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Electronic Finance:

A New Approach to Financial Sector Development?

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Abstract

In recent years electronic finance—especially online banking and brokerage services—has reshaped the financial landscape around the world. This note summarizes these developments and analyzes their implications for consumers, governments, and financial service providers. First it reviews the e-finance (r)evolution in emerging and other markets and projects its future growth. Then it analyzes e-finance's impact on the structure of and competition in the financial services industry. After that it assesses how e-finance, and globalization more generally, affects financial sector policies in developing countries—including the need for changes in the approach to financial sector development. In that context, the note examines government's changing role in the financial sector and identifies opportunities that e-finance offers countries to leapfrog.

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Electronic finance is spreading quickly…

Electronic financial services, whether delivered online or through other remote mechanisms, have spread quickly in recent years. Despite differences across countries—including such factors as the readiness of telecommunications infrastructure and the quality of regulations—there is much commonality and convergence in the spread of e-finance.

E-finance penetration varies by type of service. Most affected have been brokerage markets, where online trading is becoming the norm. Increased connectivity has also accelerated the migration of securities trading and capital raising by emerging markets to a few global financial centers, with capital raised offshore by emerging markets increasing dramatically since the early 1990s. This shift has resulted in far greater integration and intermarket links. Consolidation is also occurring in key middle and back office functions such as custody, clearing of trades and retail payments, and central securities depositories.

The spread of online banking services has been more varied across countries. Spurred by the entry of new providers from outside the financial sector, however, many financial service providers are now offering e-finance services.

…and shows great potential

By 2005 online banking could account for 50 percent of the market for banking services in industrial countries, up from 9 percent today, and for 10 percent in majo developing countries, up from 1 percent. With better connectivity, online banking in developing countries could rise even further, to 20 percent by 2005. Similarly, in industrial countries the share of online brokerage could rise from 28 to 80 percent, and in developing countries from 2 to 15 percent. With a better business and enabling environment, the share of online brokerage in developing countries could even hit 40 percent by 2005.

But these averages hide big differences, depending on whether a country's penetration rate has already passed a critical level. In Nordic countries, for example, online banking could reach nearly 80 percent by 2005, while U.K. and U.S. penetration would approach just 50 percent. For online brokerage, penetration rates in Nordic countries could hit 90 percent.

E-finance is dramatically changing the structure and nature of financial services

- E-finance will lead to much lower costs and greater competition in financial services through both new entry from outside today's financial sector and greater competition among incumbent financial service providers. These developments will force banks to lower fees and commissions because providing e-finance is much cheaper than providing traditional financial services. As a result incumbent financial institutions will likely experience a sharp decline in revenue.
- Internet and related technologies are more than just new delivery channels—they are a completely different way of providing financial services. Using data mining techniques, for example, providers can tailor products without much human input and at very low cost. They can also better stratify their customer base and allow

consumers to build preference profiles online—enabling far more personalized pricing of financial services and much more effective identification of credit risks. The Internet also allows new financial service providers to compete more effectively for customers. All these forces are delivering large benefits to consumers of financial services at the retail and commercial levels.

- Technological advances are also changing the face of the financial services industry. New providers are emerging within and across countries, including online banks, online brokerages, and companies that allow consumers to compare financial services such as mortgage loans and insurance policies. Nonfinancial entities are also entering the market, including telecommunication and utility companies that offer payment and other services. Vertically integrated financial service companies are growing rapidly and creating synergies by combining brand names, distribution networks, and financial service production.
- Trading systems—for equities, fixed income, and foreign exchange—are consolidating and going global. Trading is moving toward electronic platforms not tied to any location. Electronic trading and communication networks have lowered the costs of trading and allow for better price determination.
- The Internet and other technological advances have shrunk economies of scale in the production of financial services. Lower scale economies have increased competition, particularly among financial services that can easily be unbundled and commoditized through automation—including payment services, mortgage loans, insurance, and even trade technology. Competition is further fostered by declining up-front costs. In contrast, network externalities—exhibited by financial services such as payment services, trading systems, and exchanges—tend to hamper competition.

Underdeveloped financial systems can exploit opportunities for leapfrogging

The effects of e-finance are not limited to industrial countries and advanced emerging markets. For countries with underdeveloped financial systems, e-finance offers opportunities to leapfrog. Such systems tend to do a poor job of allocating resources and have high intermediation costs, problems with establishing credible supervision, and possibly large fiscal costs from bank recapitalizations. For such countries, e-finance can be a revolution—and evidence indicates that this is starting to happen. In Africa electronic cash and other smart cards offer savings and payment services to low-income customers—including in remote areas—who often do not even have formal bank accounts. Other countries—Brazil, Estonia, Republic of Korea—suggest that e-finance can be introduced quickly even where basic financial infrastructure is weak. E-finance will also allow financial services to be delivered to such countries from offshore, providing the additional benefits of international technology and oversight.

But realizing the gains will require changing public policies toward financial services…

The most pressing policy issues involve the enabling regulatory environment for e-finance. Adjustments are needed in approaches to telecommunications, security and related infrastructure for electronic transactions, information and privacy, and contract enforcement. In addition, steps should be taken to minimize risks for consumers and investors, adjust prudential regulation, and improve the performance of markets.

- The telecommunications framework should avoid protecting incumbent providers and allow private firms to enhance connectivity using forms ranging from fixed lines to mobile and satellite.
- Internet transactions require security measures where innovative approaches to public and private partnerships will be necessary. For example, government actions are needed to set up a framework for digital signatures. Also there will be a need to establish secure systems for certification where a number of solutions involving the private and public sector will be possible. Finally, there will be a need to address the challenges of enforcing standards in the electronic security area or creating a database sufficient to actuarially measure and benchmark electronic security systems.
- If information is good enough, e-finance will extend the reach of financial institutions and capital markets. Governments will need to review their information and privacy policies in light of the new possibilities.
- With e-finance, contract enforcement has become more important within and across borders, but new technology may also help solve contract enforcement problems. Rules will increasingly have to be set at the global level.
- Managing risks will become more important to protect consumers and investors. E-finance can increase long-standing risks—such as theft and lack of privacy—as well as create new ones. Thus more emphasis is needed on better disclosure, education, and information. The Internet is starting to provide solutions, with firms acting as certification agents, aggregators, and vendors of security and privacy hardware and software on behalf of consumers, investors, and financial service providers.
- Prudential regulation will probably become less effective, so it will be important—especially in developing countries—to ensure that the financial sector safety net is not extended to nonfinancial firms that increasingly provide near substitutes for financial services, including deposits.
- To make financial markets and institutions work better, more emphasis should be placed on competition policy and clear rules for markets.

…and adjusting government's role in the financial sector

Government intervention in the financial sector has generally had poor results. Government ownership of banks retards financial sector development and increases the risk of financial crises. Efforts to reach underserved groups often fail or are captured by special interests, and can incur large fiscal costs.

- E-finance reduces the need for government intervention because the private sector can provide financial services even when a country's financial sector is weak. Market failures will be less likely because new technology will make information more easily available and, with related reforms, of higher quality. This will permit financial services to be provided more widely and make markets to trade risks and assets more complete, reducing the need for government intervention.

- But there will still be scope for government action beyond setting the enabling environment. As a start, government could improve the way it shares information (such as credit-related information, subject to privacy statutes). And existing infrastructure, such as post office networks, can provide access to e-finance services.
- Government's role can change fundamentally—with less need for direct provision—in areas such as banking services, housing finance, insurance, nonbank financial services (factoring, leasing), storage finance, trade finance, small and medium-size enterprise lending, and even microlending. In all these areas more efficient delivery of services can achieve savings, cut costs, and expand access.

With the potential of e-finance come some provisos:

First, e-finance offers many opportunities—but it is no panacea. Most of the benefits, such as widening access to financial services, can be realized only if complementary reforms are made in communications infrastructure, security, contract enforcement, corporate governance, and other areas. Also, e-finance relates to a variety of issues, each of which requires deeper analysis and possible changes. Further research (often multidisciplinary) is needed on each issue. Finally, as with any new phenomenon, e-finance faces large data problems. Any data on e-finance penetration and even that for total customers of e-finance must be viewed with caution. More efforts will be needed to develop a consistent methodology for measuring concepts such as Internet penetration and related basic data on e-finance.

Efforts of the World Bank:

The World Bank, along with its affiliate the International Finance Corporation (IFC), can help create the proper enabling environment to support the growth of e-finance while minimizing some of the concurrent risks. Today, there are at least four areas where the Bank is trying to include the impact of technology and e-finance in its financial sector work in developing countries.

1. ***Financial Sector Policy.*** E-finance is a new phenomenon and the World Bank can be useful by transferring knowledge about other country experiences and making an objective assessment of alternative policies for a country's financial sector development. Global E-finance developments will be monitored, analyzed and disseminated. As technology and innovations evolve, general recommendations for financial sector development will be adjusted. In its financial sector policy work for a specific country, the Bank increasingly examines the impact of electronic finance on the appropriate financial sector development paradigm. Here the focus is on how regulatory policies, including supervisory policies, may need to change or how approaches to delivering subsidies and financial services via public banks may need to be altered substantially. Results of the analysis will gradually be reflected in the Bank's country dialogue through vehicles, such as the overall country assistance strategy—often coordinated with other multilateral agencies and other bilateral lenders, the financial sector assessment program undertaken jointly with the International Monetary Fund, and other economic and sector work.

2. ***Operations in the Financial Sector.*** In its operational financial sector work, the Bank aims to develop a comprehensive policy advice package on e-finance for specific countries. This package will include advice on the legal framework to support electronic finance, the framework for electronic security, the telecom infrastructure, and the information infrastructure (e.g., credit bureaus and registries). For this type of advisory services, the Bank will deploy multidisciplinary teams to work on pilot cases to examine how technology can be applied to broaden access to financial sector services and what needs to be changed to the country's policy framework. This package of services can include technical assistance and could over time be mainstreamed into Bank products, such as financial sector adjustment lending and other operations. It will complement the activities of the IFC through its "Electronic Finance Global Initiative" also have discussed at this conference.

3. ***Treasury Operations.*** As a financial institution, e-finance has impacted the Bank's own borrowing, lending and asset management operations. The Bank was the first issuer of an electronic bond using the Internet as a distribution channel. On the liquidity management side, the Bank is a heavy user of on-line trading platforms. And it is updating its own back-offices operations to implement straight-through-processing (STP). E-finance advisory services will draw on these experiences. Advice will also benefit from the technical assistance the Bank's Treasury is providing in the area of reserve management and asset and liability management.

4. ***Other Areas.*** The information communications and technology group (ICT) of the Bank provides assistance to developing countries to create an environment that allows for more rapid acquisition, application and spread of information via use of technology. This assistance includes advice on the most appropriate framework for providing telecom services and more broadly on e-readiness. Work on the enabling environment for e-finance will increasingly be coordinated with this work, including through the creative use of existing infrastructure such as post offices.