IT company with 10 collaborators, which was established in 1996. It offers a diversified range of products mainly, including: development of professional billing systems; business office automation systems; development of document management; remote-access database development; Internet/Intranet

applications; web design and hosting; web marketing, etc.

Interactive Systems serves a wide range of clients (about 200), both in the Ukraine and Russia, including government entities, international organizations, telecommunications operators, and educational organizations.

Financing

The company's turnover was about US\$60,000 in 2006. In order to expand the business and to offer new services to the clients, external financial help is required. According to the interviewee figures would be around US\$10,000. Anyhow, to develop new projects, they estimate this figure to increase up to US\$1–1.5 million. The company has never applied for a bank loan before, due to the high interest rates offered.

Comments

Interactive Systems Ltd. experiences problems with IPR regulations and copyrights.

LOGIS

Operations

Established in 2003, Logis is a limited liability company. Its personnel includes about 15 staff. It specializes in: (i) the development of new software using new technologies and tools; (ii) web-applications and database development; (iii) embedded software development, creation of remote control software and software drivers for equipment suppliers; and (iv) application re-engineering, structural change and modeling, language and platform migration, programming language changes, adding modern user interfaces, etc.

Financing

The company is fully financed by owners' equity and has never applied for a bank loan. The annual turnover is US\$250,000. Due to the fact that this company is performing outsourcing operations, it is fully paid by clients on an "hours-worked" basis. Therefore, there is no immediate need for external financing. However, if the company wishes to increase its clients and extend the networks an investment of US\$200,000–300,000 would be necessary for that end.

Comments

During the interview the manager pointed out that the company has experienced difficulties with regulatory policy uncertainty, sudden changes in VAT-law, labor regulations, cost of finances, macroeconomic instability.

MICROCOSMIC GROUP

Operations

Microcosmic Group was founded in 2000. Nowadays the company counts some 15 employees and operates in the field of e-commerce, e-learning and application integration systems.

Financing

At the moment the company is facing a shortage of facilities. In monetary terms, according to the calculations, it would require a financing of some US\$30,000–50,000. Nevertheless, the company has not applied for a bank loan, due to inadequate collateral and high interest rates (about 24%). In the past, the company tried to obtain investments from the venture capital (AVentures), but did not succeed because the amount sought was too small for the fund. Registered annual turnover is US\$200,000.

Comments

Main problems faced by the company during his operations, concern:

- High VAT rates;
- Lack of skills/education of workers;
- Costs of finance;
- Anti-competitive or informal practices.

SOFTPRESS

Operations

SoftPress was founded in 1995 as a limited liability company. Over the years it grew into a large company, currently employing some 130 persons and registering a US\$3 million turnover. The company operates in the publishing sector and is considered as the most important publishing house in the country. It specializes in information and communication technologies, developing Internet-

projects and in cooperation with other ICT companies, successfully works in the field of content-project creation in the Ukrainian segment of Internet.

Financing

The company currently has a bank loan. Moreover, it is in the process of obtaining an investment from the IFC. Current estimated financial needs reach some US\$1,000,000.

Comments

Main problems faced by the company during his operations, concern:

- Expensive office space;
- Access to and cost of finances (high interest rates);
- Legal framework;
- Tax administration;
- Labor regulations.

ZEPT GROUP

Operations

Founded in 2004, Zept Group is a limited liability company that counts some 10 collaborators. Zept Group delivers services in the area of management

consulting, knowledge management and information technologies. The consultancy component encompasses a wide range of technologies for efficient business management, from creation of analytical information systems to development of management solutions and methodologies. Zept Group worked with important clients, such as: Bayer Cropscience, Finport Technologies Inc., Association of Ukrainian Banks, Kyiv Municipal Administration, Medical center «Dobrobut», etc.

Financing

The lack of adequate collateral did not allow the company to obtain bank loans in the past. Additionally, there was an unsuccessfully attempt to attract investments from the Sygma Blayzer venture capital firm, failed due to the inability to prove financial profitability of the investment required. Current annual turnover reaches some US\$ 1 million, while financial needs are estimated to be in the range of US\$300,000.

Comments

In line with other companies' complaints, Zept Group is facing difficulties both, considering its operational activities and with reference to future growth, in the following areas: expansion of office space, tax administration, costs of finance as well as macroeconomic instability in the country.

About *infoDev*

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

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

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

