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E-FINANCE AND SMALL AND MEDIUM-SIZE ENTERPRISES (SMEs) IN DEVELOPING AND TRANSITION ECONOMIES

UNCTAD Expert Meeting
"Improving Competitiveness of SMEs in Developing Countries: Role of Finance Including E-Finance to Enhance Enterprise Development",
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UNCTAD Background Paper [*]

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INTRODUCTION

This background paper provides a conceptual framework for discussion of the potential contribution of e-finance to facilitating the development of SMEs in developing countries. The paper is intended to:

- Provide the elements of definition of e-finance and identify critical vectors of its development;
- Review the global experience of e-finance and to draw preliminary conclusions from this experience;
- Analyse e-finance initiatives, aiming specifically to support SME development, both in the developed and in the developing countries;
- Examine prospects for greater use of e-finance to promote SME development and to discuss challenges arising from such a use.

The paper is based on an extensive review of the existing documentation on the different aspects of the subject matter. That documentation is extremely heterogeneous and fragmentary. In particular, data on the attitudes of users of e-finance services have still not yet been collected on a systematic basis and analysed. E-finance suppliers themselves provide a large share of the documentation. Alongside with useful information, they are at the same time promoting given initiatives, which in some cases could be at pilot stages. It is therefore extremely difficult to obtain reliable data on their actual use and impact.

Not surprisingly, the weakness of data is particularly pronounced for e-finance in the developing countries. As a result, many of the conclusions drawn from the review can be considered tentative and indicative.

Moreover, the speed and amplitude of changes in e-commerce in general and e-finance in particular could outpace the most authoritative views on those phenomena. Some things regarded as conventional wisdom only a short time ago are now questioned or simply considered erroneous. The rise of e-finance initiatives has been spectacular, but so has their fall.

At the same time it is becoming evident that tentative conclusions could be replaced by more solid ones only on the basis of systematic gathering and analysis of data on e-commerce and in particular on e-finance experiences in developing countries.

1.THE E-FINANCE EXPERIENCES

1.1.The scope of e-finance

This paper defines e-finance as that of financial services delivered through Internet i.e. online.

1.2.The scope of SME related e-finance

E-finance includes online brokerage, banking, insurance and other financial services. Internet technologies have now penetrated all aspects of financial services industry, both retail and wholesale, back-office and front office, information and transaction. At the same time this paper is focused on SMEs and the latter apart retained profits have mainly access to bank lending, trade finance and are highly dependant on the quality of credit information related to their financial health. That's why the analysis of e-finance for SMEs in developing countries will be limited to mainly Internet banking and payments, e-trade finance and online credit information and to some extent to possibilities of Internet to disseminate mainly Anglo-Saxon tradition of venture capital and business angels to finance online SMEs in developing countries.

It is worth mentioning here that the forthcoming UNCTAD "E-Commerce and Development Report 2001" contain a chapter on online payments, which *inter alia* gives in detail the overview of Internet based payments, banking, e-trade finance and credit management.

Internet banking

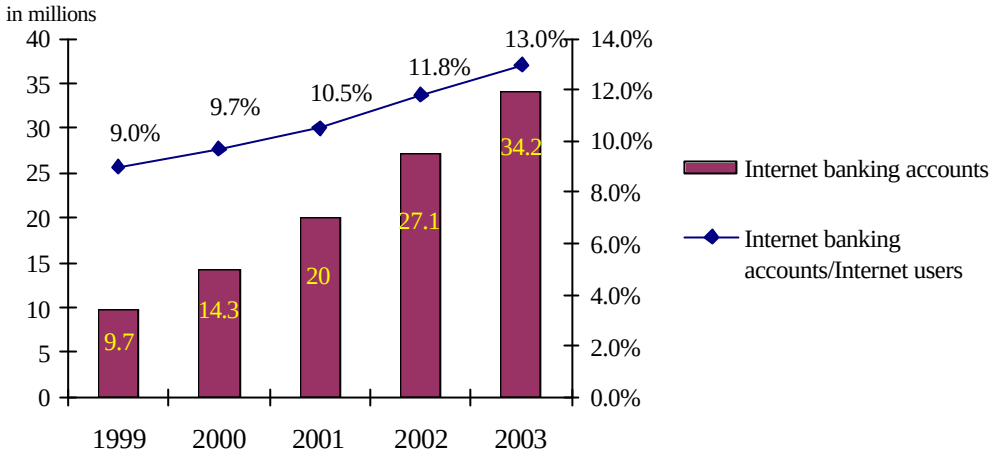
The Internet banking refers to the deployment over the Internet of retail and commercial banking services with individual and corporate clients including bank transfers, payments and settlements, documentary collections and credits, cards business and others.

Since its inception Internet banking has been experiencing a strong and sustained growth. According to Jupiter Media, Internet traffic for all US banks grew 77.6 percent between July 2000 and July 2001, compared with overall World Wide Web traffic growth of 19.8 percent for the same period. Datamonitor forecasts that between 2000 and 2003 the number of online bank accounts in Europe might grow annually by 34%. The number of online accounts would increase from 14.3 million in 2000 to 34.2 million in 2003. As a result the Internet banking user population will increase rapidly.

Internet banking operations represent currently between 5% and 10% of the total retail banking transactions volume both in the USA and in Europe. This is less than the share of Internet securities trading, estimated at between 20 and 25% of the total, but much more than overall business-to-consumer (B2C) e-commerce representing less than 2% of the total retail trade. Thus in France, the number of online banking accounts is growing at 75% per year and is forecast to reach 10 million by 2003.

Internet banking is becoming a driving force shaping the future of the banking industry. All banks, including those who remained cautious in the past, intend to offer access to its products and services via the Internet, which is seen as a major distribution and communication channel.

Graph 1
Growth of online banking in Europe



Source: Datamonitor

Dramatic change of perception

However, beyond the dynamic and steady growth, there has been a significant change in the early conventional wisdom as far as the future of Internet banking is concerned. In 1990s the expectations were that the Internet banking would destroy the traditional business model of retail banking and usher powerful newcomers from the outside of the banking industry. It was suggested that the formula of success laid with a pure play Internet banking venture, as opposed to the traditional banking systems and approaches.

The current status of Internet banking shows that a conventional wisdom proved to have been wrong. The traditional retail banking model has most certainly not been destroyed and no newcomer was able to penetrate durably and on a large scale the banking sector. Some of these newcomers, who had raised considerable funds, had to dramatically scale down their ambitions. Few of them may still succeed (for instance Egg in the UK) but apparently pure-play e-bank approach would have required considerably more time and resources to succeed, while its promoters might have needed deeper pockets and much more patience to persevere.

Click and mortar: dominant model

Today the entry barriers to Internet banking appear to be much higher for new entrants than it used to be during the first days of it. Those barriers are high because they are grounded in customer attitudes and the very nature of banking services and products. The traditional banks with a strong customer base have a major competitive advantage over newcomers. However, to maintain this advantage is not an obvious undertaking. The key to success is in keeping pace with technological change and sophistication, which allows a bank to understand the potential of Internet technologies and to integrate them into a coherent business strategy.

The prevailing view today is that Internet banking can only succeed if it is thoroughly integrated within the existing banking infrastructure, which should combine click and mortar. According to

this view, Internet is considered as another distribution channel, complementing physical branches, phone banking and ATM networks. The dominance of so called "click and mortar" model can be explained by its success on the ground. Thus two good examples of Internet banking, are Wells Fargo in the United States and Nordea in Scandinavia. They have adopted this model from the very beginning of the Internet era in banking. While Wells Fargo has actually the highest absolute number of online customers, more than 3 millions in April 2001 of the total of 24 million, Nordea, might claim the highest percentage of on-line customers, which at 2.3 million represent over 20% of the total. Both banks claiming substantial direct and indirect benefits from Internet banking are sharing following common elements:

- Both are leaders in their traditional markets and thus can capitalize on a sizeable customer base. Furthermore, this customer base is technologically sophisticated. California and Scandinavia have extremely high rates of Internet use.
- Both have tightly integrated Internet in their operations and their existing infrastructure.
- Both intend to "virtualize the bank", offering through Internet all products and services found in other channels
- Both are technologically advanced and started early in Internet deployment. Thus, Wells Fargo started online services in 1989 and was the first major US bank to launch an Internet service in 1995

While the competitive advantage of a large and sophisticated customer base and of an early start are not easy to replicate by other banks, the tight integration approach can become the part and the parcel of the Internet strategy also for other financial institutions.

Internet payments

Progress in the area of payments effected over the Internet has been far from being harmonious. Many attempts to introduce innovative mechanisms have failed, as did endeavours to introduce new standards. Yet, these initial setbacks have not discouraged innovations and new entrants. More importantly, the most important existing core payment networks, and in particular the Society for Worldwide Interbank Financial Telecommunications (SWIFT), which is a huge bank co-operative including 7,000 financial institutions from 190 countries, have begun to formulate and implement a strategy of migration to the Internet.

Retail payments: Road kills and hard slogs

A close relationship between e-commerce and e-payment systems has been taken for granted and many specialists believed that there could be no thriving e-commerce without robust, secure and standardized e-payment infrastructure. So they considered e-payments as a killer application.

Yet, the actual e-payment experience proved somewhat different. While electronic commerce, in both B2C and B2B (business-to-business) segments, has been growing more rapidly than the initial market forecasts, the Internet-based payment systems has experienced several setbacks. Many systems run into serious, sometimes fatal, difficulties. Thus, Digicash, a highly visible promoter of e-cash, after moving from Amsterdam to the Silicon Valley in April 1997, and acquiring substantial funding and prestigious investors had to be finally liquidated in September 1998. The early market

leader, Cybercash, had to change its strategy and top management several times and finally in early 2001 delisted itself from NASDAQ. A French venture called Cyber-comm was backed by the majority of French banks with a view to combine Internet and smart card technologies. However it was wound down in early 2001.

Micro-payments, which were also considered in the mid 1990s as a strong candidate for a killer application and a preferred mechanism for transactions for intangible goods (information, on-line entertainment and others), have so far didn't take off on an expected scale.

Broad standardization initiatives have also made little progress. JEPI (Joint Electronic Payment Initiative), despite strong support from CommerceNet and WorldWideWeb, was abandoned due to the lack of interest of business participants in this initiative. Another broad-based initiative, called SET (Secure Electronic Transactions) and supported by the credit card giants Visa and MasterCard, as well as such IT heavyweights as IBM and Microsoft, which sought to combine complex Internet encryption methods through the use of combination of softwares and Public Key Infrastructure (PKI), had to face significant problems of market acceptance by merchants, end customers and banks themselves. So, far there has been no universal or speedy adoption of the standard and Visa began to de-emphasize in favour of an alternative system.

Despite numerous attempts aimed at offering innovative alternatives, credit and debit cards and their existing payment network and procedures, are currently the main payment instruments for B2C transactions, used in over 95% of purchases. And yet, there is a broad recognition that card-based payments are not a panacea for e-commerce transactions. The current commission and interchange payments structure is deemed quite expensive by most e-tailers. Even the supposed beneficiaries of this situation, banks and payment networks, do not particularly like it, to the extent that any scheme where card is not physically present, increases the risk of fraud and conflicts. Thus, the card networks point out that Internet transactions represent a disproportionate percentage of charge-backs and fraud. In any case, card-based payments are not particularly well suited for either small-value (micropayments) or large-value payments. Whether the recently introduced smart cards combining the virtues of all cards and other e-banking characteristics (in a chip embedded in a card), will make cards suitable for micro and large value payments remains to be seen.

The main problem with the first generation of Internet payment initiatives is that they have not focused enough on their customers' behaviour and attitudes. As a result, most of these systems appeared as hasty solutions in a process of a search for more efficient and lasting solutions. They combine considerable technological sophistication with a degree of marketing and business naivety. They also suffer from technological overkill. New solutions also fell into the sort of a vicious circle: merchants will not offer e-payment schemes if few consumers use it, while consumers will not use e-payments if few merchants accept it.

Yet, despite the dismal track record of the first wave of B2C e-payment schemes, the development of Internet-based payment has not slowed down but actually broadened in scope. B2C payments continue to attract new entrants, be they cyber-entrepreneurs, backed by venture capital or well-known IT providers such as Microsoft or Yahoo. The range of proposed solutions is growing wider and currently include:

- Virtual points providers: e-centives.com, mypoints.com
- Person-to-person payments: PayPal, BillPoint, PayDirect, eCount.com,

- Virtual escrow: i-Escrow Inc., escrow.com, tradesafe.com
. Digital wallets: Yahoo Inc., Microsoft (Passport)
- Virtual credit cards: American Express, AIB, NextCard
- Electronic bill-payment and presentment: e-route, billserv.com, CheckFree (Transpoint)

Among new solutions, Paypal is of particular interest, to the extent that it uses Internet technologies to respond to emerging market requirements to facilitate person-to-person payments. This requirement arises for instance in the context of on-line auctions, where buyers and sellers need a sure, secure and cost-effective payment mechanism to settle their transactions. Thus, Paypal benefited from a close association with the leading cyber-auction operator, E-Bay (25% of E-Bay payments go through Paypal). A system such as Paypal can capitalize on viral marketing, as each user of Paypal encourages his friends and business acquaintances to open an account.

Paypal has been spectacularly successful. Created in early 2000, it claimed over 5 million users by early 2001 and more than 10 million in September with some 130,000 transactions, valued at USD 10 million, per day. The payment architecture of Paypal combines innovation (use of e-mail for payment notification and confirmation, account management), with integration into existing payment systems (Paypal relies on traditional banking accounts and card infrastructure for actual fund transfer). Paypal's income is derived primarily from the float on accounts it manages, complemented by fees charged to purchasing customers and service providers. This business model allows Paypal to undercut the traditional merchant acquirers, particularly for the small businesses. Paypal has expanded its operations to 35 countries and expects to turn cash-flow positive before the end of 2001. The company plans to go public within next 6 to 12 months.

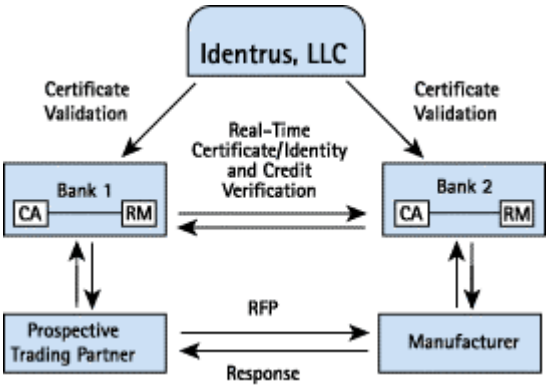
Wholesale banking initiatives: Identrus and SWIFTNet

However, the most significant aspect of the current dynamics of the e-finance is the clear change of attitude of the banking industry, from reactive to proactive. Several initiatives aiming at introducing Internet technologies into the core payment infrastructure were launched in the last two years. The two most significant are Identrus and SWIFTNet.

Identrus, is a US-based organization created in early 1999 and owned by 42 global financial institutions, which act as Identrus Certificate Authorities for corporate customers in more than 133 countries. Identrus seeks to create a global trust infrastructure, based on PKI, enabling business-to-business (B2B) commerce among all companies, which are using this infrastructure. Identrus network will link in a structured and hierarchical way various security and certification systems created by its member banks. Identrus itself will operate a root certificate authority (root CA), an entity at the pinnacle of the electronic identity hierarchy. Identrus' legal and technical infrastructure is based on a set of uniform system rules, contracts and business practices for comprehensive trust and risk management.

In December 2000, four major banks, ABN AMRO Bank, Bank of America, Deutsche Bank and HypoVereinsbank, went live with Identrus and deployed trust-enabled B2B applications.

Graph 2
The Identrus scheme



From the standpoint of the global payment infrastructure, the December 2000 decision of SWIFT to migrate to a new IP-based network, SWIFTNET, represents a major milestone. SWIFT network is a core element of the global payment infrastructure. In Europe, SWIFT has co-operated with central banks to support their real time gross settlement systems, serving as a common messaging service for the majority of high value payment systems in the Euro zone. SWIFT provides the infrastructure for TARGET system. Its role in market infrastructures is also expanding, as it is becoming messaging hub for clearing and settlement systems in securities (Global Straight Through Processing) and foreign exchange trading (CLS bank).

It is expected that SWIFTNET will combine IP standards with highly secure, high performance network, owned and operated by SWIFT, in close co-operation with a specialized telecom operator, Global Crossing. The principal SWIFT application, FIN, will migrate to SWIFTNET before the end of 2004. It is anticipated that SWIFTNET will offer a wide range of other services, including information, security, payments, etc. The fully range of e-services to be delivered over SWIFTNet has yet to be fully announced.

In September 2000, Identrus has announced a strategic alliance with SWIFT. Introduction of IP standards will allow SWIFT members and users to have single interfaces to various infrastructures and services. SWIFTNET's ambition is clearly to become the infrastructure of choice for new generation of Internet technologies-based payment systems and related services.

From closed to open architecture

Payment systems, particularly the wholesale systems used for transactions among financial institutions have been moving to an electronic infrastructure since the beginning of the 1970s. The electronic payment systems and networks were based on proprietary protocols and dedicated telecommunication infrastructure.

The Internet radically changes this situation. It is an *open network infrastructure*, involving direct non-hierarchical links between the buyer, the vendor and any intermediaries between them and the technology providers. The Internet model dissociates the network from the physical infrastructure.

It allows interconnection between heterogeneous networks and provides ubiquitous common standards, whose development is no longer controlled by a single entity or even a group of entities. Furthermore, with encryption technology, digital certificates and smart cards, it is now possible to provide security in a modular and flexible fashion. Thus a highly secure environment can be created on the public networks.

In other words the introduction of Internet entails a radical value shift.

Graph 3
Internet payments: Radical value shift

Traditional payment service providers	Internet
Closed network	Open network
Private infrastructure	Public infrastructure
Mono-industry	Cross-industry

This view of a radical value shift is not necessarily universally shared. For many payment systems, use of IP standards and protocols does not entail a radical change in their business practices and their governance. It remains to be seen whether the full advantages of Internet architecture can be gained without fully accepting the open network model.

Electronic trade finance systems

Designed to facilitate movement of goods and services, trade finance systems rely on complex flows of complicated documents, traditionally paper-based, which makes it slow, costly and error-prone. The United Nations estimates that US$460 billion is spent annually on processing the paperwork associated with international trade.

For several years, various participants in international trade have sought to simplify the flows and migrate from paper-based to electronic documents. These were laborious and often frustrating efforts due to the difficulties of defining common standards.

The advent of Internet technologies has a potential to significantly accelerate the evolution toward fully electronic trade finance. Its impact can be seen both in already established and recently created trade facilitation services.

Bolero

Bolero International Ltd. was created in April 1998 as a joint venture of SWIFT and the Through Transport Club (TT Club), representing the world logistics and transport industry (with some 10,000 members). In Fall 2000, Bolero obtained venture capital funding of USD 50 million, from a consortium led by Apax Partners.

Bolero is intended as a platform for the secure electronic transfer of commercial trade documentation and data worldwide via the Internet. The platform went live in October in September 1999, using SWIFT messaging service and was renamed bolero.net.

Bolero acts as a neutral third party to ensure highly secure electronic delivery and receipt of the information along the entire trade chain from front-end order processing and management, through to back-office trade document exchange and payment. In addition to a common technology platform, bolero.net provides an unified legal structure that binds together all parties involved in international trade (importers, exporters, shipping agents, freight forwarders, customs and international banks). After extensive consultation with the industry, Bolero issued a Rule Book, which allows any dispute to be resolved in the same way it would be with paper documentation. Signing up to the Rule Book is a pre-condition to using Bolero. Combining technological platform and a legal framework is its distinct feature. Customers, such as Sanwa Bank or Otto Versand, have estimated that through bolero.net processing time for trade documents could be cut from 15 days to 2 days and overall costs reduced by 30 to 50%.

At present, Bolero operates over the SWIFT network. It is planned as one of the first services to migrate to SWIFTNet. In order to demonstrate its commitment to Internet technologies and their tangible benefits, Bolero and its users have developed BoleroXML, a set of specifications which describe the standard structure and contents of the electronic version of a common trade document such as Commercial Invoice, Bill of Lading and Packing List. Bolero is committed to providing an open solution that runs over the Internet and made available interface specifications. So far, over 30 companies, including Sun Microsystems AMS, Mercator, Neon, China Systems, Midas Kapiti and Surecomp, have become bolero.net partners. Major customers themselves can develop their own interfaces to connect to the Bolero System.

TradeCard

TradeCard is an example of a successful Internet-based start-up proposing an online substitute to a traditional bank based letter of credit (L/C).It proposes itself as trust building platform for the process of online negotiations on trade transaction and the related payment through the Tradecard substitute for L/C. It was launched in 1997, with a venture capital funding of Warburg Pincus (total investment reached USD 70 millions through September 2001), and went live on the web in 2000.

TradeCard focuses on what is often considered a critical bottleneck in international trade transactions: lack of inexpensive and efficient system for crossborder trade payment settlement. In March 2001, TradeCard introduced an automated, collaborative, global trade settlement platform which claims to streamline and automate the processing of virtually any payment transaction, whether it is domestic or cross-border, guaranteed or open account, large or small. Headquartered in New York, with offices in San Francisco, Seattle, Chicago, Hong Kong, Taipei, Seoul and London, TradeCard processed $10 million in trades from November 1999 through January 2001. The firm's monthly trade volumes are increasing by 50–100%. Between January and September 2001, the number of clients increased from 130 to 600 companies.

Initially the banks were reluctant to accept the new competitor. But currently TradeCard works with a dozen international banks and has entered into strategic partnerships with Coface as payment insurer, Marsh, the largest broker of cargo insurance, MasterCard and Thomas Cooks, as well as with

Cap Gemini Ernst & Young to provide financial supply chain tools to CGE&Y clients and prospects.

Other companies active in facilitating crossborder trade payments via the Internet include CCEWeb, Actrade, FinancialOxygen, Qiva, Clear-Cross and Xign Corp.

E-Forfaiting marketplaces: the cases of ITFex and LTPTrade

These two companies, one based in New York (ITFex), one in London (LTPTrade), are B2B exchanges, created in 2000, seeking to create an Internet-based secondary market for international trade finance instruments such as forfaiting bills, bankers acceptances or shipping guarantees.

At present, this is an extremely fragmented and illiquid market, with an annual trading volume estimated at US 75 Billion in 2000 (less than 3% of relevant outstanding assets). Celent Communication estimates that Internet technologies will stimulate the emergence of an electronic trade finance instruments markets, whose value by 2005 should reach over USD 700 billion or 20% of the total. At the same time, Celent recognizes that the growth of electronic trade finance market will be slower than that of e-markets for other instruments such as bonds or equities. This is due not only to the disparate nature of trade finance instruments (even if the on-going standardization efforts will reduce this disparity) but also to the lack of established automated trading mechanisms, such as matching, and of pricing benchmarks.

It is too early to judge the prospects of IFTex and LTPTrade. Their development plans were adversely affected by the general slowdown in the B2B commerce. Both exchanges are now operational. In September 2001, LTPTrade has launched the new release of its trade finance dealing and information platform. Key features of the new platform include improved offering and dealing functionality, as well as expanded research and information resources. That month, there were 629 members signed up to the LTPtrade.net platform from 125 financial institutions in 29 different countries. No data are available on the actual trading volume.

Headquartered in New York, with offices in Chicago and Miami, and representatives in Brazil, Peru and Argentina, ITFex had, as of August 2001, about 400 registered users, most of which are commercial banks, importers and exporters. The completed deal volume was estimated at USD 20 million.

Credit information and management systems

Risk management is a critical dimension of any financial system. In order to safely execute their credit or payment transactions, financial intermediaries need to know the counterparties to these transactions and their credit and payment track records. This need is particularly important for SMEs, whose development is often hampered by a perceived lack of creditworthiness, due to the absence of reliable data and information.

While banks have their own risk management and credit assessment units, they also rely on specialized services, which provide credit information and assessment data, as well as ways and means, such as credit risk insurance, to reduce the credit and transaction risks. Among best known of these services are Dun & Bradstreet, Coface and Equifax.

Internet makes the credit risk information and management tasks simultaneously easier and more complex. By reducing the cost of information and standardizing data formats, it makes it easier to gather and disseminate the credit information. It also facilitates integration of information and transaction. At the same time, Internet expands considerably the number of potential counterparties and the range of transactions. Businesses active online are also faced with thousands of new buyers and sellers that they know nothing about. And they need to make their creditworthiness assessment quickly and keep it current.

While the on-line credit information gap is glaring, it is not easy to fill. Required skills are highly specialized and cannot be acquired overnight. Prior experience and accumulated historical data are essential. Barriers to entry are high. Not surprisingly, this segment continues to be dominated by the existing narrow group of suppliers, each of which has adopted an aggressive Internet strategy. These strategies have common elements, with all suppliers making their existing data available via the Internet, but they also show significant differences. Also, alternative approaches to credit information assessment, using innovative technologies, are emerging. However, those approaches are being adopted and deployed by the existing suppliers rather than by new entrants.

Dun and Bradstreet

Dun & Bradstreet (D&B) is probably the oldest existing provider of business information (since 1841). The D&B D-U-N-S Number, the Data Universal Numbering System, has become the standard for keeping track of millions of businesses in the USA as well as worldwide. It provides unique identifiers of single business entities, while linking corporate family structures together. D&B links the D&B D-U-N-S Numbers of parents, subsidiaries, headquarters and branches on more than 62 million corporate family members in 120 countries. Used by the world's most influential standards-setting organizations, it is recognized, recommended and/or required by more than 50 global, industry and trade associations, including the United Nations, the U.S. Federal Government, the Australian Government and the European Commission.

D&B has developed and is implementing a comprehensive Internet strategy. In 2000, its Web-related revenues were USD 240 million, twice that of the 1999 and some 17% of the total revenues. The stated objective is for the Interned-based services to generate the majority of current revenues by 2002. To achieve this objective, D&B announced in May 2001, the D&B Global Access Toolkit, which significantly expands D&B online global data delivery capabilities. D&B also seeks to become an important player in B2B e-commerce. To achieve this goal, the company entered into strategic partnerships with Oracle, Siebel Systems, SAP and other B2B players to integrate D&B products into their offerings.

For instance, in August 2001, VeriSign, Inc., the leading provider of Internet trust services and domain name registration services, and Dun & Bradstreet announced an agreement, under which e-businesses applying for the VeriSign's Shared Hosting Security service will automatically be authenticated by Dun & Bradstreet using the company's global database.

In May 2001, Dun & Bradstreet and Intuit Inc., a leader in small business financial management solutions, announced a strategic initiative to offer small businesses a new suite of Web-based D&B business services. The agreement will bring D&B's information and customized technology solutions to a new and virtually untapped small business market and will provide QuickBooks® small

business customers with information and tools that can help them make better, more informed business decisions.

Beyond strategic partnerships, D&B has also invested directly in leading edge Internet companies, developing technologies and products of potential interest to D&B. One such a company is Open Ratings. Based in Boston, Open Ratings offers a comprehensive supplier performance management solution for the Global 3000 buyers, Buyer Insight™ Enterprise. The solution, a co-developed by Open Ratings and Dun & Bradstreet, equips buyers with sophisticated patent-pending technology, developed by Pattie Maes, MIT Professor, and her colleagues, to provide predictive performance ratings and business information about over 15 million suppliers throughout North America. Buyer Insight Enterprise helps buyers more effectively select, evaluate and monitor suppliers by going beyond extrapolative decisions from historical performance to truly forecasting future performance. To do so, Open Ratings technology uses various information sources including quantitative transaction and contract compliance data, qualitative buyer feedback, and other third-party sources of operating and financial information including business and operating history information from D&B's global database.

Coface and @rating

The Coface Group, headquartered in Paris, is the world leader in export credit insurance and it operates in 93 countries on five continents. Coface offers an integrated range of guarantees, including credit insurance, guarantee insurance, exchange risk cover and fidelity insurance, to its client companies throughout their international expansion. It also provides receivables management and credit information services. In order to allow its clients to analyse and monitor the financial position of their trading partners throughout the world, Coface has developed a Common Risk System, an online database containing information on 35 million companies worldwide.

In December 1999, Coface launched a Web-based rating system, @rating, allowing companies to insure trade debt throughout the world. The @rating system uses the data from the Common Risk System to develop a simple and easily accessible credit rating system, which allows any company to:

- Check a trading partner's reliability online
- Apply for an @rating Quality Label online
- Protect transactions online
- Check payment experience online

@rating provides a method of assessing trade debts of less than 6 months duration for the amount between 1,000 – 100,000 Euros, (representing the range of most e-commerce transactions). It offers a simple means for the trading partners to protect themselves from the risk of default and to set customer credit limits, based on constantly updated information. For the first time, ratings are generated by an agency with over 50 years experience in actually insuring the risks it is rating. Groupe Coface and its partners in Credit Alliance will be ready to back the rating with a guarantee of payment, using credit insurance policies.

To complete its risk monitoring capability, Coface expanded @ratings to cover country risks (data on 140 countries are provided and regularly updated). All Coface group products now incorporate

the @rating Solution. Since its launch, some 350 partners (banks, factors, electronic marketplaces, Chambers of Commerce, etc.) have integrated the @rating Solution in their service offering.

Equifax

Building on its core business of credit reporting, Equifax has developed a range of diversified services including transaction processing, direct marketing, customer relationship management and e-commerce security solutions. Enabling and securing global commerce is the principal objective of the company. In July 2001, Equifax spun off its Payment Services into a separate company, Certegy.

The principal asset of Equifax is the world's largest repository of consumer credit information and unparalleled consumer lifestyle and demographic databases. Information Services' operations span the United States, Canada, the United Kingdom, Spain, Portugal, Italy, Chile, Brazil, Argentina, Peru, Costa Rica and El Salvador. Its credit reporting services offer data on more than 400 million consumers and businesses.

In January 2001, Equifax launched a new service – The Small Business Financial Exchange. Managed by Equifax, the Exchange brings together initially 15 of the largest U.S. small-business lenders – such as Bank of America, Bank One and Wells Fargo – to report and maintain comprehensive trade data on small businesses. This is the first and only source of aggregated risk and exposure information on the estimated 25 million small businesses in the United States. The Exchange will enhance lenders' ability to make small business credit decisions and facilitate financing needs for this important segment of our economy. The Small Business Financial Exchange went live in August 2001.

Equifax Internet strategy is structured around three major axes:

- To facilitate direct and secure access of consumers to information about them and to preserve the privacy of this information in the online world
- To develop Equifax Secure products, which identify and authenticate participants in online transactions, in order to make the Internet safe and secure for commercial transactions. Customers of Equifax Secure include Checkfree and SunTrust. Strategic alliances were formed with VeriSign, Paymentech and PricewaterhouseCoopers.
- Equifax ePORT initiative capitalizes on the benefits of Internet technology to lower costs, speed delivery and increase product penetration for the existing credit information services. Since Equifax ePORT was introduced in the second quarter of 2000, active users have grown to more than 24,000 customers.

In 2000, Equifax provided over the Internet more than 100,000 consumer credit profiles and more than 190,000 consumer authentications per month.

1.3.E-finance in developing countries

Internet is a global phenomenon and so is e-finance. Its deployment is not limited to developed countries. World Bank has carried out in 2000 and 2001 a number of studies on e-finance in emerging markets (World Bank 2000,2001). Admittedly, these studies were based on fragmentary and incomplete data. Nevertheless they clearly demonstrate the dynamism of e-finance in developing and transitional countries, with countries such as Brazil, South Korea or India, experiencing strong

growth in e-banking and/or e-broking. At the same time, there are significant differences not only among regions but also among countries within the same region. It is interesting to note that to a large extent, while initial impulse has been often provided by foreign institution (Deutsche Bank launched the very first Internet banking project in Latin America in 1996 and Citibank has developed a special "e-toolkit" across all its branches worldwide.), local financial institutions have now successfully taken the relay. In many cases, e-finance initiatives were launched by entrepreneurs, who have acquired financial and/or technology experience in developed countries.

Dynamics of e-finance in emerging economies, while not dissimilar are clearly not identical to that in the developed countries. It appears by and large to be driven on the one hand, by Internet banking, and, on other hand by trade finance. Activity in financial markets is very limited, although in some countries such as Korea or Mexico, on-line brokerage services appear to be rather well-developed. On the other hand, some e-financial services appear specifically tailored to the developing and transition economies. This is the case of micro-finance, which will be discussed in the section on SMEs' specific services.

In the remaining part of this section, we shall take a quick look at selected activities in Internet banking and trade finance in the developing economies.

Internet banking

According to World Bank survey, the average online banking penetration for developing countries by the end of 1999 was close in 5% (World Bank 2001). For some countries, the penetration is considerably higher and growing rapidly.

In Brazil, for instance, about 8% of the banking customers use online banking and according to the Yankee Group, this percentage should reach 15% by the end of 2001. According to July 2001 report by Pyramid Research, Brazilian banks have been investing heavily in e-banking services and rapidly developing their online client base (Pyramid Research 2001). Today, the majority of the top Brazilian banks offer advanced e-banking services, and many are also offering online banking via mobile phones. Banco do Brasil, invested nearly USD 28 million in 2000, and expects to double this investment in 2001. The results are particularly encouraging: the increase in online transactions reached 315% in 2000 from 22.4 million to 92.8 million. In March 2001, Banco do Brasil had 12.8 million clients, 2.6 millions of them using e-banking. All the other large Brazilian banks also experience the growth trend. Bradesco, Brazil's largest private bank, adds between 4000 and 5000 clients per day to its e-banking service and with 3 million on-line clients in August 2001 (27% of the total) is the world's third largest Internet bank.

Internet banking also met with considerable success in Korea, where the number of online users have increased from 120 000 in 1999, to 4 million in 2000 and 7.5 million in June 2001. Between June 2000 and June 2001, the number of Internet banking transactions surged 600% to reach 75 million. Korea is also a global leader in on-line brokerage (with a penetration higher than in the United States) and in mobile banking.

In India, over 50 banks offer on-line services. The largest private bank, ICICI, has multiplied by four its online banking users, who represent over 15% of the total.

In South-East Asia Internet banking is also developing rapidly in Thailand, Malaysia, Singapore, and to a lesser extent in Philippines.

E-trade finance

Emerging markets are expected to continue to be the main growth engine for the trade finance sector. Last year, trade finance flows between the U.S. and Western Europe diminished. But by contrast, in Eastern Europe, Latin America and Asia, the activity grew by 15%.

The total volume of letters of credit (L/C) received by all Latin American exporters in 1999 should reach USD 87bn, in addition to the USD 29bn in documentary collections. Of this total, only USD 30bn will come from Latin America's trade with the rest of the world (USA included). Intra-regional trade is often made up of mid-large size companies who lack open-account trade tools and rely on old-fashioned L/C.

This creates an opportunity for financial institutions seeking to offer electronic trade finance services. Banks such as Bradesco in Brazil or Banamex in Mexico seek to develop on-line wire transfers, on-line initiation of letters of credit, on-line inquiry status or on-line purchase for exchange. 65% of Mexican companies surveyed use at least one of the above mentioned products, and more than half of the Mercosur companies turn to high tech trade finance tools. Argentina leads Mercosur in the proportion of companies using technology products (58%), but Brazilian companies use them more extensively than those of other Mercosur countries - 2.8 products on average per company in Brazil versus 1.7 products on average per company in other countries. Brazil has also one of the most sophisticated local credit information systems dominated by a company called Serasa created by Brazilian banks and having and extensive database on the financials and payment records of the Brazilian companies.

However, local banks, as large as they may be in their country, suffer from the lack of global coverage. This explains their interest in global initiatives such as TradeCard and Bolero. Global banks such as Citibank, JP Morgan Chase or ABN Amro are of course very active in this area and offer not only competitive pricing on trade financing products but also access to their networks and platforms. And when they cannot beat their local competitors, they co-opt them. In July 2001, Citibank bought Banamex for USD 12.5 billion.

In other parts of the world, e-finance trade initiatives are still in their early stages. In India for instance, Exim Bank, Germany-based West LB and IFC (World Bank affiliate) have created in March 2001 a joint venture, Global Trade Finance (GTF) Pvt Ltd, to offer factoring and forfaiting services to Indian exporters. West LB has a 40-per cent stake in the venture, while Exim Bank has 35 per cent and IFC 25 per cent. In addition, the company has foreign currency lines of credit from both West LB and IFC, as well as a rupee line of credit from Exim Bank. GTF was set to begin operations in Fall 2001. One of its objective was to allow exporters to initiate their transaction on-line.

A more ambitious project, Global Trade Finance Network (GTFNet) seeks to facilitate the finance of trade debt receivables generated, primarily, from emerging markets, their acquisition and distribution worldwide. It is defined as a cross-territory extranet-based "business to business" network, with headquarters in Singapore and hubs in the UK, Middle East and the Americas. Founded by

Tara Kimbrell Cole and sponsored by prestigious board, chaired by ex-CEO of Standard Chartered Bank, GTFNet is not as yet operational.

1.4.Lessons from e-finance experiences

E-finance: it is only the beginning

The above overview of e-finance, while far from comprehensive, clearly demonstrates the breadth and the depth of e-finance development. The dot-com crash and the difficulties of B2B marketplace development over the last two years may have changed the public perception of the Internet (and market valuation of many Internet companies) and slowed somewhat the speed of its deployment but they have not changed the fundamental momentum of e-finance. In few years time the distinction between finance and e-finance will become somewhat elusive as all financial technology, from user interface through middleware to the core applications and networks will probably become Internet-enabled and Internet-based.

Yet, the process of evolution toward e-finance is still in its early stage. For one thing, Internet technology will continue to evolve toward larger bandwidth, fixed-wireless convergence and terminal access independence.

Four common misconceptions

Yet, beyond the technology, it is essential to understand the business dynamics of e-finance. On this score, it appears that there are four common misconceptions about e-finance, which help to explain some serious strategic errors, committed frequently by overenthusiastic promoters of e-finance.

Cost reduction potential

There is no doubt that Internet has a potential to reduce financial transaction costs. However, the cost reduction potential has often been exaggerated or misinterpreted. Cost dynamics of e-finance are quite complex. For one thing, in order to achieve the full potential of cost reduction, it is important a create a fully automated system, capable of straight-through processing. Such system may require heavy investments in computing power, network building and programming capability. Furthermore, the costs of migration from legacy to Internet-based architecture are often very high. For that reason, many e-finance enthusiasts favoured a pure play model, creating an Internet bank from the scratch. The underlying assumption was that the newcomers had a crucial cost advantage. However, this assumption proved false. Whatever cost advantage newcomers may have achieved via technology, it was decisively undermined by the need for heavy client acquisition spending. Furthermore, while technology cost savings were often hypothetical, marketing costs were actual expenditures, amounting to between USD 150 and 300 per actual customer. While such costs could be justified in on-line broking (and as a result some newcomers , such as E-trade or Ameritrade managed to gain sizeable market share), this was not the case for Internet banking. Internet did not invalidate the basic marketing rule that the cost of selling a new product to an existing customer is 10% of the cost of selling to new customer. A large part of Internet costs remains at the first glance invisible but it is still there (GEF, Internet banking Issues paper, 2001).

Ease of implementation

A related fallacy was one of the ease of implementation. While it is cheap and quick to create a basic Web site, to design and implement a fully functional, industrial-strength application capable of accommodating in a secure manner a large number of complex transactions and huge variation in volume is a complex and protracted undertaking. In addition, there is limited prior experience to draw on and the necessary skills and know-how are still scarce. Thus, potential for specification creep and cost overrun is as large in Internet as it is in the traditional IT environment. This was vividly demonstrated by Vontobel bank in Switzerland, which in Spring 2001 announced a loss exceeding 120 million euros, due entirely to an overly ambitious Internet banking project .

Revolutionary impact

Until 2000 it was commonly thought that e-business would revolutionize the financial industry and destroy the incumbent "dinosaurs." Yet, the evolution of e-finance clearly demonstrates (with a possible exception of on-line brokerage), the advantages of established financial services suppliers, be they banking, transaction processing or information, as long they have the capacity to evolve and to embrace the new approaches and technologies. The dominant business model today is that of a "click and mortar" and the best chance for an innovation to succeed is to be adopted by the leading players. This does not mean that the financial services will not change, as they have been doing for the last decades. Rather the change will be more gradual and would probably take place mainly inside the established systems and structures.

Disintermediation

Contrary to some high-profile pronouncements, the Internet economy is not frictionless. Actually, with a dramatic increase in the number of transactions and expansion of the universe of potential relationships, the overall level of friction is likely to increase. The abundance of information, opportunities and relationships increases the need for new intermediation structures and mechanisms. The challenge to the financial institutions and financial services providers is not the disintermediation but the changing nature of intermediation. Thus, the emergence of e-finance has stimulated the emergence of the new categories of intermediaries such as financial portals, transaction aggregators, financial applications services providers, etc.

Looking at the leapfrogging argument

Many experts raise the issue of leapfrogging, affording countries with underdeveloped financial systems possibility to jump ahead. The arguments developed above suggest that while possibilities for leapfrogging exist, it is not certain they are widespread. Countries with weak financial systems also often suffer from the absence of technological infrastructure and associated skills, which make creation of a vibrant e-finance system quite arduous. To build a cyberfinance offer from scratch requires the mobilization of high-level skills in the financial, telecom and IT sectors, which many developing countries don't have and can not develop without external support. Examples of countries like Korea or Estonia, which have attained the e-finance sophistication, comparable to that of most advanced OECD countries are not easily replicable. Furthermore, even more advanced emerging economies, have to implement a dearth of improvements in critical systems and applications such as trade finance hubs or financial markets in order to achieve the required level of competitiveness.

Nevertheless, it is true that e-finance offers for the opportunities for quicker deployment and better coverage than the traditional approaches to financial systems development.

E-finance impact

While dynamics of e-finance do not entail a sudden upheaval, they will lead to profound and durable transformation of financial services. They will broaden the access, not only in terms of a number of potential users but also in time and in space: from anywhere on the planet, 24 hours a day, seven days a week. E-finance will enhance the information and technology content of financial services and thus further blur boundaries between finance and technology, information and transaction, as well as between financial institutions and technology providers. Among others this evolution raises substantive regulatory issues.

2. E-SME INITIATIVES AND THEIR FUNDING

2.1.E-SMEs experiences in developed countries

Public sector initiatives

Global Marketplace for SMEs

The vast opportunities and low costs of Internet made it appear as an ideal vector for the promotion of SMEs, in particular by reducing their lack of access to markets and market information. It is therefore not surprising that one of the priority pilot projects within the G-8 Information Society program launched in 1995 was a global marketplace for SMEs. This was one of very first public initiative in international e-commerce. The project was structured around three major themes:

Theme 1: Global Information Network for SMEs
Theme 2: SME Requirements - Legal, Institutional and Technical
Theme 3: International Testbeds for Electronic Commerce

Despite strong support from G8 governments and the European Commission, which provided substantial funding, the results of the project were rather disappointing, particularly concerning the launch and the follow-up of international testbeds. One explanation for the difficulties was the overlaps between global, regional and national initiatives. Nearly all governments in OECD countries have tried to promote their SMEs, by sponsoring specific e-commerce and e-finance initiatives and platforms. These efforts have not always been well-coordinated. Furthermore, the respective role of public authorities and private sectors bodies were not always well-defined. Thus it was not clear whether the e-commerce support should be channeled via existing trade associations such as chambers of commerce or through the new bodies dedicated to e-commerce. Furthermore, there were substantive differences concerning for instance the definition of SMEs or the distinctions between B2B and B2C domains.

At present, public authorities efforts to support e-commerce for SMEs appear to focus on two type of services:

- SME-specific information networks
- Investor networks

E-commerce information networks

Over the last few years, several organizations were created both within national, regional and global framework to promote e-commerce. These organizations include:

- CommerceNet, a US based global partnership with affiliations in countries such as Finland, Spain, Italy, Netherland, Japan and Korea.
- Electronic Commerce Association in the UK
- Electronic Commerce Europe
- The U.S. Business Advisor
- French Association for Electronic Commerce (AFCEE)
- Japanese Electronic Commerce Association

These organizations are quite heterogeneous, they differ considerably in their objectives, governance, funding and results. Some of them specifically address requirements of SMEs, others do not. At present, there is no overall coordination between those various organisations. Neither the Global Information Network for SMEs nor the European Observatory for SMEs, created in 1992 appear able to create a network of network of e-commerce information for SMEs.

Investors network for SMEs

One of the toughest challenges for a beginning entrepreneur is to find money to start a business. It is a misconception to think that a seed capital in provided by venture capitalists. Before managing to get capital from a venture fund and afterwards maybe from the commercial banks or institutional investors, the entrepreneur starting an SME have to invest it's own savings or those at his disposal from relatives and friends. Another category of initial investors include so called 'business angels," i.e. private individuals willing to invest their money and their skills into a business they believe in. Internet is a very convenient tool to find a business angel and also to build a network linking entrepreneurs and investors. Business angels networks can mobilize substantial pools of informal venture capital that were formerly fragmented and invisible, stimulate demand for equity finance that would otherwise have been latent, and facilitate investments by creating communication channels between investors and entrepreneurs. The European Commission has supported setting up of such networks. For instance, it provided funding for the European Business Angels Network (EBAN). EBAN is a non profit association aimed at:

- Encouraging the exchange of experience among business angels networks and encouraging " best practice "
- Promoting recognition of business angels networks
- Contributing to programs of assistance to the creation and development of a positive environment for business angels activities.

It brings together national business angels networks from five countries (Germany, Italy, Netherlands, Finland and the UK). Data on the network activity is limited. In the UK, total investment achieved in 1995/96 through all UK business angel networks was GBP6.8 million (10.2 million euros) in 117 investments. Average investment was GBP50,000 (75,000 euros) in each business. According to EBAN the number of active investors in Europe is estimated at 125.000 and the number of potential investors at 1.000.000. Their investment capacity is between 10 and 20 billion euros.

Go-online EU initiative

In March 2001, European Commission has published a plan to help European SMEs to "go digital. " The plan is structured around three action lines (create a favourable environment for electronic business and entrepreneurship, accelerate the take up of e-business and improve ICT skills), leading to 11 actions, which include provision of loan guarantee facility to the SMEs and promoting electronic business interoperability.

USA Department of Commerce Export Finance Matchmaker Initiative

Since late 1990 the USA SME exporters had at their disposal a comprehensive online database built up by the USA Department of Commerce Trade Administration giving to the exporters seeking export or pre-export finance possibilities to enter with their details into the database and then request and receive several competitive proposals on export financing from mainly US banks and other financial institutions. This type of databases became actually important facilitators and it was considered appropriate that government agency would develop and made available to the SMEs this online tool of access to trade finance.

Private initiatives

Private sectors efforts seek to facilitate access of SMEs to business opportunities, to electronic markets and to sources of their funding.

Business portals

Portals specially designed for SMEs offer cheap and convenient answers to the variety of small business needs. The challenge is to maintain a range of services both easy to find and effective. Many banks have launched SMEs oriented business portals in order to ensure customer loyalty and create a basis for Internet-based banking services for SMEs. This is the case for Royal Bank of Scotland and Barclays in the UK.

B2B marketplaces for SMEs

Despite its recent slowdown, most analysts expect B2B e-commerce market to grow substantially in the coming years. The Gartner Group forecasts that the worldwide B2B e-commerce market will reach USD7.3 trillion by 2004. Most B2B initiatives have focused on so-called big-ticket deals among large enterprises. Furthermore, many SMEs see the B2B markets as a way for large buyers to put additional pressure on suppliers to lower their prices. Yet, at the same, they can see the advantage of broader access and exposure. Efforts to involve more actively SMEs in the B2B markets take two forms: to adapt large exchanges to the specific needs of the SMEs and to develop specific exchanges for SMEs.

The General Electric Exchange Services

An example of the first approach is shown by GE. Its e-business marketplace, GE Global Exchange Services' (GXS), operates one of the largest B2B e-commerce networks in the world, with more than 100,000 trading partners. The network's 1 billion annual transactions account for $1 trillion in goods and services. In late 2000, GXS announced that by mid-2001, it will open its access to SMEs. In August 2001, GXS launched a new service, Express Marketpace, that lets companies of any size, industry or location, begin immediate and low-cost supply chain collaboration, from selection through settlement, using only a Web browser.

AllBusiness

AllBusiness is a provider of online resources for the 22 million small- and medium-size businesses in the United States. It has been created as a result of the merger between AllBusiness.com, a small

business resource site, and Bigvine.com, Inc., a B-to-B barter site. The company is privately held and is backed by leading investors including Kleiner, Perkins, Caufield & Byers; American Express; Kohlberg Kravis Roberts & Co.; and NBC Internet Inc. The site provides content and publishing services, covering sales and marketing, technology and e-commerce, and human resources activities. The company also provides an online commerce platform for barter, including professional services, office supplies and equipment, and travel.

Mondus

Mondus, created in the UK in 1999, is dedicated to the satisfaction of procurement needs of European SMEs, both buyers and sellers. It offers data on office supplies and ICT products, on a broad range of business services (finance, legal advice, web design). This type of service allows SMEs to directly compare prices and obtain goods at the best price, also allowing buyers to launch tender offers on the site. It is also a leverage for selling companies. In September 2000, Mondus reached 170 000 users of its services. Its funding, provided by Italian business directory publisher, SEAT Pagina, reached in USD 150 million in August 2000. With a staff of over 120, Mondus operates in the UK, France, Germany and Italy.

PurchasePro

From its inception in 1996, PurchasePro, targeted small and medium size business, which represent over 90% of the US business population. Headquartered in Las Vegas, PurchasePro has initially focused intially on the hospitability industry, before expanding its market coverage to office supplies and other intermediate goods. PurchasePro operates the Global Marketplace interconnecting more than 140,000 businesses and provides a highly scalable, hosted software powering hundreds of private and public marketplaces. However the financial troubles of the company causes doubts over its long-term survival.

The Venture Site

The UK based Venture Site is a not-for profit matchmaking service for small companies seeking equity finance and "business angel" investors. For SMEs, the site allows anonymous advertising for venture capital needs and access to a large database of potential investors.

Investors can anonymously advertise their availability on the venture capital market, search the database and become involved as a manager or consultant.

2.2.E-SMEs experiences in developing and transition economies

Overview of selected experiences

E-Business and e-finance arrangements and offers aimed at SMEs are also proliferating in and for developing and transition economies. They include global, regional and local business portals and business hubs, electronic marketplaces, private equity investments, SME financing and microfinance.

Business portals, offering useful information at a reasonable cost without any geographical restrictions, have been recognized very early as an essential element of e-commerce strategy geared toward SME. And the pioneer in this endeavour was UNCTAD launching it's Global Trade Point Network (GTPNet) as early as in 1994. Its premise was that Internet made accessible trade opportunities to everyone around the world, regardless of geographical location, technology and infrastructure availability or economic status. Its specific objective was to develop a global network of local portals, called Trade Points, offering trade information services, company databases and trade leads. Their content would generate Electronic Trade Opportunities (ETOs) for both buyers and sellers.

GTPNet developed rapidly and by mid-2001, 160 Trade Points were operating in about 90 countries. According to a 1998 performance survey, the ETO System achieved a level of penetration and expansion of electronic trading that far exceeded the expectations. Using the GTPNet and the Internet, the ETO system has transmitted over 2 billion Electronic Trade Opportunities (ETOs) since its inception and was used by about 8 million companies.

However, as the system expanded, it became more difficult to manage and control and hence, to ensure its smooth governance. Given the heterogeneous and uneven character of information flows passing through the GTPNet it was agreed to improve the service standards and infrastructure to ensure the follow-up for opportunities. The UNCTAD governing bodies have decided to eventually transfer the control and ownership of the Trade Point program to a new international non-profit organization, the World Trade Point Federation (WTPF), created in November 2000 with a view to bring together local Trade Point organizations. At the same time the WFTP needs to create its unified technical support structure for local Trade Points and to identify a long-term technical partner who would manage it. Meanwhile the Trade Points might still need the assistance of UNCTAD in addressing their needs for training and other technical assistance.

Private global initiatives

There are also private initiatives, such Canada-based foreign-trade portal, Foreign Trade On-Line™, which provides profiles of companies around the world, looking for either buying or selling opportunities. Profiles presents basic information about goods and services offered and contact details. They are organized into 27 sectoral categories. Foreign Trade On-line offers assistance in creating portals but does not offer matching or follow-up services. There is no information concerning the number of companies using the portal and leads' success rate.

Other global trade portal initiatives include Tradezone, Digilead, Wtnet and several others. According to GBOT (Global Board of Trade), there are at least 400 trade boards, listing foreign trade op-

portunities. GBOT, a California-based private company, created in 1995, has developed a special tool, The Trade Accelerator, to allow a company to post its lead simultaneously to trade boards tracked by GBOT. Over 20 000 trade leads are currently listed on GBOT.

Regional and local portals

Business portals can found in all emerging regions. Most often, they benefit from mixed support, combining public and private funding. Below is few examples of such portals in Africa and Asia.

Africa4biz

Africa4biz.com presents itself as "Africa Trade Centre on the Internet". The site is intended as a bridge between African companies and the rest of the world. The site is organized as a directory by professional categories. It seeks to cover various African countries (from South Africa to Kenya, Nigeria to Morocco and Egypt). Although information is sketchy and often incomplete, it provides a support for a more ambitious and comprehensive database. There is no specific focus on SMEs but most companies listed clearly belong to this category.

Thailand

Electronic commerce efforts in Thailand are spearheaded by the Electronic Commerce Resource Center (ECRC), set up in December 1996 under the National Electronics and Computer Technology Center (NECTEC), National Science and Technology Development Agency (NSTDA) and the Ministry of Science, Technology, and Environment (MoSTE).

ECRC operates a web portal. Another portal is run by NECTEC. Both sites provide general business information.

In July 2001, SMEs were given further incentives to make a move into the electronic commerce sector with a number of public and private sector initiatives. The Department of Industrial Promotion (DIP) will work with a media group, which operates a popular Shinee.com site to encourage up to 60 selected SMEs to experience e-commerce including web site design and operation, free of charge. The DIP and Shinee.com venture will provide SMEs with a free web site.

Malaysia

For Malaysia government, electronic commerce is a high priority, spearheaded by The National Information Technology Council (NITC) of Malaysia. Chaired by the Prime Minister, NITC Council functions as the primary advisor and consultant to the Government on matters pertaining to IT in Malaysia's national development. Various e-commerce activities are showcased in Malaysia E-commerce hub, which provides a rich variety of links. For instance, some 30 merchants, accepting on-line payments, as well as banks offering Internet services and security services could be reached from the hub.

E-marketplaces development

Electronic marketplaces seek to go beyond trade opportunities portals, offering tools to realize these opportunities through the matching of buyers and sellers, the transaction follow-up and fulfilment. Following the explosion of B2B marketplaces between late 1999 and late 2000 in OECD countries,

with thousands of private and public B2B exchanges projects, many electronic marketplaces initiatives were announced in emerging countries. The reflux of B2B marketplaces in developed countries has adversely affected the progress of these initiatives many of which have been scaled down or closed down. Nevertheless, in several countries, particularly in Asia, development of B2B marketplaces continue and some of them are now operational.

Asia

China

Chinese companies such as www.Alibaba.com appear as clear leaders in B2B marketplace development. Headquartered in Hong Kong and operating across China, with offices in California, London, Seoul and Taipei, Alibaba.com presents itself as a leading provider of online marketing services for importers and exporters and the world's largest marketplace for global trade. Alibaba has over 750,000 registered members from more than 200 countries, growing at a rate of over 1,500 members each day. They are mostly from small- and medium-sized companies in developing countries around the world. They are located in rural areas, as well as large cities, in countries as diverse as Kyrgyzstan, Sierra Leone and Brazil. For the most part, these are not "high-tech companies." They are low-tech companies using technology to expand their market reach and grow their businesses. Alibaba's websites allow users to browse company information and trade leads by 27 industry categories and 700 product sub-categories, ranging from agriculture to software.

Alibaba.com's institutional investors include SOFTBANK, Goldman Sachs, Transpac Capital, Fidelity Capital, Venture TDF, Pte Ltd of Singapore and Investor AB of Sweden. To complete its trading capability, Alibaba relies on a secure online payments system, developed, through a partnership with a leading bank, the Industrial and Commercial Bank of China, which accounts for half of the annual total settlement volume of the entire banking system of China and is aggressively developing and promoting B2B payment solutions).

Another Chinese success story is Hong Kong-based Li & Fung, which transformed itself from a traditional purchasing agent into a manager of the logistics of producing and exporting consumer products across many producers and countries. Through its web offering, which facilitates order aggregation, the company targets small and medium enterprises (SMEs).

Thailand

In Thailand, the Department of Export Promotion (DEP) has recently signed contracts with five business-to-business e-marketplace solution providers: Thailand.com, WeThai.com, ThailandExport.com, ThaiExpoNet.com and Samart Internet. The aim is to encourage up to 8,000 companies to move to the Net.

Malaysia

In Malaysia, fourteen B2B marketplaces are currently active. They include broadly based marketplaces such MTeX (Malaysian Trade Electronic Exchange), as well specialized exchanges such as Eyewearland.com, which manufactures and exports frames and sunglasses. One exchange, Dextel Online, provides business matchmaking services for SMIs and SMEs.

Singapour and India

Elsewhere in Asia, Singapore company eplus Technologies is expanding its solutions services beyond the local 92,000 SMEs to others in the region. B2B marketspaces are beginning to appear in India as well.

Latin America

Potential for B2B e-commerce in Latin America is considerable. According to a 2000 study by InfoAmericas, 60-70% of mid-sized companies in several Latin American industries are connected to the Internet, compared to 5% of consumers. This makes sales of business goods and services on-line a feasible and potentially attractive proposition. The arrival of digital marketplaces may help to level the playing field for many small local suppliers who simply cannot afford to reach their potential market through traditional distribution channels. SMEs will also save costs by sourcing directly from their suppliers through online networks, rather than through the costly multi-layered distribution models.

The first to develop their SME strategies were the IT suppliers. 25-30% of new PC sales come from SME segment and with it the sale of accessories and supplies. An estimated 50-60% of companies with at least 10 employees have a network installed and network products and support services are in great demand. Thus, a company such as Telefonos de Mexico (Telmex) has decided to sell computers to anyone with a phone line, charging $50 per month and adding it onto the phone bill. In less than six months, Telmex became the largest PC reseller in Mexico by creatively targeting a previously untapped market.

Latin American banks have been rather cautious in e-commerce initiatives for SMEs. Nevertheless, there are some exceptions. The Mexican subsidiary of Spanish BSCH has launched P-market, an online marketplace linking SMEs with various suppliers. The bank offers online functionalities to allow SMEs to manage their finance on line, and is also developing an online procurement system, called Procura Electronica, to be launched in the second half 2001. The bank expects its online clients to grow from 3500 early 2001 to 30 000.

In Brazil, Bradesco bank also participates in e-commerce initiatives involving SME transactions, such as the shopping mall shopfacil.com and the purchase exchange latinexus.com.

Private equity mobilisation

Linking private equity investors with SMEs in emerging countries is far more challenging than in OECD countries. With few exceptions such as Singapore, there is no local venture capital industry. And business angels networks are often family or ethnically-based. Nevertheless, some efforts, spearheaded by international players, have been launched to create Internet-based private equity networks.

EmPower Link

In January 2001, the UK's International Development Consortium (IDC), created in 1997 to develop closer links between the University of Hertfordshire and its business environment, has established a joint venture called Empower Link Holdings (Pty), with a South African investment fund, Omega. The idea was to take the EquityLink, its very successful business angels network, created in 1995, into South Africa, linking it with UK and European opportunities. EmPower Link was sup-

posed to provide support services to South African SMEs including management development, financial management, developing businesses, sales and marketing, IT and innovation in technology and design. It is expected to significantly contribute to the development of a comprehensive SME support infrastructure in South Africa.

Softbank Emerging Markets

In February 2000, Softbank, one of world's best-known Internet companies, has announced a creation of a joint venture with the International Finance Corporation (IFC), the World Bank's private-sector arm, to spawn start-up Internet companies in as many as 100 developing countries. The joint venture is an investment fund called Softbank Emerging Markets (SBEM),to be based in California's Silicon Valley on a capital base of $200 million. Seventy-five percent of this will come from Softbank and the remaining 25 percent, from the IFC.

To begin with, SBEM will act as an incubator, investing in and providing advice to promising local Internet ventures in 10 to 20 countries. SBEM plans to establish a number of holding companies to conduct actual investment and oversee operations of local joint ventures in these countries. First local office was opened in March 9 in Malaysia. So far, no investments were announced.

Technology hubs

One of the key problems of SMEs in the emerging economies is their unfavorable sectoral mix. Most of SMEs which are active in traditional sectors and lack export capability. Lack of high-tech SMEs is certainly a major handicap for the emerging economies and an obstacle to the development of locally-based e-commerce. On the other hand, the growth of Internet gives an opportunity to create new businesses, specialized in new technologies. However, in order to realize this opportunity it is necessary to have access to technology and to create an environment capable of nurturing the new businesses. In the OECD countries, successful high-technology businesses are often concentrated (clustered) in small geographic areas, where they can obtain access to a wide range of resources, including technical skills, academic research, financial expertise, development know-how. More importantly, such clustering favor informal as well as formal contacts. Silicon Valley in the US, Silicon Glen and Cambridge in the UK, Sophia Antipolis in France are often quoted as examples of high-tech clusters. There also such clusters in some developing countries (Bangalore in India or Penang in Malaysia). Two recent projects, both located in Africa, are more specifically oriented toward Internet-based technologies. They are:

- El Ghazala in Tunisia , where the government launched in 1999, the Communications Technology Park, which now houses six tech outfits, including software startup Cynex and Picosoft, a consulting and systems company. To help supply the park's workforce, Tunis' Institute of Advanced Business Studies has just launched an MBA program in information technology and ecommerce.

- Gauteng Innovation Hub in South Africa , a collaborative project between the University of Pretoria and CSIR, a local research and development organization promoting the IT industry, to build the, a tech corridor from Johannesburg to Pretoria. Guateng hub aspires to be an incubator, educational center, and administrative base for emerging and established tech companies. If all goes as planned, a cross-continental fiber-optic cable project called Africa One will be in place just in time for the Hub to go online in 2002.

- Internet City in Dubai is a project launched as a local entrepreneurial initiative with a strong support of the government. The Internet City is a set of wellequipped buildings with sophisticated telecommunication links attracting all kinds of Internet companies to operate from that centre. Given the Dubai's role as major trade hub in the region and its liberal trade and investment regime this centre might become a well connected multifunctional technology hub.

Microfinance initiatives

Microfinance, or small-amount lending to individuals or very small SMEs in emerging countries, is seen as an important component of financial system in developing countries. Internet can stimulate and accelerate its development. It provides a cost-efficient communication support and offers a potential to lower the transaction costs, which can often exceed 50% of the amount lent. Not surprisingly, a number of Internet-based microfinance initiatives have been launched.

Virtual Microfinance Market

The Virtual Microfinance Market (VMM) is an information exchange system designed to facilitate interactions between microfinance institutions (MFIs), private investors, Governments and other participants in the microfinance market.

It is being developed by the United Nations Conference on Trade and Development (UNCTAD), under the guidance of an Advisory Board, and in the framework of a technical assistance project being financed by the Government of Luxembourg.

On the same Internet site, The VMM provides contact and financial information on MFIs willing to mobilize commercial funding ("demand"); information on the legal and regulatory conditions of investment in these MFIs and links permitting direct contact with regulatory authorities on each country ("environment"); contact data on investors and financial intermediaries and information on conditions attached to past or current offers ("supply"); and access to sources of knowledge, technical advice and training on state-of-the-art techniques and tools for improving MFIs' financial management and access to capital markets ("knowledge").

The VMM is accessible free of charge to all its members, i.e. to all duly registered information providers.

This project is aimed at creating sustainable market links between the commercial investment world and the micro-enterprise sector in developing countries. It is expected to permit the investment, under commercial terms, of millions of dollars at the grass-roots level and the creation of thousands of jobs.

PlaNet Finance

PlaNet Finance is a Paris-based international non profit institution created in October 1998, aiming at reducing poverty by using the Internet to promote the development of microfinance. PlaNet Finance supports organizations that provide financial support to the world's poorest. Its direct clients are microfinance institutions and other organizations that provide banking services for the poor and

the very poor. PlaNet Finance does not aim to compete with banks, but to help them to develop their activities in this new field as efficiently as possible. It operate with of private partners / sponsors and with a network of local partners.

Pride Africa

Pride Africa is a microfinance network providing access to credit to more that 80,000 African SMEs from Kenya Malawi, Tanzania, Uganda and Zambia. The financial and information service network provided by Pride Africa offers micro-finance opportunities for local people and small enterprises that previously had no access to flexible financing due to rigid banking regulations and the information monopolies of government and large businesses.

SMEloan

SMEloan serves the needs of Hong Kong's SMEs. The company offers Express Loans up to HK $1 million, approved within one minute of submitting an online application. This allows business owners to instantly obtain their financing. Though not specifically a microfinance institution, in practice most SMEs borrow modest amounts. SMEloan offers possibilities to borrow more than the HK $1 million, using more time-consuming procedures.

3.E-FINANCE PROSPECTS AND CHALLENGES FOR SMES

3.1.Prospects and key success factors

Promising first signs

The positive signs related to e-finance for SMEs in developing countries include:

- High level acceptance of technology by customers and financial institutions
- Many innovative approaches
- Initial tangible results in terms of market access and revenues generation.

However, most projects are still in the pilot stage or still have not been deployed on the large scale. It is therefore much too early to determine which projects are likely to be most successful and therefore should provide the "best practice" benchmarks to be replicated in other countries. More importantly, the key question as when and how e-finance will fundamentally change the conditions of access of SMEs to finance still remains to be answered. Nevertheless, from the experiences so far, two broad key success factors can be identified: adaptation to local requirements and strong support from public authorities.

Adapting global technology to local requirements

While Internet technologies are global and their core is standardised, their applications can and need to be adapted to local circumstances. Internet offers this amazing capability to reconcile global uniformity and local flexibility. It facilitates cross border links but at the same time create new configurations of networks and clusters. Distinctions between proximity and remoteness remain highly pertinent, even if the distance under consideration becomes virtual rather than geographical.

The most successful e-finance stories in developing countries, including such banks as ICICI, Itau or Bradesco, stress their ability to respond to local requirements in terms of their product mix and delivery channels. The need to localize the financial solution is even stronger for the e-finance for SMEs, which for the most part operate within a limited geographical area. Furthermore, their characteristics, size, financial structure and sectoral mix, can vary considerably even within the same city or region. At the same time, Internet technologies create an opportunity to develop strong links between SMEs in different countries. For instance, a Tunisian start-up, Intelligent DSP, works with the New Delhi office of Analog Devices to develop remote monitoring services for electrical power meters. More broadly, successful e-commerce initiatives facilitate the emergence of new forms of business organizations such as virtual hubs and networks.

Government support and commitment

Most e-finance developments have taken place through interplay of competitive market forces with limited public sector intervention. Some of them, particularly in Internet banking, have been launched by foreign institutions. The situation is quite different in the case of e-finance for SMEs, where public sector intervention is quite frequent. It is not only that the public authorities have to

create the broad framework conditions for e-commerce development (appropriate legislation and technological infrastructure, to mention two most important) but also they need to ensure that SMEs take advantage of the new environment and opportunities it creates. The great majority of developing countries SMEs success stories in their involvement in e-commerce were largely due to the public sector support. This is particularly the case of Asia, where governments of Singapore, Malaysia and Thailand played a decisive role in all aspects of e-commerce development.

This was also the case of Tunisia, where Internet development has been a long-standing top policy priority. In 1991 it became the first Arab and African country to connect to the Internet. At present, it has a highest relative Internet penetration of any African countries. Here laws supporting e-commerce and digital signatures (based on the uniform law proposed by UNCITRAL) have been passed, and numerous public and private online services allowing Tunisian citizens to take advantage of e-commerce are being proposed. The Tunisian government also actively promotes development of high-tech SMEs.

However, while the public sector involvement in e-commerce promotion appears in many cases highly critical, it differs in many aspects from traditional government interventions. It is more flexible and proactive and relies less on administrative edicts and more on co-operation with private sector. Rather than maintaining stability, it promotes innovation. The new modus operandi often entails setting up of specialized agencies. Thus in Tunisia, Internet initiatives are spearheaded and coordinated by Agence Tunisienne de l'Internet (ATI), while in Malaysia, by National Information Technology Council (NITC). Both are high-powered bodies with wide mandates, ranging from legislative initiatives, to research and development projects.

An interesting aspect of public support for e-commerce is that local governments can play a major and often decisive role. This is for instance the case of China, where many e-commerce initiatives were launched by provincial governments. For instance, in Zhejiang province, the provincial government established an Internet centre in every big town to help farmers post trade offers on sites such as Alibaba.com.

3.2.Challenges

Challenges faced by those who seek to promote e-finance and e-commerce in developing countries are numerous and varied. They share two broad themes:

- *Reconciling apparently incompatible opposites*: global and local, digital opportunity and digital divide, public and private, closed and open

- *Developing new forms* of business organization including new cross-border, cross-sectoral cooperative and partnership arrangements.

Digital opportunity or divide in the context of SMEs

Can Internet and other information technologies contribute to the reduction of poverty and acceleration of growth in developing economies ? This question is now at the centre of international economic debate.

On the one side are those who see Internet technologies as an extremely powerful development enabler, whose unique characteristics (in particular pervasiveness and speed of dissemination, low marginal costs and global nature) allow rapid creation and growth of new economic and social networks. Though the proponents of Internet understand that it is not a panacea itself. While Internet technologies create a "digital opportunity" they still should be underpinned by a policy and institutional framework conducive for a dynamic infrastructure and human capacity building. Internet can have a dramatic impact on achieving specific social and economic development goals as well as to play a key role in broader national development strategies. This vision underpinned a launch of various endeavours including the ICT Task Force initiated by the United Nations Secretary-General Mr. Kofi Annan, the Report of the so called Dot Force to the members of G-8 and others.

The opponents to above views stress that Internet will actually accentuate income and growth disparities and will create new more profound inequalities between the haves and have nots in their access to the Internet and related information technologies (see Table 8 below). They insist that because Internet creates so many new opportunities, the lack of access to it can aggravate the disparities, generated by the well-known deficiencies in basic telecommunications infrastructures of developing countries as well as by the host of weaknesses of their economic and social structures. Moreover, this situation generally known under the term of "digital divide" creates opportunity gaps not only between countries but also within countries. Such gaps are particularly critical for businesses, where skilful use of Internet is generally seen as a crucial competitive advantage. In the developing countries, this gap is even more important as it is becoming evident that SMEs with access to the Internet will be more successful than those who do not have one.

Designing and implementing policies that reconcile the digital divide and digital opportunity is a complex task, both conceptually and operationally. The ISOC INET 2000 conference, held in Yohokama in August 2000 has eloquently put the strategies for bridging gaps of the Internet economy into the "8 C" keywords: connectivity, content, community, commerce, capability, co-operation, culture and capital. The current disparities in the uses of Internet shown in the following table call for bold strategies in that respect.

Table 1
The use of Internet in various countries and regions

	Internet users (% of population)	
	1998	**2000**
USA	26.3	54.3
High income OECD countries (ex-USA)	6.9	28.2
Latin America & Carribean	0.8	3.2
East Asia & Pacific	0.5	2.3
Eastern Europe & CIS	0.8	3.9
Arab states	0.2	0.6
Sub-Saharan Africa	0.1	0.4
South Asia	0.04	0.4
World	**2.4**	**6.7**

Source: 2001 Human Development Report

To support SMEs it is important to understand that the principles of a level-playing field and equal access has to be balanced with the need to support a d encourage high-growth businesses and innovation. While the most SMEs will stay small with their attrition rate remaining high, some should be afforded the opportunity to grow and even to grow rapidly. The technology sector in the developed countries is driven by companies, which started small but became big and even dominant. E-finance and e-commerce initiatives and programs in developing and transition countries should facilitate higher rate of growth and emergence of new, well performing companies. To make that happen SMEs should get support from national governments and international community to get rapidly access to Internet at affordable costs and get related support through financial incentives, training and other capacity building measures at the initial stage of their adaptation to the new economy.

Need for adequate regulatory and institutional framework

To facilitate the realization of those programs developing countries need to take a proactive role in encouraging rapid adoption of market friendly laws and regulations, including laws on e-commerce, electronic contracts and digital signatures. It is equally important to ensure effective coordination of government agencies, industry associations and other facilitators helping to make fast decisions on starting new e-commerce ventures. Creating supporting environment during early stages of the im-

plementation of e-commerce and e-finance ventures could help to reap the benefits of coincidence of globalisation and the advent of the new economy. While e-finance and e-commerce do not eliminate borders, they make them more porous. Internet may also allow companies and households to circumvent regulations and restrictions. For example, in spite of exchange controls in many developing countries, their households and companies (especially via offshore vehicles) still manage to open accounts with foreign banks or brokerage houses via the Internet. Internet makes the use of offshore companies and banks even easier. On the downside Internet offers new opportunities for fraudsters. Many of them try to use the developing countries as a base for their operations.

Without a robust regulatory framework, the development of e-finance and e-commerce might be jeopardized. Yet, if such framework is too rigid and formal, it may also discourage innovation and entrepreneurship and, more importantly, deter informal sector from joining e-commerce. In the end, e-finance and e-commerce will succeed only if they create a stable physical and virtual infrastructure of trust, shared by all parties concerned including public authorities, local and foreign entrepreneurs, financial services providers and customers. Creating and maintaining a trusted local environment is essential to attract private foreign capital and know how as well as financial and technical assistance originating from international development agencies and NGOs hence ensuring the effective use of the knowledge and resources coming from all key actors of the development process.

Working with foreign e-commerce and e-finance ventures

The critical mass of e-finance and e-commerce resources, know how and actual operational experience are concentrated within a limited number of large private sector companies, headquartered in OECD countries. Those companies provide key elements of infrastructure, networks, systems and applications that comprise e-finance and e-commerce. They operate globally, both in terms of sourcing and selling their products and services. Relationships between those companies, national governments and international development agencies have not been always easy. Nevertheless, both the companies and the public organizations increasingly recognize the need for new forms for co-operation to promote e-finance and e-commerce. An example of such a co-operation is Netaid.org foundation, launched jointly by UNDP and Cisco corporation with the objective of using Internet to combat poverty. Private firms such as Accenture played a major role in the Digital Opportunity Initiative.

Various e-finance projects, has been created by global banks such as Citibank, HSBC and Deutsche Bank, credit card associations like Visa and Mastercard and some others. Examples include such focused on SMEs programmes as the CitiBusiness and the Visa Business Card. It is interesting to mention here that financing households and micro-enterprises i.e. so called microfinance initiatives (which in many aspects is very close to SME financing) are also currently under the scrutiny of banks and international development community at large. Thus, Deutsche Bank has created a Microcredit Development Fund, which contributed to the creation of many microfinance institutions. It is hoped that the current difficulties experienced by leading Internet companies in their core markets will not curtail their willingness to pursue and expand the new co-operative approaches.

Evolution of global e-finance platforms

One area in which such co-operation is essential is the evolution of global e-finance platforms such as SWIFTNet and Identrus, which are the key elements of the emerging new global finance architecture. As their design and implementation evolve, they should take into consideration the requirements of e-finance and e-commerce in developing countries. These requirements are particularly important in two areas:

- Development of payment and settlement systems based on those platforms. At present, projects for such system tend to focus on the needs of global corporations. The development of payment services and settlement services for SMEs operated by trusted banks in developing countries and connected with specialized B2B marketplaces should be actively encouraged.

- Interoperability between global and local e-finance platforms. In the Internet world of open standards, various platforms should be interoperable. In practice, interoperability is as much as a business question as it is a technical problem. Conditions of interoperability should therefore be given careful considerations.

More information about SMEs from developing countries

Global trade and information platforms, such as Bolero or @ratings raise a somewhat different challenge. These platforms explicitly cover developing countries and SMEs in those countries. However, for the platforms to offer full benefits of their potential, both the quantity and the quality of information about the SMEs has to be enhanced. To be listed in such platforms as @ratings, SMEs need to show reliable figures with timely updates. This is a complex, time-consuming and onerous task, particularly for the SMEs in the informal sector, which is a very large part of the economy in a number of countries. Internet provides potential means to lower the costs and reduce the length of this task. Initiatives aiming at increasing the availability of reliable data about the SMEs should be given high priority in e-commerce support programs and policies. They must include much closer cooperation with and between existing credit information companies in developing countries as well as the creation of those services in countries where they do not yet exist.

The case of mobile communications and smart cards

Internet technologies are a moving target. They continue to evolve and expand. As bandwidth continues to expand, it becomes technically feasible and cost-effective to integrate data, voice and video, thus making customer interfaces and services more user-friendly and richer in scope. Another key trend is the convergence between fixed and wireless networks, which is at the core of new mobile telecommunications networks (3G and CDMA). Many countries view this evolution as key to effectively lowering the cost of their service delivery channels. Thus Philippines and Indonesia are archipelago nations, while Mongolia, has a small population spread in a large area. For them wireless and mobile Internet are the only ways to introduce e-commerce and e-finance.

Another critical technology is the smart card. This technology has been used in South Africa for instance to create financial infrastructure for people without banking accounts. In the medium term, the smart could provides a secure and cost-effective support for specialized payment and settlement services *inter alia* for the informal sector.

Handling complexity

While the evolution of Internet technologies holds considerable promise for e-finance and e-commerce, it also increases the complexity of the underlying systems and applications. For the developing and transition countries, the challenge ahead will be to build up capacities, particularly local expertise to manage these complex systems.

Working with NGOs

The international community has now recognised the crucial contribution of NGOs to the development process. The Internet led to the emergence of new categories of NGOs, which seek both to stimulate local e-business initiatives and facilitate the cross-border transfer of the relevant know how.

For instance, Singapore-based PAN (Pan-Asian Networking initiative), supported by Canada's International Development Research Centre, has launched e-commerce services for textile and handicraft manufacturers in Bangladesh and Nepal. In Latin America, a regional NGO, Fidamerica, supported by IFAD, has launched 34 projects in 16 countries since 1995.

While NGOs are often viewed primarily as non-profit organizations, the category also comprises informal networks bringing together ethnic groups dispersed among around the world such as Chinese, Indian and other diasporas. These Diasporas have a high proportion of both technicians and entrepreneurs, active in e-finance and e-commerce. The diaspora networks facilitate both transfer of know-how and development of transborder projects such as alibaba.com.

Working with international development agencies

Supporting SMEs is one of the traditional functions of international development agencies, which comprise the international financial institutions (IFI) such as the World Bank Group and the regional development banks, as well as other UN development agencies including UNDP, UNIDO, UNCTAD, and others. These organizations stimulate the debate about key conceptual issues, contribute to the development of new approaches, encourage the implementation of appropriate local, regional and global policies, fund programs and projects and monitor their implementation. The dynamics of Internet and e-commerce calls for further elaboration of the new forms of co-operation and partnership between international agencies and organizations which detain the critical know-how and implementation capability such as private technology and financial and other companies as well as non-governmental organizations (NGOs).

International development agencies are getting more and more involved in e-commerce activities, which includes also e-finance. In that respect they are becoming more keen to stress the importance of knowledge management and transfer for the development process and are seeking various forms of partnerships with the private sector and NGOs to achieve this goal.

Given the experience and dedication of their staff, their access to information and knowledge *inter alia* through an extensive network of consultants, they are uniquely placed to catalyse the process of the management and transfer of e-commerce related know how and other resources to the developing countries.

This process needs in particular better coordination and joint efforts between various agencies both in terms of substance and the geographical distribution of their efforts. As virtually all agencies have launched their own global knowledge and information networks it is becoming increasingly important to go beyond the web based links to each others websites and to make them increasingly complementary so that to avoid the overlaps and gaps in their content. The focal points in e-commerce might create a sort of "networks of networks" using their websites as a tool for dissemination of information and analysis as well as training hubs for the entities from developing and transition economies seeking to develop their e-commerce and particularly e-finance skills.

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