



*School of Business and Public Management
The Institute of Brazilian Business and Management Issues
XII Minerva Program – Fall 2000*

**The Business Revolution through B2B Market Tone and
its impacts over the Financial System going into 21st
Century**

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1. Introduction

The speed of change in the world is increasing faster than some decades ago. Many issues that people used to define as non changed issues, nowadays are going towards different directions. New concepts are rising and all the sectors are facing the need to adapt to this changes, otherwise they will be out of the game.

Globalization does not over control anybody, any government, any society, this is the rule to survive. The extremely rapid transfer of ideas and fashions from one location to another around the world is an important aspect of globalization. The globalization of the communication and travel industries enable us to see, to touch, to feel, smell and taste products and services in their communities, gradually shifts our purchasing toward products and services with universal appeal. This trend will result in higher-quality products with lower-prices, eliminating products and services that can not compete. Governments may erect barriers against foreign products that show some threat for their domestic products, but in the long run these barriers will be overcome by the pressure and the wishes of the society. As we can see, the new environment tends to break down geographic boundaries, but it can create other barriers like the access to this new era of telecommunications and technology.

It is in this context that Electronic Business to Business must be discussed. Consider It as a step towards the convergence of nations and cultures. A revolution that will impact business, society and governance. Some studies define the Electronic Business Revolution to be responsible for changes similar to those brought about in the Industrial Revolution, because it is not conducting old business in a new way. In this revolution, leaders will lose power and the unknown become the new leaders.

At present, what catches public attention is the magnitude of the numbers showed by the Research Institutions. An OECD report released in September 1998, for instance, predicts that e-commerce –now estimated at \$26 billion (US dollars) will reach a trillion dollars worldwide in the next seven years. The business to business

transactions is responsible for 80% of all e-commerce and tend to be the key growth market for e-commerce in the near term. Certainly, as sociologists and futurists point out, the Electronic Business to Business has already changed , and more fundamentally, will change the way billions of people work, learn, and live and of course how enterprisers development their relationships. Traditional principles of economics – supply and demand – still ring true, but electronic business increases efficiency, releasing resources that can support faster economic growth. Network effects and reduced economic frictions allow firms to better tailor products and services for new markets to satisfy unique needs and expand opportunities for new businesses. Electronic Business to Business also allows firms to delink the value-added chain of production to locations around the world to better employ each country`s unique resources. And it also allows poorer countries , small businesses and diverse interests to participate in the large communities. The electronic business to business increases marketplace diversity and supports faster growth and greater economic well-being.

In this sense, several issues will affect the speed of the Internet Revolution Growth. Technological Innovation and diffusion, networks and information systems. synergistic infrastructure and logistic, transport and distribution channels, governmental policies, jurisdictions and policy issues overlap, international trade and greater human skills and flexibility are only some of big issues that must be considered in any analyses about Internet Business to Business.

In this sense, we can include the performance of financial intermediaries, another key issue, that will influence the benefits and global linkages offered by electronic business. And far from it, regarding new opportunities and key threats as well, we have to analyze the profound effect on the financial sector that have been produced by Internet , dramatically changing the cost, distribution, marketing and servicing products and enabling new types of products and services to be develop. Our proposal with this paper is discuss the Business Revolution over the Financial Sector , as a consequence of the faster and potential development of Business to Business -B2B- Market Tone.

1.1 Web Commerce Growth

General View - Evolution of the WEB

The growth in Web commerce might be likened to a hockey stick curve, starting out fairly flat for the first year or so its development, then skyrocketing, and now driven by Internet Business to Business :

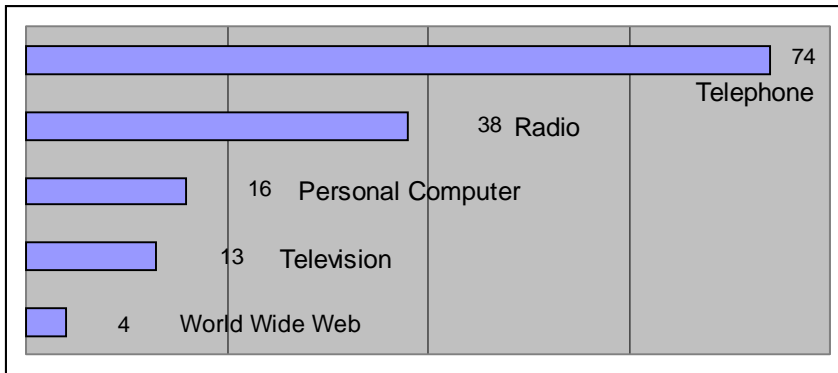
- In January 1995, consumers polled by the Gallup Organization and CMP Media's Interactive Age magazine said purchasing products was the single least compelling reason for going online, followed by gathering news and information, communicating with friends and colleagues, doing database searches, accessing games and software, participating in chats and forums, and conducting electronic polling, voting, or town meetings, in that order;
- By the fall of 1995, according to a survey by CommerceNet and Nielsen Media Research, 55 percent of Web users said they went online to look for specific product information, while 35 percent of Web users looked for product information before making their choice about actual purchase, although not necessarily in cyberspace. In fact, at the time the survey was done, very few sites were conducting electronic commerce;
- In its "1996 Online Project" report, Jupiter Communications projected that Web-based shopping revenues would jump from \$407.3 million in 1996 to \$1.1 billion in 1997, reaching \$4.5 billion in 2000;
- In an October 1996 report, Forrester Research Inc. projected that the total U.S Internet economy would approach \$200 billion by 2000, which includes infra-structure, Internet access, consumer commerce, and business to business commerce. According to the report, by 2000 business to business e-commerce trade and fees would reach \$66 billion, consumer online

transactions and fees would reach \$7.1 billion, and the sale of content over the Net would grow to \$4.8 billion;

- In March 1997, according to the CommerceNet/Nielsen survey, 73 percent of Web users said that they spent time online looking for specific product information, 53 percent looked for product information before making their choices about purchasing and 15 percent - about 5.6 million people - made actual purchases on line. Sales of consumer goods over the Internet would total \$2,7 billion in 1997. The projections for electronic commerce in 2001 would reach \$17 billion for retail revenues and \$183 billion for business to business;
- In april 1998, ActivMedia issued a report that predicts that electronic commerce revenues would achieve \$1,2 trillion by 2002;
- It is now projected that by 2005,electronic commerce in the United States alone could surpass the \$6 trillion mark (Jupiter Communications , 27 june, 2000). Ninety percent of the businesses in the United States say that electronic commerce soon will affect how they do business. Since these companies source from firms overseas and sell to buyers overseas this implies that the tide of electronic business will not stop at the US Border.

As we can see, the forecasters have been increasing their projections regarding the numbers that would be achieved by Electronic Business and this growth is expected to be higher in the majority parts of world. Internet has attracted more users in more countries in a shorter period of time than any other communication tool in our history, it took only four years to reach 50 million users, compared to 74 years for the telephone and 13 years for TV. In Brazil, in 1999 there were 6 million of users connected in Internet and the potential to growth is reach 17 million of people in 2003.

Years to reach 50 million users (comparative)

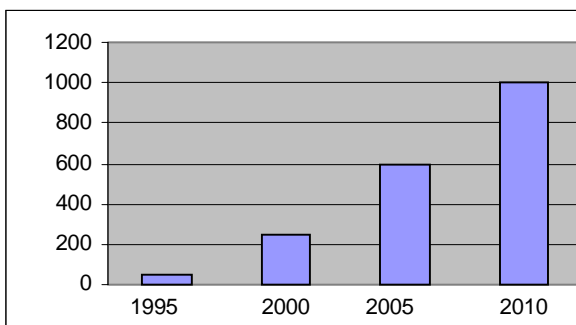


Source: International Telecommunications Union (ITU), *Challenges to the Network: Internet for Development* Geneva: ITU, 1999

Three factors contribute for the growth of Internet commerce :

- The steep decline in the prices of information technology (IT) products, such as computers and softwares;
- The development of platforms and the mass distribution of Internet browsers like Netscape, which on the one hand provide a relatively easy way to firms to develop user-friendly interfaces such as Web sites;
- The commercialization of the WEB itself with media-rich content and electronic commerce.

Unduplicated Users (million)

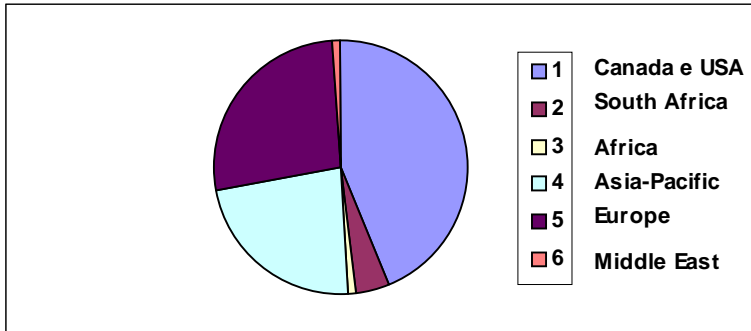


Worldwide Internet population forecast (1995 –2010) Input-1994.

Now a days, the use of Internet is concentrated in the United States, but Japan and Western Europe is catching up fast. Forecasters sate that the more accelerated

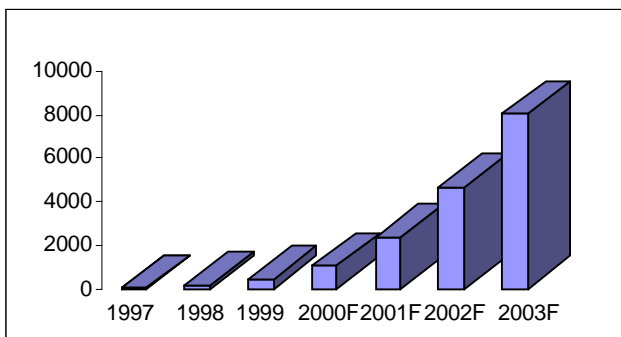
growth over the next three to five years is expected to take place in Asia and Latin America.

Internet Users by region (percent) 1999



Source: Nua Internet Surveys, <http://www.nua.ie/surveys/how-many-online/index.html>.

E-Commerce spending in Latin America



F = Forecast

Source: Latin Trade, March 2000, 38, using data from IDC

Comparison among Brazil and the rest of world - E-commerce spending

Year	Brazil	Rest of the world
1999	\$80 millions	\$130 billions
2003	\$2,7 billions	\$2,4 trillions

Source: [http:// www.globo.com.br](http://www.globo.com.br)

1.2 Market penetration of Business to Business commerce

Although the electronic business to business is still a very small percentage of total revenue, this new method of buying and selling goods and services is growing faster, with a beneficial effect on macroeconomic performance.

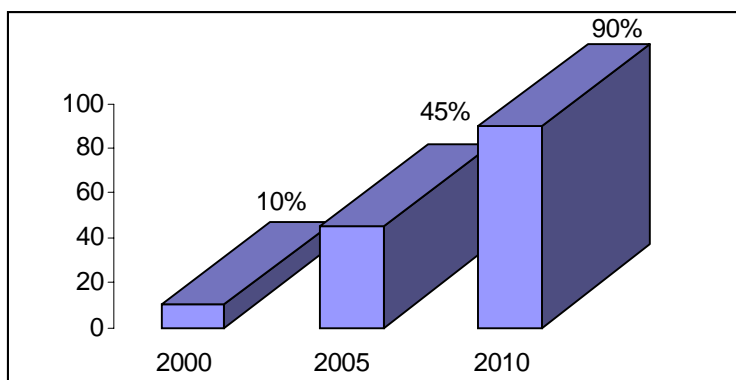
The nascent North American B2B e-marketplace grew 171% in 1999, propelled by “brick to click” distributors and established dot.com marketplaces. E-Market revenue reached nearly 500 million in 1999, an increase from 1998 revenue of \$183 million.

In 2000, B2B E-Commerce in the U.S will grow from \$ 1,2 trillion to \$ 4,8 trillion in transactions value by 2004. The dominance of B2B is already about 6 times the value of business to consumer electronic commerce (B2C) and could grow to 12 times the B2C value.

Between 2001 and 2006, the value of e-commerce will almost treble across all goods and countries. In some areas, e-commerce trading will account for the majority of transactions by both number and value. In Information Technology, for instance the proportion may exceed 90 percent by 2006.

By the year 2005, more than 40 percent of the 7 million business locations in the United States will be involved in some level of e-commerce, as compared with 5 percent today. It means that 40% of total purchasing will be done electronically. In 2010, 90% of all transactions will be done electronically.

Use of e-commerce by US businesses – 2000/2010 (INPUT)



In the same time frame, large companies will use e-commerce to connect more than 80 percent of their customers, partner and supplier base, compared with an

average of less than 20 percent today. Major changes in business process will be necessary to support it, including many important issues. For huge companies, it will be easier, considering Internet technologies like an extension of EDI network to smaller companies via WEB Technology. This will allow traditional trading partners networks to grow faster and increase their communities. However, these networks will have to be changed to accomplish the virtual environment.

2. Some Economic aspects of Electronic Business to Business

2.1 - Definition of Electronic Business to Business (B2B)

“Electronic Business is a shorthand term that encompasses a complex of technologies, infrastructures, processes and products. It brings together whole industries and narrow applications, producers and users, information exchange and economic activity into a global marketplace called the Internet”.

We can not find an opened definition for Electronic Business, because of the speed of the new concepts and issues all the time added to it. There is no universal definition because the Internet marketplace and its participants are so numerous and their relationship are changing day by day. So, we can adopt a simple definition to **Electronic Business - do business electronically**, and establish no boundaries to this fast-moving target, We will discuss some economic aspects of the new market that offers a new type of commodity, such as digital products through digital processes.

2.2 – Comparative features between Electronic Business and EDI Exchange Data Interchange (more traditional form of electronic commerce)

First of all, it is necessary to clarify that Electronic Business is substantially different from the traditional forms of electronic commerce, electronic data interchange (EDI), although the terms are often similarly used. EDI is an

information technology, used by huge companies through separate and private systems. These companies have been using this technology to organize processes. EDI is a system in which structured messages, representing standard business forms, are exchanged between trading partners over private network. Historically, the huge companies have used this information technology in order to create a private network, requiring their small partners to use its proprietary systems.

TRADICIONAL EDI	INTERNET COMMERCE
Predetermined partner relationship	Unknown partner relationships
Closed trading community	Open trading community
Low volume of transactions	High volume of transactions
High-value transactions	Low-value transactions
High security level	Variable security level
Rigid	Flexible
Primary product and services	Secondary products and services

So, while EDI uses private systems, the Internet is based on an open, non proprietary protocol (Transport Control Protocol/Internet Protocol, or TCP/IP) and there is a standard coding system (HTML) for representing data on the Web.

Thus, unlike EDI, Internet electronic business can take place independent of any operating platform. And because businesses do not have to invest in creating new protocols and standards, it costs much less to sell goods and services over the Internet. In fact, EDI transactions are ten times more expensive than Internet based electronic commerce transactions. In addition, over the Internet, companies can offer interactive, media-rich marketing and customer feedback, services traditionally unavailable through EDI. Given these differences, EDI can be thought of as one specific market, while electronic business over the Internet can be thought of as an entire marketplace, in which all types of buyers and sellers interact.

Nevertheless, we understand that EDI will continue to grow over next years as major companies spread it through their suppliers chain, mainly smaller companies. Some traditional aspects of EDI will give way to more open formats connecting the small and middle size companies into the systems. The growth of the Internet Commerce trend impacts against the limitations of EDI. By 2003, Internet commerce will be four times the size of the EDI market. But, these differences between business to business through EDI or Internet can survive together up to Internet commerce offers all the conditions to support the relationship over the productive chain.

We can cite a good example : in Germany, Siemens Business Services has helped develop a system, called TECCOM, for the cars parts industry. TECCOM uses both EDI and Internet technologies. All the productive chain is inside the systems, workshops, dealers and car manufactures – by reducing the need to use others resources, optimizing costs and creating more quality.

It is important to ratify that e-business refers to the global relationship between enterprises in an open market, and externally focused on the organization's suppliers and customers. As mentioned before, the definition of e-business does not have boundaries. New concepts are adding day by day. Then, systems that will connect business, suppliers and buyers chain, certainly will suffer necessary developments side by side these new concepts. Talking about new concepts, the next part will explore briefly Market Characteristics of E-Business, introducing the concept of B2B Market Tones

2.3 - Market Characteristics, Competition and Market Organizations

2.3.1 – Internal Processes: step by step up to now

We have perceived that the actual stage of E-Business, looking towards the up to date concept of Market Tones was preceded by important changes in business

structures in which quality of unit and individual performance (human capital) was accentuated. Instead of being in the top of the organizations, planning and control units began to be a part of a core set of units surrounded by support units and then by external interface units.

The traditional span of control of 12 people is giving way to spans of control of hundred people, and the role of management and coordination are done over powerful collaboration, communication and analytical systems.

One of the most important challenges for this structure is communication. That's why, in the beginning, Internet was used by the Electronic Commerce to create better condition for communications among companies. Now, communication is required to support Electronic Business. Thus electronic catalogs can provide information for all suppliers or all customers and prospects at the same time. Financial Information can be placed on the Web site that is accessible to all investors at the same time. So, the information is available when and for whom that needed it. It is a just in time information and can be retrieved , as well.

On the other hand, the information superhighway has increased productivity. Therefore, it resulted in most of the cases in lower costs and lower prices. This, in part, has been responsible for inhibiting the growth of inflation in the USA, even in a scenario of full employment.

Some processes were incorporated by the companies over the period 1980 up to 1990, regarding Information Technology like JIT (Just in Time), SCM (Supply Chain Management) and ERP (Enterprise Resource Planning), inside others.

This technological processes continue to develop inside the companies. The higher the proportion of Information Technology in a particular process, the greater the impact improvements in IT productivity will have on it. It can explain why companies, regions and countries got high level of competitive advantages in few years. This new global marketplace is where businesses, consumers and governments can communicate and find new sources of supply, new products to meet their demands, new information to help them make decisions , and new ways to assist in economic development.

The results of IT was not only over the productivity (productivity in USA increased by 4% in the first quarter of 1999) but over others activities. Companies began to use Information Technology to get into new markets, produce new products, ratify their relationship with their existing customers. Companies starts to emphasize PR management and sales management. A good example of Focusing in customer relationship is 800-number, phenomenon that began in the late 1990 . Nowadays, call-center is giving way to highly sophisticated systems to attend the needs of the customer and translated into sales opportunity. Electronic Business is changing the relationship among suppliers, prospects and customers.

Business to Business cost savings by industry (percent)

Industry	Cost savings
Aerospace machinings	11
Chemicals	10
Coal	2
Communications/bandwidth	5-15
Computing	11-20
Electronic Components	29-39
Food Ingredients	3-5
Forest products	15-25
Freight transport	15-20
Healthcare	5
Life Science	12-19
Machinings (metals)	22
Media and advertising	10-15
Oil and Gas	5-15
Paper	10
Steel	11

Sources: Goldman Sachs Research

2.3.2 - Organizational Challenges

The greatest challenges that companies are facing to enter the virtual market are mainly two: what will be offered to customers and suppliers outside the organization as well as what will be the new conditions of internal operating. These challenges can represent barriers to some enterprises enter in Business Commerce.

Huge companies are adapting their structures and giving more responsibilities for each unit, in order to compete with smallest organizations that used to have more flexibility. On the other hand, small companies can use their self-organize to take advantage of the Electronic Tools and of the possibility to entry in this market, competing against huge leaders.

The length of the consequence of each company will be determined by the measure of vertically organization. In the old model, companies were like a chain with rigid link between levels. Electronic Business organizations trend to lose power and strong links among the layers of the business. Each layer must stand on its own, and operate semi-autonomously. It will give way to competitive and high performance among the layers, linking by a internal network. This own experience changing the old vision will provide companies to gain expertise for external relationships, fundamental condition to survive in this environment.

Despite the recommendation to gain more autonomy among the layers of the organization, they do not become a holding company with a set of autonomous organizations. Of course, it does not work. The core vision of the company must be strong and the message for the market must be strengthened. The whole company, concerning each unit must work towards in the same direction and have a viable place in it, transferring out of the company a part of the strengthening activity. Like IBM's arrangement with AT&T to handle IBM's ISP activities , for example. The fundamental issue that must be observed is that each process must be considered as business units, responding for the self-sustainable condition. If

the internal unit can not provide a company with a competitive service, it will be outsourced to specialist organization. This model has driven good results among the players of the Information Technology Industry. It is Important to say that when one process has to be centralized, for example cash collection, it does not mean that it will be in the same place. The network holds them together.

Fundamental issues must be discussed. Geographic structures, sales and distribution channels, customer support and facilities and locations have to be considered inside a non-geographic and strongly cultural market.

The enterprises do not need to be based in a single location because all functions need not be operated in one locate. So, a firm becomes a distributed company, where any operation can be any where. The difference between it and multi-office corporation is that all operations of a virtual firm is conducted on a network. Business to Business relationship need this interaction to support all the functions. Business logistics including supplier management, inventory, warehousing and invoicing can be integrated in a corporation – wide Intranet, defined as “a secure corporate network with rich functional features of Local Area Networks interconnected by the Internet or its technologies and applications”(Chellappa et al.,1997).

Suppliers and customers may access the systems by their own, in different levels in order to establish a perfect network.

Information Technology will support the new-interactive relationship between companies over the productive chain and transforming many aspects of business and market activities. The brief general view of the way to trade using e-commerce includes:

- Internal electronic mail and messaging
- Online publishing of corporate documents
- On line searches for documents, projects, and peer knowledge
- Distributing critical and timely information to employees

- Managing corporate finance and personnel systems
- Manufacturing logistics management
- Supply chain management for inventory, distribution and warehousing
- Sending orders processing information and reports to suppliers and customers
- Tracking orders and shipments and many new business activities.

All business activities must be done within a holistic business process, integrating business and market process. Concerning that many services will be locked out because of costs, as mentioned above, and concerning all the aspects of doing business electronically, the trend is to increase the interdependence between partners in the chain and channels.

2.3.3 - Market Organization

Electronic commerce as a marketplace differs fundamentally from other physical markets in many aspects. First of all, the size of a firm is not a significant factor that establishes the possibility to enter into virtual market. . Since the beginning, Electronic Business through the Internet has been the story of enterprises, not focused on huge companies. The story of E-Business in USA was constructed by thousands of small software and service companies that over the years who applied technology to their use needs. Two main kinds of companies were involved with the virtual market: product companies and services companies. Bill Gates from Microsoft is a classic example of a product company leader. Microsoft initially took computing power for the people, and now takes Electronic Business to both people and organization. Others examples of product company pioneers include Larry Ellison of Oracle, Scott McNeely of Sun Microsystems and John Chambers of Cisco. The software industry leads the entrepreneurship trend. It occurred because of the intelligence and people, rather than capital alone, and the capable of rapid scaling.

Internet is supposed to be a equalizer between big companies and small vendors. The structure and capabilities of the Internet further reduce frictions in the marketplace in the three dimensions of time, distance and information. The Internet marketplace fosters global production of products and services, which, thanks to more easily accessed information, are tailored exactly to what a buyer needs and are available exactly when the buyers want it. Moreover, because access to the power of network is relatively easy and cheap, small businesses have the same opportunity as big companies. to meet market demand. We must consider the barriers to entry in this market and one of the most important is the Information technology, but we accept that these barriers are lower than in the traditional market, concerning aspects of low overhead costs and more democratic information about products and demand . Otherwise, in physical markets large size was a comparative advantage, helping companies to command a larger presence in physical form, market share, and reputation. The biggest condition was associated with high quality products, what is not necessary perceived in real life.

Since physical distance is not a barrier to do business electronically, WEB market has the ability to save costs and time and eliminate the intermediaries in the distribution chain, nominated “desintermediation”. We can cite the example of cars . Customers Knows what brand and model he or she wants to buy. So, the buying process can be reduced to checking the boxes for the desired options, entering payment details and specifying a delivery address. But, the physical contact has been used by car industry to maintain customers. The alternative founded by Volkswagen is give showrooms with a more customer-friendly localized in dealership, providing customers with all information, including marketing and finance options.

On the other hand, the concept of market intermediaries is to give more efficiency for the market process. Then, we can perceive that in electronic business the new framework will open channel to new innovative role of intermediaries, *including Financial Intermediaries*.

The Business revolution also means revolutionary changes for the environment. The timing of changes will vary according to industry and location – some organizations particularly in Industrial Technology and *Information Intensive Industries*, the adaptation to the new rule of market must be in a short term. *The Finance Industry are in the group that has to take the position in Business Revolution now.*

3. Business to Business B2B Market Tone

We showed the growth of the phenomena Internet, the key role that business to business has in this environment, the challenges to firms to be competitive in the new marketplace. Now we will develop the new modern concept of Business to Business MarketTone, that defines clearly, the framework that Financial Systems has to face going to 21st Century.

Business to Business (B2B) Internet development has been receiving most attention by all the people involved in digital economy , mainly venture capitalists like Internet Capital Group, CMGI, Benchmark Capital and many others. They are making multi – billion dollar investments in B2B Internet ventures. In fact, analysts are predicting that 2000 will be the year of explosive Business-to Business explosion. Most value-creation in the economy occurs along B2B supply chain. In fact, recent industry reports by the major investment banks - Goldman Sachs, Morgan Stanley Dean Witter, Bear Stearns, and BankBoston Robertson Stephenson indicate a growing supply of financial capital chasing the new B2B entrepreneurs.

3.1 - Definition : Economic perspective concerning the new online B2B trading platforms

Sellers, buyers and investors are interconnected in a new environment, nominated as new digital landscape. Increases in the sophisticated network as well as

increases in Internet-based commercial software applications would cause significant sectors of the economy to become more like the economics described in textbooks. From an economic perspective, electronic commerce has many characteristics of a perfectly competitive market. Although perfect competition has been the basis of most economic studies by which we evaluate economic efficiency, it is far more an exception in real life than the norm. As well, electronic commerce presents an experimental stage to further realize the economic efficiency of a competitive market.

Regarding all the aspects described up to now, our analysis will adopt Business to Business Market Tone concept , as the most recently concept that based the foundation of business transactions. In our opinion this concept will guide the direction of decisions and investments for all involved parts in the game.

“MarketTone gives companies and their customers and suppliers continuous access to a wide variety of electronic markets for purchase and sale of their inputs and outputs via online catalogs, auctions and exchanges”.

The Internet connectivity viewed in this new concept of B2B MarketTone will have an important consequence on the traditional business model as it process the raw materials that it buys (***inputs***) into the goods and services (***outputs***) that a company offers in the marketplace. In this hand, the view of Market Tone is much wider than simple e-procurement, because it clearly shows that an input can be an output, every buyer can be a seller and vice-versa. So, every decision can be hedged and every position can be insured in the same way that auctions can be reversed and buyers can set the price.

Every company can be viewed as portfolios of inputs and outputs.

In this hand, when the price of company`s inputs decrease, and when the price of company`s outputs increases, it means that the price of the company will change, In this example, it might increase. It is a result of the wider vision over the stock

market, which will be much deeply discussed at next part of the paper – Financial models into B2B Market Tone.

This view of B2B is much more aggressive than the others, and will have implications for the global digital economy.

As said by Forrester Research analyst Vanda Lief:

“Aggregators, auctioneers and exchanges are reshaping business trade relationships. As these new models blossom in vertical markets, they will change the rules of engagement by flattening industry inefficiencies”.

So, B2B Market Tones will arise in many parts of the world, some industries will be affected most soon, then others, but the fact is consequences over all the global economy - large and small companies , many industries, many countries. The B2B more than e-procurement will create a new environment of Internet based catalogs, auctions and exchanges and affect financial structure to many participants of this new world.

3.2 B2B Platforms in Cyberspace: Catalogs, Auctions and exchanges

The important reason for the flood of new B2B money is past numbers. Major Internet consumer initiatives the past years has resulted in relatively valuations of companies. But the most reason that makes companies works for widest space in Internet Platform is the most value-adding activity in economy conducted in B2B interconnection chain market Tone. We can see at least, five categories of technology companies that are working for wider space in the Internet platform.

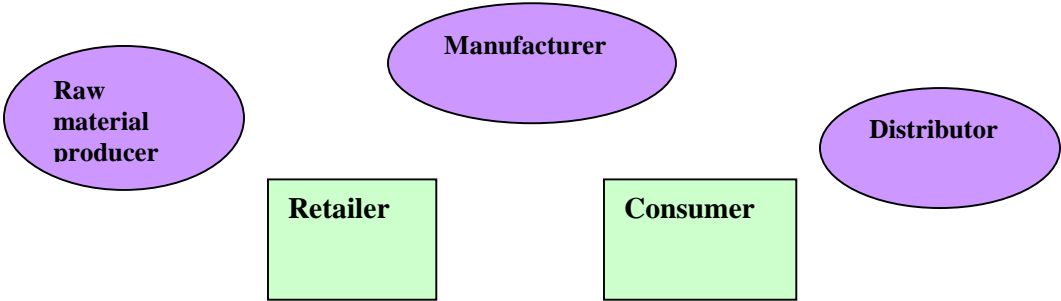
This includes hardware companies like Dell, Cisco and Lucent; software companies like Microsoft, Sun and Oracle; bandwidth companies like AT&T, Bell Atlantic and Sprint; content companies like Disney, NBC and Time Warner; and “Bit Processing Companies” like Amazon, AmericaOnLine and eBay.

These companies are diversifying aggressively outside their core business in order to pursue value-adding activities on their Internet Platform. Some analysis predict

that B2B ventures will increase faster than any prescription as well as significant amount of financial banks.

The trend that guided companies is focus on total financial value of B2B chain.

EACH STAGE OF THE VALUE CHAIN REPRESENTS A LUCRATIVE B2B MARKET



Then definition of Market Tone includes 3 parts: catalogs, auctions and online exchanges. In the catalog approach, sellers list their products with prices, specifications and delivery terms and facilitate an electronic web-based ordering program. Other environment provide financial settlement as well. A good example can be found at www.chendex.com. The auction approach is a result of some experiences in the consumer marketplace like e-Bay. Many companies discovered this way to do business in order to unload excess inventory, surplus goods and obsolete equipment. A good example of this approach is www.adauction.com.

An exchange market approach matches buyers and sellers via bid and asked prices, like in typical stock market, whereas brokers negotiates stocks, bonds, futures and options. A good example of this approach is www.tradeun.com.

In this approach the parties can take on hedged and future positions, including marketmakers-third party, who can gives liquidity in these exchanges with temporary long and short position.

As mentioned before, Market Tone is far more than an optimization of the relationship among the supply chain or e-procurement. Market Tone clarify to the market the interconnectivity among all companies`inputs and outputs.

Into this notion, we can understand the new B2B platform created in 1999 by GM and FORD. They allowed their suppliers to forge an electronic relationship with

these major automobile manufactures. Concerning the volume and scope in this automotive environment it is clearly a market-creating endeavor. And all suppliers will be affected – wheter they do business with GM and FORd or not.

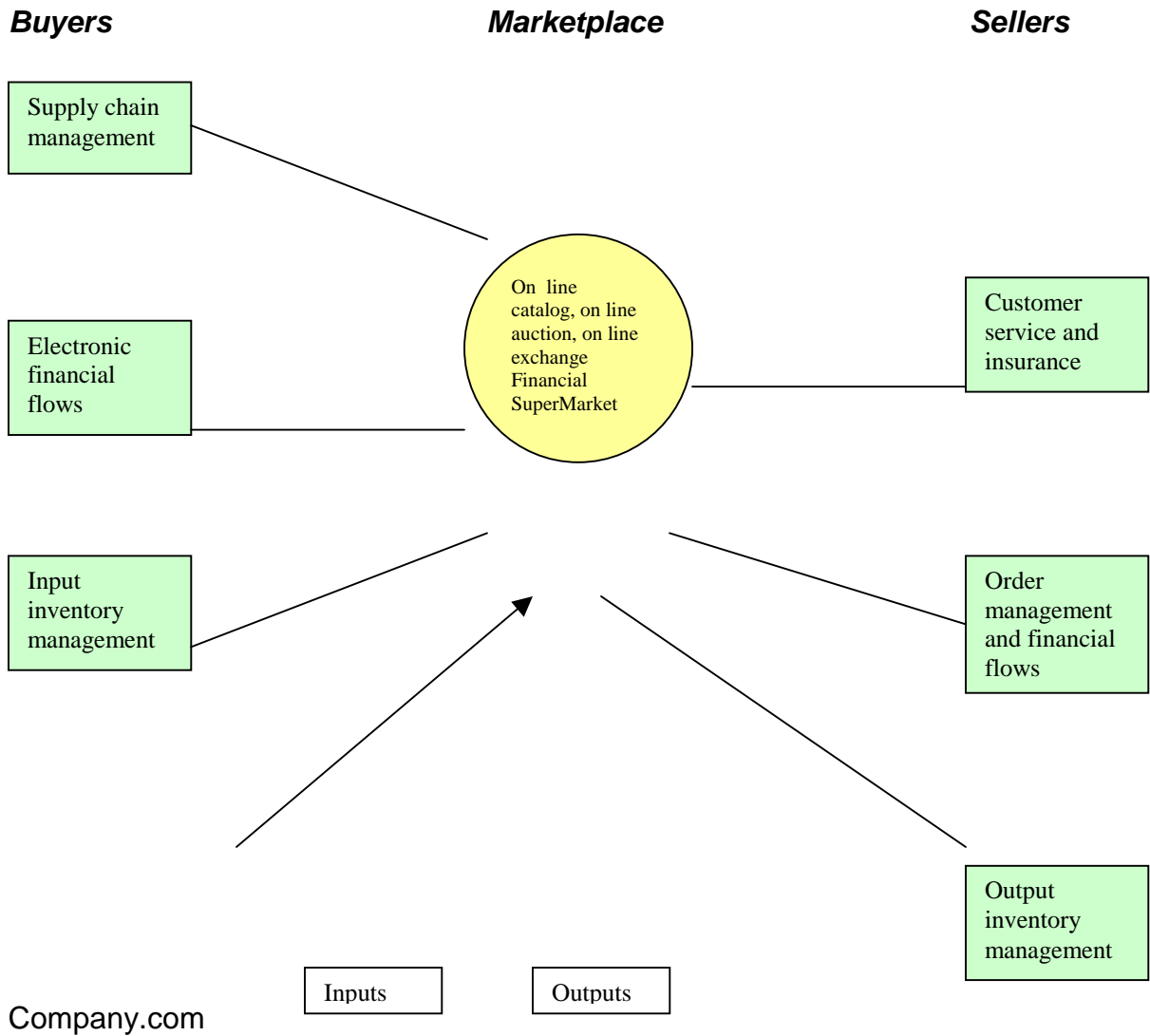
Energy trader www.altranet.com explains the length of their sevice platform:

“The market model at ALTRA does a lot more than match a community of buyers and sellers in the energy marketplace. They use the system for price discovery, posting of bids and offers, and to consummate deals for three forms of energy: liquid fuels, natural gas, and electric power. We support electronic scheduling and delivery services from sellers to buyer and payment services from buyers to sellers. We also protect the buyer and seller from default by providing a unique insurance-based limited financial clearing service”.

3.3 Cyberexchanges in the B2B Landscape

Although Internet users, mainly catalogs and auctions, are not new it is impressive how, in the last six months, we have seem creations of formal exchanges around the world. It works similar the popular securities exchange market. Basically, exchanges can be use to acquire the firm`s input and to sell the firm`s output. The most important results for companies is the decrease of search, analysis and transaction costs. That`s why industry forecast that by 2003 over 35% of the Internet transactions economy will be consisted of exchanges in cyberspace.

SUPPLY AND VALUE CHAINS ARE BACKWARD AND FORWARD INTEGRATED VIA MARKETTONE TECHNOLOGY



The exchanges are being created to trade all products and services in a stock exchange format. It looks like complex at first moment, but the system begin simple when the objective is defined:

“The net market maker brings business together at dynamic trading exchanges, it is quickly becoming the most popular many-to-many Internet business model”.

In order to support the new Market Tone, we can see the birth of various Business Venture that are establishing the foundations of B2B. These companies serve as software developers, physical market maker hosts, bandwidth and storage players, concept developers and marketplace evangelists.

Since most B2B purchases and sales involved products that require transportation as well, the model is developing conditions to support multi-part transactions. For example, a buyer of steel can buy transport service at the same time of buy the product. It clearly increases the efficiency of the market, as well, regarding that the decision concerns all the aspects online, optimizing complex transactions.

In this hand, the interests of venture capitalists will bring more and more companies into this market, increasing the participation . It will require high level of information. If a oil price increases, a impact over new cars production will be negative. The logical conclusion is the decrease of steel and plastic inputs demanded by automotive industry. In the traditional market, instead of the same effect, the length of time observed into the changes and the impacts, play out over several months. Into market Tone, it will be in real time and the necessary adjustments will be taken, increasing, once again, the efficiency of the market.

The structure of the new framework will allow transparent trading among exchanges in the market and taking advantages of opportunities presented into the market Tone.

3.4 – Conclusions Remarks regarding to B2B MarketTone

Looking for all the issues raised and discussed above, concerning the new relationship between enterprises , the conclusion is that the B2B marketplace is far-reaching more than to do business electronically. The huge broadband communications network via online catalogs, auctions and exchanges will allow a far more efficient procurement and sales. It will create, as well, far more efficiency financial settlement process. In this hand, the new cyberspace phenomenon will have much more impacts over the structure of the marketplace. The widespread use of the Internet-based Market tone platform implies that products and services will be negotiate in a efficiency exchange environment. Firms can have

simultaneous positions in inputs and outputs , as well as fixed capital like equipments and buildings. At the same time, inventory valuation in companies will become easier since there will be many more market prices to determine reliable values. Even asset management data warehouses and surplus trade (e.g. www.assettrade.com, www.techsmart.com , www.imark.com) will be able to more easily value prices, trade and manage the physical assets of a wide variety of firms.

The key approach of this vision is the management of the current and future assets portfolio.

Another important issue raised by this new view of the marketone is that companies will be seen as portfolios of inputs and outputs. It will be pretty clear for all the types of market, including investors. If the price of a company`s major input declines and the price of a company`s output increases, the logical result over the value of the firm is the increasing of its value. It will be reflected in its stock price and will be the link between B2B Internet trading markets and financial stocks market.

Finally, B2B MarketTone will cause “significant sectors the new digital economy to become more like the economics described in textbooks”. Business that provide the hard and soft infrastructure to implement these new platforms will grow rapidly.

“Companies are finding that e-procurement is transforming the entire supply base and its large cost structure . The return on investment for e-procurement is dramatic, with the average ROI (Return on Investment) in excess of 300%.

And those companies who discover that it will be the new competitive framework and learn soon how to be in a good position in this market will gain competitive advantages in the new economy of the next century.

The Impacts over the Financial Sector will be very right now, hard , definitive and important concerning all these new environment . Our proposal is discuss most of these impacts over the Financial System going to 21. century.

4 - NEW CONCEPT OF E-BUSINESS AND THE IMPACTS OVER THE FINANCIAL MARKET

4.1- The Role of Financial Sector in Economy

Financial markets have been responsible for providing necessary funds from savers to borrowers who are looking to invest in productive activities. The market and operational efficiencies of financial markets have long-term effects that determine the levels of future production and consumption. Financial structure is in fact a key ingredient for general economic well-being. A country's financial system intermediates between savers and investors and helps allocate and discipline capital to yield economic benefits to both individuals and the economy. The Financial system is also the conduit for monetary policy, which affects the overall level of a country's macroeconomic activity. Domestic policies that encourage a deep and stronger financial system support economic development. Global forces and the liberalization of financial systems, including through electronic business can support these objectives, although policymakers need to spend some efforts in order to visualize this new pathway .

4.1.1 - Finance, Development and Electronic Business -

The question of how finance and development are linked, and what impact international competition might have on domestic financial market are not new. However, the results of these questions have implications for how policymakers might use electronic business to help create a financial environment conducive to development and moreover , how this environment conducive to electronic business also supports financial sector development.

Development of financial sector, mainly where there are clear legal and accounting systems, improves long-run economic performance by raising

productivity growth (Beck, Levine and Loayza 1999). At the same time higher income have been associated with a deeper and stronger financial system (banks, non banks institutions and market), that with stand economic volatility and downturns.

Competition, no matter where it is coming from , domestic and foreign, makes the financial market more efficient, achieving higher economic rewards. Argentina demonstrates that domestic financial institutions remain active in the domestic marketplace even after the market is opened to foreign competition (Claessens, Demirguc-Kunt and Huizinga 1998, Clarke et al.1999; Denizer 1997).

Brazil demonstrates the same results after opened the boundaries of the country for foreign banks. The arrival of the foreign banks has also improved the efficiency of the financial system. However private banks are still hegemonic when compared to foreign banks and they have been reacting efficiently to the stronger competition. The private Banks in Brazil are much less vulnerable than in the beginning of the Real Plan (Fernando Pimentel Puga, 1999).

The domestic institutions have unique knowledge of the domestic marketplace, allowing them to thrive by adding-value to local firms and consumers. This combination of international reach by some institutions coexisting with local reach of domestic institutions is a feature of the Internet and electronic business more generally. The Internet electronic business enable lower cost cross-border financial activities that may not yet have been liberalized sufficiently by foreign presence and domestic entry. It can play a part in improving financial and overall economic performance.

4.1.2 - Globalization of Financial Systems

People always comment on the power of the global financial system. They based their comments in the amount of dollars that are traded through the SWIFT

electronic funds, about trillions of dollars. But it is not a true global financial system. It is merely a global financial trading system. Money is traded among what are essentially local institutions: banks, mutual funds, investment companies. etc. even multinationals corporations are usually still located in one geographic place. A truly global electronic banking system would allow an individual or a corporation to deal with one financial institution across all geographic boundaries. Organizations such as Merrill Lynch and Citibank are striving towards this goal. Electronic Business is driving the financial services industry toward such transnational banking facilities.

The possibilities of the Electronic Commerce world are enticing. For example, companies will be able to make one payroll deposit to cover all employee payments for a given period no matter where those employee are located. Similarly, the employees will enjoy access to their money in the currency of choice wherever they happen to be. Other important example may be the destiny of the investments. The Internet phenomenon is attracting investment from all parts of the world.

Some domestic rules designed by governments make this impossible nowadays. But, as time goes by, the power of this environment will leave this issue to the top of governmental agendas.

4.2 - Financial intermediaries and electronic commerce

The use of Internet to transact financial business will bring about a fundamental change in financial markets and Institutions that are already at the forefront of electronic transactions. This affirmative would not make sense when we look for the Financial Industry. Banks are among the most intense users of technology and they are involved in some of the more exciting developments on the Internet such as secure payment technologies, transaction-enabled Web sites and advanced customer relationship management. Banks have been clearing their accounts via domestic and international electronic funds transfers; today's security markers also have been using highly automated account-clearing systems and automated

exchanges. The NYSE – New York Stock Exchange, for instance, has allowed after-hours electronic trading without specialists since 1991, while stock or commodity traders have access to around-the clock electronic markets through Reuters Holdings'Intinet (<http://www.instinet.com>). The advent of electronic payment systems and the electronic commerce were another signal of the evolution of financial institutions and markets. With each new introduction – wire transfers, electronic funds transfers, credit cards, automatic teller machines, financial market become more efficient. This market have been always responded and in the majority of time, supplanting the changes in the new global framework. In this hand, many banks have identified Internet banking as a key route to increase their market share and retain customers. More than 1000 US banks have or plan to have fully transaction Web Sites. European Banks have been embraced Electronic Business as a competitive weapon. Banks recognize that customers are looking for easier ways to access information and conduct transactions. They see the Internet as a major commercial opportunity. The most important financial reason for this interest in Electronic Business is added revenues, but saving money is a closely second reason. Branch-based transactions are costly and the extensive branch networks that allowed banks to expand in the past are difficult to sustain in a era of intense competition. Call centers and automatic teller machines have helped drive down the cost of basic transactions, but Internet has the power to radically reform their cost base.

Otherwise some financial institutions have elected the Internet the most way to consolidate and increase market share, is pretty early too predict how electronic business will change the financial markets'organization and institutional financial structures. But it is pretty clear that it will happen. It is happening now.

4.2.2 – Electronic Banking and financial services in electronically platform

Electronic Business directly influences the financial structure of an economy in several ways. First, just as businesses that produces goods, electronic commerce affects the range of products that financial intermediaries offer. The

electronic business affects, in fact, how businesses and buyers interact with each other. Since electronic business is global, financial intermediation is more likely to involve cross-border transactions and nondomestic institutions. Second, financial intermediaries interact with each other and with the central bank via payments systems. In the new electronically arena, to have a chance to meet the high expectations set in the press with regards to the Internet, efficient and effective payment services need to be established and accepted by businesses and buyers alike. On the other hand, the faster pace and the greater international component of electronic business place greater demands on a country's financial plumbing. The global competitive framework will create new demand for products and services. More broadly, the multiple components of the financial system – banks and non banks financial intermediaries and markets – play a very important role in supporting the development of firms that , on the one hand, participate in the global value chain of production and, on the other, innovate electronic business to best meet the needs of local users. Government policies that influence financial intermediaries and the range of financial products will affect with a major dimension the development of electronic business in a country, in fact, over the worldwide. Recognizing this, virtually all interested parties in academia, governments and financial services are exploring this issues surrounding electronic payments services, digital currency and digital exchange markets. Banking, securities and insurance, also are concerned with financial instruments and money. Already, the boundaries are becoming less distinct between the various organizations that form the Financial Industries. Indeed, looking for the market organization in Business to Business Market Tone, we can see that the financial industries are blurring between these and other industries such as retailing.

The Internet will amplify and accelerate the breaking down of the boundaries of these organizations and also blurring with other processes and industries.

For example, what is a bank? It is a organization that stores value. It allows individuals and organizations to develop value through their work efforts, value that can be stored until it is used to acquire a product or service from someone else.

Will Electronic Business allow other organizations to store value? The answer can be **Yes**. Organizations, particularly large ones, could store the value generated by their “employees” work efforts an sales, pay substantial interest on these values and negotiate with other organizations for special deals in order to transfer that value from one organization to another.

Banks were extremely frightened, and many still are, of the power that Microsoft could exert in the banking business. Instead of having dollar bills, we could have Bill`s dollars.

The sense is that most organizations are very capable of functioning as banks. The software systems, services and support are all available for them to do so. Many large companies such as BWW, GE and General Motors have set up the equivalents of banks, although they do not act as retail banks yet. Credit Unions establishes within companies of all kinds have some characteristics of banks. Regulation prohibits them from fully competing in the banking market.

There is no doubts that the banks will have to reexamine their roles. One question facing banks that is not necessary related to banking is to what extent they can and should use the new environment to develop and offer new products. Should they use their role as trusted agents to move themselves into other areas of the electronic marketplace? Is the better way to become portals?

There is a major debate in the United States over the direction of banks and the financial industries in this regard. In fact, electronic banks are rapidly moving to offer enhanced services for their customers. Probably, the most important facet of any individual`s or organizations`s life is finance. If so, then an argument can be made that the financial service institution should become the core of the customer`s future activities in any number of areas, particularly areas such as investment and insurance, mainly regarding the new clearly conditions of the marketplace as discussed below. Banks also see a rapid movement of other types of companies into their banks domain.

4.2.3 -Transactional Efficiencies into electronic markets

Electronic Commerce technologies affect individual financial institutions in a number of ways, which together push them to alter the mix of services they offer. Electronic Commerce technologies significantly reduce the cost of providing financial services, but they also turn traditional products offered by financial institutions, such as some loans, into commodities. For example, a 1997 study by Booz Allen and corroborated in 2000 by Arthur Andersen suggested that a transaction at a teller window costs a bank \$ 1.07, an automatic teller machine (ATM) transaction \$0.27, and an Internet banking transaction only \$0.01. At the same time, margins on some traditional loans are falling. Competition by lenders for the right to offer loans to borrowers who fill out standard forms of standard loans has become more intense and more common, as discussed in previous section. For security trading as well, full-service brokerages charge \$150 from executing a trade, but online brokerages like e-trade charge only \$10.

In addition, market efficiency can be measure by the time it takes to match buyers and sellers. The electronic market create conditions to increase search and settlement process. The automatic negotiation needs some specifications like predefined price limits, volume and time and continuos participation of all parties at the same time. This fact makes the negotiation system more clear for all buyers and sellers. For the financial systems this issue may be a opportunity or a threat., depends on the ability of the Financial Institutions to predict the new needs of the market .

On the other hand, electronic commerce technologies and lower transactions costs allow financial institutions to treat their clients individually. It means that one of the trend is customize the relationship between financial institutions and clients. In this new electronically age, financial institutions can retain their relationships with clients by creating bundles of services unique to the needs of individual part of clients, and businesses as well. In addition to technical challenges associated with bringing together multiple parties, there remain some issues, for example, security

and trust, that will be an important part of the whole discussion, but not a barrier to the faster development of the new environment.

4. 3. Financial Intermediaries – Electronic Market Case Studies

Two examples of existing financial markets using the Internet can be: initial public offerings on the Internet, and computerized exchange markets, showing how easy is the transformation process between the traditional and electronic market, as well. The effects over these markets in short run can not be so high, but they are important to understand the role of investment firms, underwriters and stock brokers in the new electronic context. As transaction costs decrease via automated trading, simple brokerage (executing buy or sell orders on behalf of customers) will no longer provide significant sources of income.

4. 3.1 – Internet Initial Public Offerings - IPOs

The use of the Internet for capitalization programs has become not only viable, but fashionable, since 1995. Investment Banks, an underwriter, traditionally responsible for this role in the market are going to share this business with electronically intermediaries. Spring Street Brewing Company, a microbrewery in New York, offered the first Internet IPO, raising \$1.6 million from 3,500 shareholders without Wall Street's Underwriters. Spring Street Brewing opened its capital without the need to rely on brokers and pay no commissions. The costs of transaction were lower. Since its first Internet IPO, the company has formed an on line investment and brokerage firm, Wit Capital Corporation to promote Internet IPOs and subsequent public trading of stocks in secondary markets. The list of Internet IPO firms includes Internet Capital Exchange (<http://www.inetcapital.com>) and web IPO – Capital Formation Group (<http://www.webipo.com>).

The Internet IPO's firms tend to eliminate layers of intermediaries and reduce costs. But its survivor in the market will depend on the increase of service

quality including mainly the information process. Like in the traditional market in which brokers provide information for investors, in Internet IPO market this role is condition to be in market. Investors must be convinced to put their money in certain investments through enough information about rating of risks, and performance of profits. This issue is more complicate but it does not take out Internet IPO firms advantages in this market. Furthermore, as access increase information contest and computational programs to evaluate the content, consumers will need not to rely on brokers and will be satisfied with the lower costs of transaction. The functions of brokerage firms have been replaced by more efficient computer programs and electronic markets. The length of changing can not be evaluate, yet.

4 .3.2 – Digital Exchange Markets

The main role of Secondary Markets, such as NYSE, is to provide liquidity for asset holders. Internet Financial-service firms tend to offer both Internet IPO`s and subsequent trading in secondary exchange markets to accommodate consumers` need for liquidity.

First of all, it is necessary understand the difference between Internet Exchange Market and Computerized Exchange Systems. While Internet Exchange Market offers the opportunity to organize the new capital markets, Online brokerage services offer a system to execute computerizes transactions through such exchanges as NYSE or the National Association of Securities Dealers Average Quotient (NASDAQ; <http://www.nasdaq.com>). Since 1969 NYSE, using screen terminals connected worldwide, connected investors and clearing members sell and buy orders electronically before it opens for trading everyday. In 1991, The board of NYSE decided to create an after-hours to trading transactions between 4:15 up to 5:15. In 1993, New York Mercantile Exchange (NYME) and AT&T launched an electronic after-hours options and futures trading systems. Despite of all changes introduced in this market, the access is limited to security professionals and Institutional Funds managers, brokers, dealers,

and exchange specialists who take orders from individual investors. Nowadays, individuals investors can sell and buy without a broker through private online trading houses accessing NYSE for instance, but they still depend on brokers` systems and have to pay commission. The average of commission ranging from \$20 to \$40 per trade in USA. But the biggest issue involved is that this market is essentially organized by brokers that centralize the trading and settlements of payments.

On the other hand, Internet Exchange Market has the potential to change capital markets in a fundamental way. First, the coordination of the market clearing will go to the brokers` hands for the buyers and sellers. Second, the spread of the market among new investors will create the opportunity to new types of financial instruments and capital markets (combine equities, financial derivatives, bonds and commodity trading markets). On the other hand, the possibility of influencing prices in a brokerage market through artificially ways by brokers and dealers takes the prices away from the reflection of demand and supply of financial assets, providing higher profits for brokers. Internet exchange market will not only respond for orders and settlement procedures, as traditional exchange markets, but will rely on to technologies to automate the price discovery process, in which all market participants observe true prices.

Some people still defends that real-life market process has some features that even up to date technology systems can not deal with. But, brokerage market has been bringing confusion to the floor of exchanges, and the consequence is over the price that not reflect true market condition. Automated transactions tend to eliminate this noise. For instance, automated auctions sells computers and software on the Internet; Onsale.com (<http://www.onsale.com>) holds auctions to sell the computers on line. Multiple units of each item area available for sale and the auction floor – the web screen shows all bidders and bids.

The increase of the Internet Exchange Market depends on the speed of investors going to the electronic marketplace. Some people argue that NYSE is an established market and its investors believe on its reliability. Although this

may be true, if Internet Exchange Market become accepted by investors, it will provide capital markets with higher levels of liquidity.

4.3.3.– Information Brokerage

The information function of financial intermediaries refers to the sale of information to prospective traders of financial assets. Lenders have no adequate means to evaluate the borrowers activities, so risk-averse lenders may be unwilling to participate in capital markets. An intermediary can reduce or share the risks monitoring borrowers. In traditional markets, the risk can be spread and monitored by diversify portfolios. The fundamental reason to increase the efficiency in traditional market is the law of large numbers. This situation is completely different in open electronic market. In automated trading systems, traders bypass risk sharing with intermediaries. So, traders must resolve the uncertainty by acquiring more and quality information. The electronic market will increase the traders need for specialized information.

Many brokers and other intermediaries are opening new business to provide information for the market, taking advantage of their expertise, for example, Merrill Lynch & Co.. It can distinguish two kinds of service: direct information and indirect information. Direct sale refers to the unconditional selling of information to buyers, for any investment purpose. Indirect sale of financial information refers an specific portfolio of investment, presented by a stock dealer. The value of financial information market tends to be lower as access increase. On the other hand, market price may be the best information for traders, and price information is more efficient in the electronic market. The trend is to add financial information with other financial services.

4.3.4 – Application of Financial Super-Models

The increase on the efficiency of the market discussed all long of the paper will allow the Financial Sector more clearly measure the ratings of operation risks,

but on the other hand, will demand Financial Super-Models to support all new transactions between electronically players. Coming back to the concept of B2B market Tone, this environment will rapidly be extended to scale market exchange environment. Application vendors will create new platforms to take advantages of B2B environment. Some studies are been done in order to constructed methods using economically-sound market exchange and auction fundamental. One of the first result will be markets for futures and forwards delivery. For example, companies could estimate future input and output needs and order steel, plastics, chemicals, machinery, etc. for delivery in some future time periods. On the other side, will be some sellers planning their sells in some future periods.

Other important mechanism from Financial market would also appear when the speculators discover opportunities to participate. Hedging, portfolio insurance, aggregation, dis-aggregation and synthetic portfolios are few examples of what would may be applied in this new market. Financial Economists will have no doubt to create Black-Scholes financial formulas to search for mispriced options and other value anomalies that provide short term trading profit opportunities.

Other important approach raised when companies are seen as current and forwards portfolios of inputs and outputs, concerning financial issues. Every decision or position, no matter if it is a currency or forward decision can be hedged and insured. One interesting construct would relate the price/quantity package of inputs and the price/quantity package of outputs of companies to the market capitalization. The relationship between the marketTone input-output markets and the Financial equity markets would be closely monitored for imbalances and potential arbitrage opportunities.

Furthermore, some questions must be responded side by side the development of the financial market structure. One must be the question of the public and private nature of the data regarding marketTone transactions. It has not yet been addressed. How will be the measure of the secrecy in a domain of the transactions made in marketTone? Is it possible in this new environment? And about the role of the Government? Looking for the huge structures as Dow Jones, NASDAQ indexes, S&P, we can admit that some positions of inputs and outputs in

marketTone can be by the Financial Institutions. By the end, there is no doubt that Market Tone will further promote financial integration and connectivity across local markets around the world.

4.4 - Electronic Payments Systems

Beyond electronic banking or electronic brokerage, the financial sector is intimately involved in the broader realm of electronic commerce in its role as enabler of online payments for transactions between businesses, consumers and governments, covering all the electronic platform. For electronic commerce to have a chance to meet the expectations in the press regards to the Internet , efficient and effective payment services need to be establish and accepted. The efficiencies and cost reductions promised by electronic commerce, mainly Business to Business market Tone, will not materialize without an appropriate on line payment system. However, the real time business environment also demands a high degree of client verification as well as security and authentication of funds transferred. Financial partners or payments systems that cannot deliver both these services will not be competitive.

Moreover, Internet businesses must authorize transactions through payment institutions in real time so as allow immediate delivery of products. A financial system that cannot provide this will break the development of electronic commerce and of the economy generally. The shorter the time between authorization and actual payment, the more efficient the transaction and the lower the institutional risk.

Some proposed electronic payment systems are simply electronic versions of existing payment systems, such as credit cards, checks , but the others are based on digital currency technology and have the potential for definitive impact on today`s financial ad monetary systems, and consequently in government policies.

4.4.1 – Electronic Payment System - an overview

Electronic Payment System can be considered the next step in a long line of changes in payment clearing systems. The electronic settling of accounts has long been an integral part of payment systems using credit cards, debit cards, automatic teller machine and prepaid cards. What enables any payment mechanism to be processed electronically is the fact that unlike currency, bills or coins that carry monetary values, non-cash mechanisms are promises or contracts of payments. Based on the information transmitted following a transaction, the accounts that represent notational money are adjusted between banks and financial institutions, for example checks.

Electronic Payments Systems must be convenient for web purchasing, transportable over the network, secure and stronger and low-cost. We can divide the electronic payment system into three groups:

- Payment through an intermediary – a conventional process of payment and settlement that involves a buyer-to-seller transfer of cash or payment information – check and credit card;
- Payment based on EFT (Electronic Funds Transfer) – financial application of EDI, which sends credit card numbers or electronic checks via secured private networks between banks and major corporations;
- Payment based on electronic currency (digital money).

4.4.2 – Digital Money

The first and the second payment systems are the adaptation of payments settlement processes to the open environment of the Internet. Digital currency or electronic money, as well digital money is a new development which has far-reaching commercial, monetary and regulations ramifications. Digital Money is a concept, technology and/or instrument that is in the early stages of adoption. But the spread of the digital money will come in the early '00s, with the spread of the Internet Business. Physical cash will probably never disappear completely, but the

“Smart paper” we be consolidated as a merging of cash and smart card concepts. After all, cash is simply stored value.

What is digital money?

- ***“A form of money that stores value as sequences of encrypted digits in computer code. This limited, stored value is depleted when a money transaction is completed. Like physical currency, it is transferable and can be used only once in any given transaction. Also like physical currency, values of digital money are divisible into smaller units”***
- ***“Typically, digital money has no physical form. It exists entirely as software and is created in connection with a bank deposit account that holds ordinary currency. It is spent when a transaction with a vendor who accepts the value specified redeems it from the authorized source, usually a bank holding a local currency demand account”***
- ***“Like a paper traveler`s check, digital money exists independent of a particular transaction, can be saved or stored, preserves anonymity between buyer and seller and represents a fixed value (at least initially) in a specific currency. Also like a traveler`s check, it can be spent in a place of ordinary currency in numerous, if not all, business transactions that require the exchange of money. Because the instrument is secure, the bearer does not require identification”***
- ***“Digital Money transactions may be conducted electronically, through an Internet (or other) computer link, or by means of smart cards that capture and record amounts of digital money. The values stored on such cards can usually be replenished when linked to a bank`s demand deposit account of currency through an ATM, PC or other system at home, work or elsewhere”.***

Digital currency can preserve the privacy afforded by cash transactions, by various encryption methods and trusted third parties. But the one of the more important

feature of digital cash as a payment system is the capacity to make peer-to-peer transactions, either on line or offline in which two parties can exchange money without involving a third party. In this sense, digital currency is more than just an efficient electronic payment system; it is a monetary innovation that deserves closer economic analysis.

Properties and Specifications of Digital Money

- **Monetary Value** – digital money must have value that can be exchanged for other goods and services, be used to pay fiduciary obligations, or be transferred to another person. Digital Money is essentially a file, it does not have intrinsic value and must be linked to another system of value. The most common implementation is to base the value of digital currency on bank deposits, credits or pre-payments . The next step for digital money is to be accepted and trusted, establishing some properties , such as exchangeability and transferability.
- **Convenience** – Digital Money has to be convenient to use, store, access and transport and allow remote access to money via telephone, modem, or Internet connection. Electronic currency must be convenient in terms of scalability and interoperability, electronic storage, transfer devices and network capabilities.
- **Security** – Digital currencies are stored on hard drives connected to an open network ,and encryption protects it against tampering.
- **Authentication** – The inspection of digital money requires authenticating secondary information that accompanies the bills or coins, such as the digital signatures of banks or payers attached to the currency (serial number). Although it may be more secure, the cost-transaction may be higher. Some systems are be created to support their clients with software and hardware to allow peer-to-peer transaction.
- **Non-Refutability** - A similar receipt that have been used by cash transaction can be used by digital transactions. An alternative is to append

all transaction records into digital currency. In this system , digital coins accumulate information about all parties involved ins past transactions.

- **Accessibility and Reliability** – One advantage of the digital money over the cash transaction is its capability to be transported over the network. Because of this, digital money must provide fast, continuous and realible connections.
- **Anonymity** - An anonymous payment system is needed to protect against revealing purchase patterns and other consumer information, although the possibilities of criminal actions, as Government is afraid. Digital Transactions can be equipped with various degrees of anonymity, masking the user identify to the bank, the payee or both. On the other hand, some versions can allow the identify the users when this needs arise. The debate of anonymity tends to be stronger, in the sense that is linked with tax evasion, money laundering, etc.

Technical Specifications of Digital Currencies

E-cash – E-cash is a digital currency protocol developed by DigiCash and tested on the Internet. E-cash uses public key encryption technologies to maintain the integrity of digital coins. By varying the encryption, Ecash can have strong or weak anonymity. DigiCash licences Ecash technologies to banks, which convert outside money(dollars) into digital currency and serve as currency servers in authenticating, clearing and settling accounts.

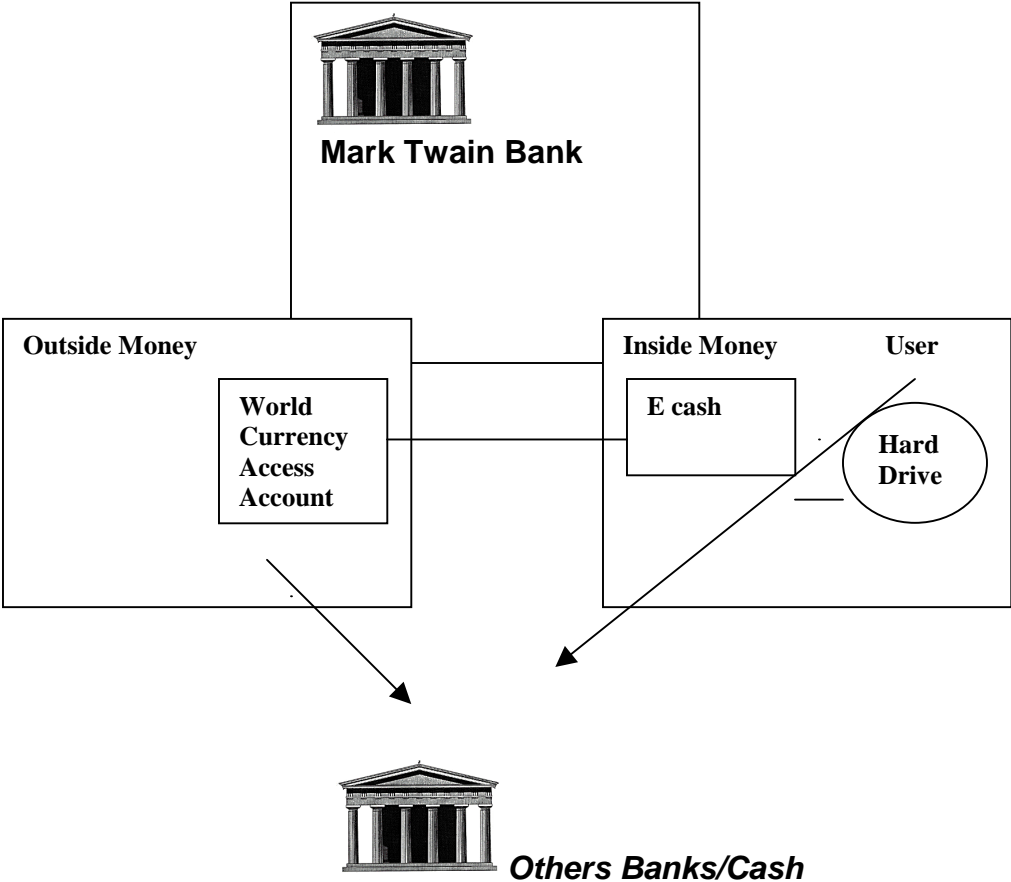
Mark Twain Bank of St. Louis (<http://www.marktwain.com>) is the first electronic bank to license the Ecash technology that serves interface functions between dollar-denominated accounts and Ecash accounts.

In this version of Ecash , a user establishes a WorldCurrency Access account with Mark Twain Bank, as a regular account, denominated by outside money (dollars). The conversion from outside money to digital currency happens when the user requests a certain amount of money be put into the Ecash Mint, which

manufactures electronic coins and where electronic currency is validated. The user uses Ecash software and can move any amount of money between his hard drive and Ecash Mint , as well as into WorldCurrency Access accounts. A user can transfer a digital coin to a merchant who accepts Ecash and maintain account with Mark Twain Bank. Despite of this is not a peer-to peer transaction, the third part is needed (the Bank) to counter the security problem. In essence the digital coin is merely an encrypted serial number, and some forms have been created to prevent the double spending.

Netcash, developed by the Information Science Institute of the University of California, is another variation of digital cash. It is proposing use currency servers that may be owned and operated by different banks or non-banks organizations. Netcash protocol is based on e-mail verifications. Although this system may contribute for the spread of users, the need to be confirmed to avoid double spending difficult the implementation of direct transactions.

E-cash model of Mark Twain Bank



Millicent - Millicent was proposed by Digital Corporation (<http://www.research.digital.com/SRC/Millicent>). The Millicent system is a pay-ahead coupon system that uses vendor-specific digital scrips, which are akin to merchant-issued coupons. Instead of using bankers and other intermediaries to verify a double spending, a scrip is presented to a merchant , who will verify its validity. A scrip has a serial number with a particular value , an expiration date and the name of vendor who accepts the scrip. It can be a solution for low value transactions, tokens, coupons and advertising debates. By combining consumer information and the vendor-specific nature of scrip, a seller can increase its market share consumers gain from lowered prices.

Mondex - Mondex was developed by Mondex International (<http://www.mondex.com/mondex>). It is a smart card system that transfers stored balances. A smart card is a hardware platform with an integrated circuit inside that can be programmed to prevent double spending without resorting online verification. Smart cards are different from debit cards, which do not require pre-withdrawal of cash. Similar to Ecash, smart cards users must withdraw money from a currency-denominated account to a digital currency account. So, a Mondex card is a portable hard drive with a built-in Ecash Mint. Both Ecash and Mondex are prepaid systems, unlike debit cards, which might be considered “just in time” pay cards. But a smart card is capable of offline transactions and Ecash need to be online.. In addition, smart cards use hardware to make the system tamper-resistant whereas Ecash relies on software encryption and a trusted third party or currency server. Smart cards possibility direct transactions, but has higher costs. The trend is that this difference between smart cards and Ecash system soon disappeared and the costs fell, spreading the users around the world.

Trends for Digital Money – By 2002 to 2005, digital money will become a large component of the payment process around the world. This trend will be driven by Electronic Business, particularly Internet Commerce Business to Business.

The reasons to move to digital money are relatively simple:

- Physical money is expensive. It costs US banks more than \$60 billion a year just to handle cash. This includes an entire range of processes such as authenticating, counting, sorting and storing. It probably costs non-banking institutions in the United States at least the equivalent of another \$60 billion a year to handle these cash systems;
- Cash is becoming increasingly easy to counterfeit;
- Cash is the prime currency for one of the largest industries in the world: illegal drugs and other forms of crime.
- A key issue for banks is cost. Banks expected that digital money and online banking using the Internet will reduce significantly their operational costs.

Although Banks are working for lower costs in the Internet Platform, they expected new costs from this new technology, mainly data communications and networks. They also expect costs from marketing and support. There are additional costs from security issue.

Banks have to plan these added costs as well, provide technology support. Banks who had introduced Internet banking services saw how their support requirements changed. If you are a client from a electronic banking, you will always associate failures to your bank and call it when you have some kind of problems, mainly technological problems. Some banks have sought to outsource portions of this support activity to technology companies. But, it is a shuttle difference between technology component and banking company.

This problem will be endemic to all forms of Electronic Business as well. Regarding to our comments about the Business to Business MarketTone, we said that companies are diversifying outside their core business in order to pursue value-adding activities on total value of B2B chain . This issue added with the Banks challenges to balance their technological costs can be a signal of changes in the market organization and structure.

Security

Recent surveys have shown that the security issues are viewed differently in important ways in different geographic locales. US respondents do not believe that security is an inhibiting factor in e-relationship. In the USA , respondents rate security is 4.5 in importance on a 1-5 scale. The satisfaction rating for security, however, is 4.2 which shows that the respondents believe that the security is under control. Certainly, all the vendors of e-business, most financial companies, must ensure that their products and services contain security protection and are compatible with popular security products and technology . European respondents have been concerned about security more than their counterparts and are less satisfied with security products in general. It can be expected that in Europe, security regarding e-business will be more explore next years. The security gap will close as mores is invested in Internet security products, services and management. In our acknowledge, security will be a usual concern , but not a barrier for the growth of Internet relationship in the near future.

4.5 - Big Players – discussion cases

1 - Chase Markets its e-commerce projects for B2B customers through combo approach, as well as one-on-one through its site -

Chase Manhattan Bank NA has identified leadership as being the most important issue in B2B e-commerce. One area that the bank has invested in is security. It is playing a leadership role bringing traditional banking together to form Identrus (Chase and other banks formed *Identrus*, in April 1999, a site to allow for B2B e-payments using digital certificates). *Identrus* is a solution to lack of interoperability among banks in marketplace, it so far has 21 member banks, including Chase, Bank of America Corp., Citigroup, Barclays plc, Deutsche Bank

AG, Wells Fargo&Co., the Canadian Imperial .Bank of Commerce, Sanwa Bank Ltd. And HSBC Holding plc.

According to the board of directors from Chase, market recognized that there was a problem from banking standpoint in that the Internet brings together unknown buyers and sellers. One way to handle that is to bring in digital certificates from your trusted fiduciary provider.

While *Identrus* is been driving to gain trust, Chase took a stake in *Escrow.com* , which allows for B2B payments without credit cards. Chase participated in \$30 million equity financing round for *Escrow.com* in this year. Chase instead, holds payments until the deal is done. Credit cards will not be the only means of transactions. This allow buyers and sellers to put money in the hands of Chase and inspect the goods before they are shipped.

Basically, Chases`s guidelines are moving away from a the” ***only way to do it is to build it yourself mentally, to extending our franchise and make alliances, basing in our tremendous brand***” .

In terms of marketing, Chase is doing it through traditional advertising and it is also one-to-one through its site (www.chase.com) . The bank is trying to have an uncoordinated approach, using its huge network, and having e-commerce execs in all lines of its business.

Some issues have been discussed among brokerages, that major banks, Chase included, have a long ways to go in the B2B Web space, and they also use to say that banks risk being disintermediated by tech vendors. Chase thinks that it is not what will guide the market. Banks are a trusted fiduciary for companies, and can offer escrow, settlements, and payments. Tech vendors can only point to third parties to do this, according Chases`s strategy.

“Tech companies have to acquire customers, Chase has these customers, so we can bring them to relationships. So, we will partner tech companies to deliver technology that would take us longer to develop ourselves. We want a home-grow capability, but also give our clients the right product mix”.

Chase also signed a deal with *TradeOut.com* to build an excess inventory hub for Chase clients. Chase understood that from a balance-sheet standpoint

everyone has excess inventory. The TradeOut.com model allows Chase to give their clients an easier way to liquidate it. An it gives Chase a chance for another revenue stream and potentially to attract other clients.

Chases` s strategy to deal with the competitors is to look to partner with the best to deliver the best products and services. We want to extend Chase to customers making purchasing and settlement decisions. Chase is trying to be one of the best-positioned companies in order to take advantage of the new economy.

Wells Fargo - strategies to acquire new customers and retain current ones through Electronic Business

Wells Fargo and CO& launches a new product for small and medium-sized businesses that allows them to create Web Pages and offer online transaction capabilities. The software bundle, called One Stop eStore is available on the Bank`s Web Site (www.wellsfargo.com) and provides tools for Web design, development and hosting, payment processing and traffic building. This is a result of a research that establish that 66% of businesses had difficulty building an on line virtyal store, and that 60% of that group would use a service such as the One Stop eStore. Wells Fargo expectation is to attract new customers, and retain current customers as well. The bank is also offering the feature as a retention strategy in light of survey findings.

This is a part of some sources of additional services that Wells Fargo plans to rollout to small and medium-sized businesses, including personalization . Wells Fargo also entered into a partnership with search portal Excite, which will list the online merchants of its shopping services.

First Union and the major banks of USA have identified B2B as the new platform with the major results

First Union Corp announced plans to set up a unit focused on business-to-business electronic commerce. The bank will license software from Intelisys Electronic Commerce Inc, which specializes in Web-based procurement systems that allow buyers and sellers to set up online marketplaces.

First Union became the latest bank to vault into business to business electronic commerce and to create a special division devoted to building an online marketplace for small and midsize companies.

The rush to stake a claim in the B2B marketplace is creating some eye-catching alliances, as major banks feel compelled to line up behind the large vendors that specialize in this sector. First Union, for example, selected Intelisys Electronic Commerce Inc (New York, NY), because the company counts among its founders Chase Manhattan Corp., which owns a 33% stake in the private venture. In September 1999, Intelisys built a system for Chase.com that sounds analogous to the First Union`s system.

Other large banks are also busy cutting deals. Citigroup Inc. teamed up with Commerce One Inc. of Walnut Creek, California, the nation`s largest facilitator of Internet Procurement, to build an online portal linking buyers and suppliers.

All the banks adopting its strategy say the services they are creating will give their corporate customers access to discounts on office supplies, computers, and software. These products and services are most directed for small and mid-sized companies, allowing them to have much more power in the marketplace as the large businesses do.

According GartnerGroup Research, Banks are champing at the bit for this business, because this is where the high revenues are. Moreover, by creating their own marketplaces, banks can host the transactions on Web sites that carry their brand names.

Intelisys Electronic Commerce is owed - besides Chase Manhattan – by BVR, a venture capital firm; and Forstmann Little & Co. of New York, which invested \$65 million in Intelisys in October,2000. First Union Bank, Chase and Wells Fargo & Co have been constructed a good relationship through Spectrum – an electronic bill payment and presentment venture set up by those banks.

5 - Conclusion

The growing Business to Business Market will guide all decisions and investments for the most important players in the new economy marketplace. This is a result of the dominance of the B2B supply chain in terms of most value-creation in the economy. The factors that contribute to the access of companies into the electronic arena, are the steep decline in tech prices, the development of opened platforms, mass distribution of browsers, and commercialization of the WEB itself with media-rich content and electronic commerce. These factors allied to the faster widespread of information will establish no boundaries to this new way to do business, despite of the size of the companies and its geographic localization. This new global marketplace is where businesses can communicate and find new sources and new products to meet their demands, as well as new information to base all the decisions, most of them online over the vision of management of the current and future assets portfolio. As every firm can be considered a portfolio of inputs and outputs, the B2B marketplace is far-reaching. The huge communication network via online catalogs, auctions and exchanges will allow far more efficiency procurement and sales, as well as, financial settlement process. Those companies who look in this direction will be on top positions in this new framework, and gain competitive advantages for the next century.

This process will guide all the strategies of the Financial Industry over the next decades. And the Financial System will be on the top of all agendas that discuss new economy, regarding its Key role in the economy.

The competition among Financial companies will increase to substantial levels. Either domestic and foreign, it is forcing the financial market to strive for more efficiency and to achieve higher economic rewards. The economy as a whole, will improve it's long-run economic performance by raising productivity and efficiency, resulting in low costs and low transactions prices.

Most banks have identified Internet banking, and more recently Internet Business to Business, as a Key route to increase and consolidate their market

share. Despite the common reasons which have been elected as added revenues and low costs, banks must take assume objective positions in this market, as a result of the sense that it is necessary to survive. The Internet can amplify interface with other processes and industries in the market and tear down boundaries between financial organizations, allowing new organizations to function as banks. Banks will also see a rapid movement of other types of companies into their market domain. That`s why banks must have to use their role as trusted agents to move themselves into other areas of the electronic business and become portals, creating their own e-marketplace with their brand names. It means : Taking advantage of the new scenario to be always on the top. Security and trust, privacy of transactions, are key words, which will receive a huge amount of investments in the next terms. According to KPMG International, investments in Internet offerings aimed to businesses with high potential revenue during the next 18 months, will increase from 40% to 50%,. Banks are convinced that in order to be successful, they need to put greater emphasis on customer needs. The Internet increasingly enables customers to compare rival products and prices (it tends to become commodities). The trend will be to customize relationships. Executives from financial companies said that the most important challenges are the need to re-engineer business process and to invest in security. The integration of the front and back office is also another major issue for the banks.

Some financial companies have been facing technological barriers to create their e-business. This can explain the joint ventures and acquisitions that are taking place in marketplace today. The Financial-services companies viewed sharing costs with other players as an important reason to invest in “dot-coms”.

The Revolution over the Financial Sector is really happening and will cause a fundamental change in the financial markets and Institutions that are already at the forefront of electronic transactions. There is no doubt that the B2B market Tone will promote financial integration and connectivity across local markets around the world. We are poised at the beginning of this revolution, and many issues must still be discussed. Issues that do not depend directly on Financial

Institutions, as regulation and deregulation, monetary and international electronically trade policies, tax policies, as well as how governments will embrace across-the board reforms. On the other hand, the private sector is targeting electronic business growth, it will strongly depend on it's partnership with the public sector. Governments that prematurely set barriers to technological development will constrain private sector efforts. But, what is clear to us, is that the Financial Institutions must construct their strategies to face this new environment and can not wait for all these definitions. The Revolution is taking place now. B2B Revolution and all the changes it brings to the market must be top priority in the agenda of any Financial Institution, in order to keep their position into 21st century marketplace.

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