



## E-FINANCE

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### **Abstract**

*This paper provides an overview of the status, evolution, innovations, technology infrastructure, administrative and support systems, resources, growth, impacts, effectiveness, risks, and challenges of e-Finance. All areas of e-finance and applications of the Internet technologies to financial services industry are covered. It discusses how organizations could benefit from such innovations and e-finance systems and infrastructure and technology.*

*Furthermore, the paper discusses the impacts of e finance models, infrastructure, challenges and risks that the financial services industry faces. It identifies areas of further research in e- finance technology, regulation, and the interface of financial services industry-legacy and new with the dynamic Information Technology Industry (ITI) -- consisting of telecommunications, software, and IT services, the Internet industry the Internet and wireless industries.*

**Keywords:** *Electronic Finance; e-Finance; e-banking; e-trading, e-payments, Internet Finance.*

### **Introduction**

Global integration, deregulation, advances in the Internet technologies are dramatically changing the structure and nature of financial services. Internet and related technologies are enabling new financial service providers to compete more effectively for customers.

The technological changes are accelerating financial sector development by lowering the costs, increasing the breadth and quality, and widening access to financial services. It can considerably improve efficiency and decrease the costs of internal business functions such as expense reporting, contract labour management, and time-and-billing procedures.

Andrew Fight (2002) defines e-Finance “all which relates to the linking of business, finance, and banking via electronic means, encompassing information gathering, processing, retrieval, and transmission of data as well as the transmission, purchase, and selling, of goods and services.

Finance is about web-enabled finance function which includes all areas of financial services industry. However, if its true benefits are to be realized, e-Finance is far more than just adding a web front-end to financial services. It is about changing fundamentally the value proposition of the finance function by redefining its core activities, changing the interaction mechanism between itself and its prime customers, and moving it up the value chain by creating and assisting others in the organization to create better value for shareholders.

Technology enablers play key roles in making the transition to e-Finance. An e-Finance transformation sees finance change its role from transaction processing to true business partnering, with far reaching implications on interactivity with customers, suppliers and others within the organization.

Developments in technology and deregulation are eroding the nature of what has made banks special. On the lending side, e-Finance allows non-banks financial institutions and capital markets to reach far more borrowers, including small and medium-size enterprises (SMEs). On the deposit and payments system side, many deposit substitutes (such as stored value cards) are emerging and many non-banks are offering payment accounts.

The purpose and main focus of this paper is to provide, an overview of e-finance, its growth, impacts and future prospects in the financial services industry and e-commerce, a summary review of the nature of the financial products, services and information that are available to institutions and individuals globally, relevant costs, benefits, and drawbacks, an analysis of the advantages/disadvantages of legacy and e-finance, potential areas of growth, consolidation, and the future path of the industry in a rapidly-changing environment, a review of technological infrastructure and regulatory advances (or lags) that have enabled (hindered) the growth of e-finance and e-business a review of the impact of e-finance globally, including its impacts on international trade and investment and on developing economies and unique and extra challenges they face. Introduce examples of products and services unique to e-finance, and finally, identify areas or issues related to e-finance that needs further research and investigation.



### **Evolution of E-Finance**

Electronic Finance was not born with the advent of the Internet. In fact, it dates back to 1871 when Western Union Corporation introduced distant money transfer for the first time. Western Union introduced the first consumer charge card in 1914 and the first prepaid card in 1993. In 2006, the company handled 147 million consumer to consumer money transfers and 249 million consumer to business transactions.

According to Miniwatts Marketing Group, as of November 2007, 1.262 billion, or 19% of the world population, have access to the Internet. North America leads the Internet penetration though Asia has the largest number of total internet users (462 million). The key drivers of the evolution of e-Finance include, Technology: Computer, Internet, and Telecommunications Technologies enabled business to be conducted in a fast, efficient and secure way. Globalization: Worldwide liberalization of trade and investment facilitated the phenomenal growth of global business including the Internet based e-business and e-finance.

**Regulations:** Both deregulations of the finance industry and re-regulations of e-commerce facilitated the growth though in some areas lacking behind technology.

**Entrepreneurship:** Creativity allowed entrepreneurs, start-ups and seasoned companies to break ‘old economy’ traditions and deliver business solutions through new, exciting and often radically different structures.

**Capital:** Capital provided the financial means to put these technical and human wheels in motion.

**Competition:** The above factors created a globally fertile and competitive environment and pool of talents to compete for introducing new technologies, concepts, and models.

These five factors have affected providers, users, regulators and investors by creating remarkable transformation in financial industry.

### **Literature Review**

Dandapani, K. et. al. (2005) and Dandapani, K. (2004 and 2001) examined the growth of virtual banking with a focus on the economics of their business model. They explored both the impetus and constraints for their growth. While the online banking by brick and mortar banks increased dramatically, only a few Pure Play Virtual banks turned into brick and mortar banks to survive.

Manuchehr Shahrokhi (2004, 2002, and 2001) provided a comprehensive overview of the applications of the Internet and IT technology to financial services industry. He documented the evolution, growth of e-Business and e-Finance and their impacts on the global economy.

Hakman, A Wan (2006) in “Electronic Financial Services: Technology and Management, “covers the issues of technology management (ICT) and its applications to banking, insurance, stock trading, e-payment, and e-finance system in use by the major financial services worldwide Gewei Ye, Garland, K. (2006), in “E-finance: the CCMP model,” suggests a model that extends the e-finance framework from the technology perspective and provides a basis for a more comprehensive approach to financial digitization. Specifically, the e-finance model is comprised of four components: digital wealth Creation, wealth Collection, wealth Management, and wealth Protection (CCMP). Extensions of Enterprise Application Integration (EAI) with CORBA (Common Object Request Broker Architecture) and web services are presented to demonstrate the value-added implications of a networked approach to business digitization. Canard, S. and Gouget, A. (2007) presented an off-line divisible e-cash scheme where a user can withdraw a divisible coin of monetary value that can be parceled and spend anonymously and unlink ably. They presented the construction of a security tag that protects the anonymity of honest users and to revoke anonymity only in case of cheat for protocols based on a binary tree structure without using a trusted third party. This is the first divisible e-cash scheme that provides both full unlinkability and anonymity without requiring a trusted third party. The ‘e- Finance Lab’ of Frankfurt, Germany is a pioneering industry-academic partnership between Frankfurt and Darmstadt Universities and industry partners<sup>7</sup> with the main goal of developing scientific yet managerial methods for rearranging the business processes of the financial service industry. The overall approach is to apply industrial methods well established in other domains, such as automotive supply chain optimization, to the financial supply chain. To pursue its goals, since 2003, e-Finance Lab has formed study clusters that encompass different areas of financial services industry.

They are:

Cluster I: Sourcing and IT Management in Financial Processes.



Cluster II: Emerging IT Architectures to support Business Processes within e-Finance Cluster  
Cluster III: Customer Management in the Financial Service Industry.  
Cluster IV: Reshaping the Banking Business.  
Cluster V: Managing the Securities Trading Value Chain

#### **E-Finance Model**

The e-Finance sector can be divided into five broad categories: 1. Business-to-Business (B2B), 2. Business-to-Consumer (B2C), 3. Consumer-to-Consumer (C2C), 4. Technical infrastructure to support the e-Finance platform, and 5. Global institutional and regulatory environment that facilitate the functioning and growth of e-commerce and e-finance.

The B2B sector includes services in corporate finance, investing, institutions, and international finance issues such as foreign exchange, derivatives and new issues and back-end processing. The B2C sector includes services such as online trading, basic online banking, electronic bill payment, mortgages and insurance. The C2C sector includes payment for online transactions and electronic money transfers. The fourth component is the technological services that support the E-Finance platform integrating the IT architecture of the firm with the internet platform as well as older legacy systems. The infrastructure services are key enablers of the industry and are designed to create, migrate and support e-Finance. Finally, regulations influence and are influenced by e-finance products and services (some of which without any precedence).

#### **IV. 1. Trends in the B2B Financial Service Sector**

Reduced Transaction Costs B2B providers have enhanced the value proposition of institutional financial services by giving their institutional clients broader product selection, faster execution, increased price transparency, tighter margins and greater cost savings due to reduced transactional costs. The internet has enabled legacy institutions to handle increasingly complex transactions involving many business partners. By adopting universal standards for loan terms and lending parameters, the finance industry enabled more customization within the open marketplace.

#### **Disintermediation and Electronic Reintermediation**

The e-finance technologies enhances the long-standing evolution of the financial services sector from one dominated by financial intermediaries to one dominated by capital markets and financial institutions that hold marketable securities. Traditional financial intermediaries transform illiquid, hence non-marketable, assets (e.g. bank loans) into liquid liabilities (e.g. demand deposits). This role has become less important over time as the liquidity of financial assets originated by intermediaries has increased. Another important issue is that disintermediation and re-intermediation allow the financial system to share and spread risks.

#### **Customized Solutions and Integrated Services**

The ability of the Internet and e-commerce technology to customize service, or components of service, is a major factor behind the proliferation of sophisticated services such as investment planning, tax and estate planning and tailored investment accounts. By using the internet to bundle products with related information and services, creative companies can improve the effectiveness and efficiency of their clients' businesses. This new delivery mechanism enables these companies to forge a strong, long-lasting client relationship that de-emphasizes product price and exchange-based transactions.

#### **Electronic Trading**

Many ATS market structures/mechanisms have been created over the past few years through web-based technologies. The financial world is edging closer to the notion of liquid, 24-hour global trading across markets and products. Online institutional trading in equities, bonds, currencies, commodities and derivatives is readily available through the corporate storefronts of major institutions. One of the most interesting and significant ATS mechanisms – the Electronic Communications Network (ECN) – resulted from changes in U.S. securities laws and has been a direct result of web-based technologies. Many financial companies are joining ECNs, where they can match trades with other participating members, saving them the cost of going through an exchange and allowing them to trade 24/7.

#### **Electronic Funding – Venture Capital – IPOs**

The Internet and of Internet start-ups have had dramatic effects on equity markets around the world. Like other areas of finance, electronic funding such as IPO and venture capital have benefited from the IT technologies. Electronic IPO. In the past decade, WR Hambrecht & Company has pioneered and spread the use of online Dutch auction and Open IPOs methods. Unlike the traditional method of book building method used by underwriters on Wall Street, the auction and open



methods is the way IPOs are priced and allocated. The stark difference between such methods was brought to light with the Google IPO in 2004.

Venture Capital. The web has become a powerful medium for entrepreneurs in search of venture capital and for venture capitalist looking for investment opportunities. Information which would have previously taken a lot of research to find or was unavailable can now be obtained with an Internet connection and a few clicks. It is now possible to acquire data on most of venture firms and firms that are seeking new businesses to invest in. Furthermore, information to prepare the entrepreneur for the requirements of venture funding is abundant on the web. Even the process of actually obtaining funding has been impacted by the use of the Internet. The Internet has impacted the venture capital funding process in many ways: Instant access to information, electronic business plan writing and submission, direct contact between entrepreneurs and funding sources, and the elimination of physical boundaries are just a few of these advantages. Some specific sites are used as examples of how technology is being used to improve the overall venture capital process.

#### IV. 2. Trends in B2C Financial Service Sector

##### Financial Infomediaries - Portals

The Internet industry that includes telecommunications and technology enablers let traditional financial institutions augment their services and introduce new products. However, a host of independent websites offer free financial Infomediaries to individuals. Examples include: Bloomberg, CNN/Money/Fortune, MarketWatch, MSN-MoneyCentral, Hoovers, IPO Home, IPO Resources on ZDNet, Google and Yahoo Finance, and Free Real Time, Federal agency websites such as the Federal Reserve Board, BEA, and Edgar at SEC and EDGAR Online, Inc.

##### Online Trading

The introduction of online trading and associated tools such as quotes, research and portfolio management modules, has been a boon to investors seeking self-directed financial management. And indeed, the online internet tools have reduced investor reliance on financial planners, advisors and brokers. Over the past decade, online customers have been developing investment strategies, following the markets for stocks, bonds, mutual funds, and Exchange Traded Funds (ETFs) and rebalancing their portfolios using easily available online financial tools. Online trading is typically offered through the corporate storefront models (Wit Capital, Web Street Securities and Ameritrade) that provide their own institutional online trading services or through a vertical portal model (Schwab and E\*Trade) that offers their own, or third party, online trading services, in tandem with other financial services.

##### E-Banking - Online Banking

Electronic Banking is the delivery of banking services through the use of electronic communication, primarily the Internet. You may also see or hear E-Banking called Internet banking, on-line banking or PC banking. E-Banking may include ATMs, wire transfers, telephone banking, electronic funds transfers and debit cards. According to projections by the Federal Reserve Board, over the next decade or so the proportion of electronic transactions would increase dramatically from 7% to 14% of total U.S. Consumer Sales. The opposite would be true for the traditional paper checks. The cost of processing incremental web transactions is quite low compared to the standard teller-assisted transactions. A Booze Allen study found that the cost of processing an incremental financial transaction amount to \$1.07 through branches, \$0.52 through telephone banking, \$0.27 through ATMs, \$0.015 through home PC banking and only \$0.01 through internet platforms.<sup>14</sup> Once the fixed costs are covered, the economics of offering banking services through the internet are quite compelling.

##### Online Banking Features

Online banking solutions have many features and capabilities in common, but traditionally also have some that are application specific. The common features fall into several categories: Transactional - Performing a financial transaction such as an account to account transfer, paying a bill, or applying for a loan. Of special note, Electronic Bill Presentment and Payment (EBPP) offers online, real-time presentment of bill content and payment choices. EBPP is the easy way of viewing billing status, remittance items, and presenting balances using a universal browser from any location. Various industry studies have shown that EBPP models have facilitated consumers with much needed convenience and time savings as according to recent surveys about 68% of the consumers preferred EBPP models for the sake of convenience as compared to 7.6% for cost savings. Non-transactional - Online statements, check links, co browsing, chat Administration of Financial Institution - features allowing the financial institution to manage the online experience of their end-users ASP/Hosting Administration - features allowing the hosting company to administer the solution across financial institutions Internet banking often includes personal financial support, such as importing data into a personal finance program such as Quicken, Microsoft Money or TurboTax. Some online banking platforms support account aggregation to allow the customers to



monitor all of their accounts in one place whether they are with their main bank or with other institutions. Business banking also commonly includes support of multiple users having varying levels of authority, and transaction approval process such as wire transfer.

### **Personal Finance/Wealth Management**

The essence of wealth management relates to personal financial advice, planning and execution, many clients do not want to replace these personalized services with web-based products and interfaces. Accordingly, B2C wealth management platforms give clients web tools that promote additional flexibility and convenience. Such ventures allow authorized customers to access account, market information and verify the order status and overall portfolios. Specific advice on investments wealth, taxes, trusts and retirement planning is then provided face-to-face by associated private bankers, investment managers, or financial consultants. For clients who prefer a self-directed approach and appropriate guidance as needed, there are internet platforms that can create an entire financial plan for a flat fee. For instance, financial planning sites such as Financial Engines<sup>17</sup>, FinPortfolio<sup>18</sup>, and Direct Advice<sup>19</sup> supply retirement and investment advice based on user-defined inputs and goals.

### **3. Trends in C2C Sector**

#### **Online Trading**

An online trading community exists to provide its members with a structured method for trading, bartering, or selling goods or services. The earliest trading sites known to the Internet include eBay, Amazon, Yahoo, and later Google and many others have revolutionized traditional business models, have created new ones that are knowledge and technology efficient. These communities are sometimes described as the electronic equivalent of bazaars, flea markets, or garage sales. eBay is a prime example of C2C sector. Founded in 1995, eBay Inc. offers global commerce, payments and communications. eBay's original vision was to create the world's first global economic democracy. It saw a "people's market" in which anyone in the world could sell or buy just about anything for a fair price. Since its inception, eBay has expanded to include some of the strongest brands in the world, including eBay, PayPal, Skype, Shopping.com, and others.

#### **Trading Circles**

A trading circle is a form of online trading designed for the viewing of TV series and episodic media. Videocassettes, DVDs and CDs represent the items normally exchanged. Each member agrees to pass an episode on to the next member in a timely fashion, thereby allowing all members of the group to view the series. Examples include Swap tree, Post Points, Swapped, and Switch Planet.

#### **Technology Infrastructure for E -Finance**

The Internet has changed many business models perhaps the most important of which is B2B e-commerce. The impact of this on finance has been that it is now possible, for example, to receive electronic orders through a B2B portal or an infomediary and use these to drive order fulfilment processes within the organization's internal systems. At the other end of the cash to cash cycle, businesses are effectively using supply chain systems to make their purchases. New technologies can significantly reduce transaction processing, or eliminate it altogether. These technologies are now maturing and finding a place in organizations. Vertically integrated financial service companies are growing rapidly and creating synergies by combining brand names, distribution networks, and financial service production. The liberalization of the capital account and the deregulation of financial markets have contributed significantly to the growth of financial markets in the industrial countries.

Information Technologies have made a central contribution by increasing the ability to move information both in terms of volume and speed, making it difficult to establish restriction on capital accounts.

#### **Systems or Organizations Facilitating E-Finance**

##### **Society for Worldwide Interbank Financial Telecommunication (SWIFT)**

SWIFT provides financial data communication and processing services to support the business activities of worldwide financial institutions for securities, payments, foreign exchange and money markets, as well as trade finance. Its dedicated telecommunications network guarantees the rapid, cost-effective, secure and reliable transmission of financial data using a range of ISO-compliant standardized messages that have been developed by SWIFT in conjunction with its users and industry organizations. Originally designed to eliminate the need for paper-based processes in the financial markets, SWIFT has also lowered costs, increased productivity and helped reduce risk in the securities industry by providing several of the key elements necessary for the automation of the settlement process, and by providing a reliable and secure network. Owned



by nearly 3,000 of its user banks, SWIFT also connects other categories of non-bank financial institutions engaged in the securities industry. SWIFT is present in over 208 countries, handled over 3 billion messages during 2007 and has over 8200 users worldwide.

### **Automated Clearing House (ACH)**

The ACH Network is a highly reliable and efficient nationwide batch-oriented electronic funds transfer system governed by the NACHA Operating Rules which provide for the Interbank clearing of electronic payments for participating depository financial institutions. The Federal Reserve and Electronic Payments Network act as ACH Operators, central clearing facilities through which financial institutions transmit or receive ACH entries. ACH payments include:

- Direct Deposit of payroll, Social Security and other government benefits, and tax refunds;
- Direct Payment of consumer bills: mortgages, loans, utility bills and insurance premiums;
- Business-to-business payments;
- E-checks;
- E-commerce payments;
- Federal, state and local tax payments

Electronic checks are becoming more popular in recent years. According to the Neilson Report in 2006 the ACH network ranked second only to Visa in transaction volume with \$13.43 billion, up 15.3%. Visa's 2006 growth rate was 13.2%. Two of the most impressive areas of consumer ACH transactions relating to the payment processing industry were in 'Internet' and 'Telephone' categories. Consumers are increasingly pulling out their check book to pay for goods and services. The growth of electronic ACH/check payments appears to be coming at the expense of credit cards and paper checks. More than 3.44 billion transactions worth more than \$7.0 trillion were conducted during the third quarter in 2007. These figures represent growth rates of 11.7 percent and 8.0 percent, respectively, over the same quarter of 2006. There were 2.11 billion debits and 1.34 billion credits, for a total of 3.44 billion. The statistics include commercial inter-bank and government transactions, but not "on-us" transactions. American businesses and governments use the ACH Network for payments to and from trading partners, vendor payments, business-to-government tax withholdings, intra-company cash management transfers, and to exchange remittance information regarding payments.

About 19 billion more electronic payments were made in 2006 than in 2003. In contrast, the number of checks paid fell by about 7 billion over the same period. Of the 93 billion noncash payments in 2006, about 63 billion were electronic and around 30 billion were checks. The highest rate of growth from 2003 to 2006 was in ACH payments, which grew about 19% per year, followed closely by debit card payments at almost 18%. Meanwhile, checks declined by an average of 6.4% per year since 2003, indicating the pace at which checks payments has been decreasing since the mid-1990s has picked up in recent years.

### **Online Trading Community**

As discussed earlier, online trading communities exist to provide a structured method for trading, bartering, or selling goods or services. These communities often have forums and chatrooms designed to facilitate communication between the members. These can be further segregated into two parts: 1. Formal Trading Communities are business-run websites maintained for the purpose of facilitating trades between members. Some of these charge a fee for each successful transaction. 2. Informal Trading Communities are lesser-known sites known that specialize in a multitude of services including community trading. Examples include, 1UP, Craig's List, IGN.

### **E-Money**

E-Money allows payments (including P2P payments) without involvement of a third party during the payment transaction. There are two main types of e-money: 'e-cash' including electronic purses and multi-purpose stored value smart cards; and 'cyber money' (also called 'network money') which are prepaid software products used for payments or transfers on cyberspace.

### **M-Finance: Mobile Banking**

Mobile banking (also known as M-Banking) is a term used for performing balance checks, account transactions, or payments via a mobile device such as a mobile phone. Mobile banking today (2007) is most often performed via SMS or the Mobile Internet but can also use special programs downloaded to the mobile device. Mobile banking in the U.S. first appeared before 2000, but it failed to catch on over the following few years. As an example, Wells Fargo shuttered its original mobile banking operations in 2002. It had only 2,500 users at the time. Wells is one of the first financial institutions



to offer online banking and now is among the pioneers of mobile banking in the United States. Wells Fargo isn't just peddling 'm-banking' to its customers; it also is providing small business and commercial 'm-banking' services.

### **Impacts of E-Finance**

A 'traditional' finance department may have enterprise wide electronic financial systems, but there are still some legacy systems in operation and transaction processing is still largely paper based. E-Finance is poised to replace the bulk of transaction processing with straight through web enabled processes without the need for manual intervention.

A major driver for e-finance is the ability to build key financial controls into the systems. The result is a finance function where transaction processing is minimal, reducing waste and risk while improving operational efficiency. E-Finance has the potential to bring about remarkable short term efficiencies, but its true significance lies in the fact that it allows finance to move away from its traditional control oriented role to being more of a strategic business partner that helps conceive, design and realize the systems and processes in the new world of e-Business.

### **e-Finance and Financial Accounting**

Integrated systems and analytical applications are both important aspects of the e-finance technology platform. Integrated information systems reduce system maintenance costs and database errors, and improve information accuracy and timeliness. Integration means tying back-office, front-office and new "Web-office" systems together into a cohesive whole. Tight integration between a Web storefront and back-office inventory, order-entry and billing systems is necessary to link the Web office to the back-office. That does not mean an e-finance function cannot take advantage of more loosely interfaced best-of-breed applications to supply specialist functionality, only that this should be an exception rather than a rule.

E-Finance is an information services provider and must be cross-functional in scope. An integrated information system also makes available a wide range of analytical applications that gives users access to valuable operational data. Integrated systems provide a better foundation for gaining business intelligence from financial statement and consolidation report writers, Online Analytical Processing (OLAP) query tools, business-specific Balanced Scorecard electronic consoles and more. Delivering business intelligence via analytical applications is one way of making sure that information consumers understand the value of e-finance in the organization. Technology can change accounting from a cost center to service centers and from information island to information hub.

### **E-Finance as Information Service Provider**

Another process that ranks high on the list for transformation is delivering information throughout the enterprise. Creating and distributing financial reports electronically (e-reporting), whether they are requested ("pulled") by information consumers, or scheduled or triggered ("pushed") by a system, is a core competency of an e-finance department. Reports are seldom printed: Instead, they usually get converted to a variety of formats and delivered via intranet report libraries or e-mail for online viewing and analysis. File-based reporting relies on electronic report libraries and archives, the association of reports with electronic subscriber lists, and either static (view-only) reports or dynamic (view and analyze) information packages.

Internet-based accounting services have expanded their scope to include linked Web storefronts, online purchasing, and small-business sales-force automation and customer relationship management applications. Online accounting vendors provide these services directly, or they opt to create close links to other Web-based service providers that specialize in related application areas. Net Ledger Inc., for example, is forging ahead through alliances with Cyber Bills Inc. for online bill presentment and payment, and with Red Gorilla for time and expense tracking. As these systems mature, they will probably become competitive with low-end midterm accounting packages, and the shrink-wrap accounting vendors and their reseller channels will have a real fight on their hands.

### **Impact of e-Finance on International Business/Trade**

The Internet has the capability to generate international market expansion and future growth for the firm, a concept known as Internalization. Both international market penetration and the development of new international customers are achievable goals for the Internet enabled firms. The acceleration of globalization of changes the once slow and cumbersome process of advancing the firm's product into international markets. Further, new virtual network intermediaries or electronic marketplaces reduce the need for the firm to have human and financial infrastructures necessary for internationalization. However, more traditional relationship networks are still the primary mechanism for internationalization. Thus, a new



theory of internationalization is not needed but rather an evolved version of network theory may be a better explanation of internationalization of SME's in today's digital environment.

### **Impact of E-Finance on Developing Countries**

E-finance and globalization offer many important opportunities. E-finance has great potential to improve the quality and scope of financial services and expand opportunities for trading while widening access to financial services for a greater number of retail and commercial clients through more cost-effective delivery of services. In some emerging markets online brokerage is already on par with that in developed countries. In some countries a lack of regulatory barriers and initial markets has made new entry across a spectrum of services attractive. In other countries entry has been more specialized. For many countries, e-finance will allow easier access to global capital and financial service providers, bringing opportunities to quickly widen access to and improve financial services. Achieving such gains will require that emerging markets give far greater priority to improving the framework for financial and other information, modernizing and strengthening their legal systems, and improving technology-related infrastructure. As financial services are imported, the need for a domestic safety net and corresponding regulation and supervision declines. As financial services are imported from abroad, the question is raised of whether small, undiversified economies should have domestic equity and debt markets and banking systems.

### **Treasury and Cash Management**

Corporate treasuries, worldwide, are making efforts to use Internet technologies for streamlining their treasury management systems. Efforts are being made to create a framework that unifies and co-ordinates their financial and global operations online - accurately, efficiently, and at a lower cost than before. For treasury professionals, the web is a source of vast global information in a real time. Corporate treasuries are looking to leverage treasury liquidity throughout their internal and external procurement and distribution partnership chain. This increased integration will allow firms to become more aggressive in their investment and cash management practices.

### **Electronic Billing and Payment Services**

Oracle's Siebel e-Payment Manager enables organizations to give consumer and businesses comprehensive online access to bills and invoices. It offers specific capabilities for both B2C and B2B billers, including the ability to cost-effectively present bills online and provide customers with multiple payment options.

#### **7. 1. Wholesale Payment Systems**

Recent statistics indicate that despite the potential cost savings and ease of transaction, electronic bill presentment and payment (EBPP) has not taken off as expected. With the reluctance of individuals to disclose their financial information on the Internet, and the lack of a compelling reason for people to pay their bills online, adoption of EBPP has been slow. However, recent developments indicate increasing interest among banks to help clients with electronic invoice presentment and payment (EIPP) solutions. Standards, architectures and models that are relevant for the e-payments and the online transaction process are numerous.

#### **7.2. Retail Payment Systems**

Digital cash systems have failed to penetrate the payments market while electronic trading of securities has been a success in most countries. At present, the credit card system dominates retail Internet payments despite being costly, open to fraud, and lack of anonymity. They are also poorly suited to micro payments or person-to-person payments, and new systems such as PayPal have emerged in recent years to address this lacuna. It is run by an oligopoly displaying the typical characteristics of low innovation and charges poorly matched to the relevant costs. In coming years, payments on the Internet may be made by a virtual "cyber money", which might be issued by banks, but also by telecommunications or IT companies.

### **Lessons from Global E-Finance Experiences**

Four basic misconceptions were frequently present in the business strategies employed in the earlier stages of the development of e-finance. First, while the Internet can reduce financial transaction costs, these gains have often been exaggerated or misinterpreted. Second, while it is cheap and quick to create a basic website, designing and implementing a fully functional, industrial-strength application capable of securely accommodating a large number of complex transactions and huge variations in volume is a complex and protracted undertaking.

Third, rather than eliminating possibilities for intermediation, the abundance of information, opportunities and relationships created by the Internet increases the need for new intermediation structures and mechanisms. Fourth, contrary to the view that e-business would revolutionize the financial industry and destroy the incumbent "dinosaurs", the evolution of finance





clearly demonstrates the advantages of established financial services suppliers, as long they have the capacity to evolve and to embrace the new approaches and technologies.

Financial innovation can help to increase the efficiency of the financial system. This facilitates the operation of monetary policy, but at the same time complicates the environment in which monetary policy operates. To deal with this complexity, bank regulators need to respond by monitoring the financial landscape, by following developments closely and by trying to predict the consequences of innovations even though they may appear very marginal. In Europe, the ECB's monetary policy strategy claims that it is well designed to deal with these challenges. Although it gives a prominent role to money, it also takes into account possible influences of financial innovation on monetary aggregates. Furthermore, through its examination of non-monetary indicators, including both real and financial variables, the information from monetary.

- Software providers
- ISPs
- Web hosting Services
- Payment Service Providers
- Payment Processors
- Banks
- Credit Card Organizations
- Third Party Billers
- Trustees – Trust Mark Services
- Escrow Services
- Certification Authority
- Rating and Scoring Agencies
- Supply Chain –

Logistics Providers Sellers Goods and Services Buyers Monetary Value aggregates can be cross-checked, which makes monetary policy more robust and less dependent on single indicators that may become distorted by financial innovation.

### **Cross-Border Finance and Regulations**

In the e-finance world, cross-border expansion becomes less expensive and less risky. The resources devoted to foreign e-finance are often situated in the home country so that the same resources can be switched from one foreign market to another. As e-finance expands, less informed consumers would gain access to markets, raising issues for cross-border investor protection and transparency. Regulators may need to protect consumers accessing offshore financial services. The easy spread of information - and misinformation - could make asset prices and capital flows more volatile. Herding, turbulence, and contagion may increase, and countries may become more vulnerable to attacks on their currency. Capital account restrictions will be more difficult under e-finance, and the growing number of creditors complicates coordination prior to or during a financial crisis, particularly in emerging markets.

### **Trading Systems**

Trading systems - equities, fixed income, and foreign exchange - are consolidating and going global. Trading is moving towards electronic platforms, not tied to any location. Electronic trading and communication networks have lowered the costs of trading and allowed a better price determination. These changes offer great benefits to consumers worldwide. The proliferation of financial products, delivery channels, and institutions, along with the speed of innovation, has allowed easier comparison of prices and products. For example, with the slashing of retail brokerage costs, and cheap access to vast information from the Internet, online trading now accounts for over half of retail stock trades in the U.S. and online traders. Many wholesale and retail payment systems have been introduced to facilitate faster cash management. One example of a fast developing retail system is Web-Based POS.

### **Stock Market**

Historically, one of the major functions of a stock exchange has been to provide a marketplace to match up buyer and seller at a price determined at arm's length, or unbiased, negotiation. Ideally, there would be one clearing house where all orders to buy and sell securities would have the opportunity to interact with one another. While that does not exist, for many years the New York Stock Exchange (NYSE) has been the closest thing to it. The NYSE has been the predominant securities trading exchange because it has continuously provided all six basic functions that an exchange can potentially offer, while many newer exchanges provide only two or three.



## Conclusion

E-finance builds on new business models and processes and demands new paradigm and software to clearly position finance as a service centre within organizations. The benefits of e-finance are many and include: reducing the cost of transaction processing, expanding the information scope of accounting and finance's systems, extending the information reach of the finance department and improving the quality of financial information. However, to realize these gains, finance professionals must embrace and leverage new technology, realign the traditional accounting mind-set and skill set, engage in process transformation initiatives, and focus on delivering value-added information services to the organization. Furthermore, they must have a solid understanding and implementation of the technology platform.

The impact of the Internet on financial services is clear. However, certain trends are emerging: expansion of B2B e-finance, automation of customer services, consolidation in local and regional financial operations, growth in global services, migration towards 24/7 global trading, blurring of business and product lines, disintermediation of traditional products and services, creation of alternative partnerships and alliances and consolidation of portals, storefronts, exchanges and marketplaces.

Technological developments should reduce the cost and enhance the security and convenience of dedicated digital media. There is a clear need to ensure open markets, minimizing the effect of switching costs, and police the pricing structures of both new and old transaction media. Regulation and supervision of payments markets should do much to promote the development of digital money. E-Finance can streamline traditional business processes and deliver value-added information services by using Internet-based technology. Leading finance, accounting, and IT executives are transforming the finance function by deploying a strategic application of the IT technologies to the financial services, or e-Finance.

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