

Research - Banking on the Internet

| [Chapter 1](#) | [Chapter 2](#) | [Chapter 3](#) | [Chapter 4](#) | [Case Studies](#) |

Chapter 4

The Internet's Impact on FI Economics

"The beauty of the Internet is its openness. It cannot be controlled or dominated or cut off."

-- Bill Gates, Testimony before the US Senate, March 3, 1998

We have argued so far that the impact of electronic channels depends on how fast retail financial institutions are able to change their traditional management practices to absorb the tidal wave of Internet technology. But the impact also depends on the economics of scale, scope, integration, learning, networks, and communications that apply to this technology, and on the strategies of other players who enter the market with different skills and backgrounds. This chapter takes a closer look at the impact of Internet-based services on the industry's structure and competitiveness. It examines the economics of Internet-based services, the most likely end-states for industry competition, and the new services and roles that the Internet makes possible.

I. The New Economics of Internet-Based Financial Services

One key influence on industry outcomes is the fundamental economics of producing and distributing financial services. This determines entry and exist barriers, the value of integrating and differentiating services, and the degree to which early investments will provide so-called first-mover advantages.

As discussed below, the Internet is likely to strengthen economies of scope, reduce entry barriers and overall scale economies, reduce the benefits of vertical integration, and enable new kinds of technology partnerships that reduce the need for vertical integration. One basic result is a tilt in the relationship between scale and scope in downstream services. (See **Figure 4.1** below.)

- **Economies of Scale and Vertical Integration.**

As we noted in Chapter III, there is already a large body of evidence on the question of scale and scope economies in conventional financial services. The typical conclusion has been that while scale economies do exist, scope economies have been

hard to realize. Conventional services like data warehousing, billing, check processing, ATM networks, and retail branches are subject to scale economies because they require large investments in equipment, networks, and facilities, especially when undertaken on a stand-alone basis by vertically-integrated companies. Other retail services are subject to *diseconomies* -- for example, private banking services that requires special attention to individual customers. However, up to now the overall balance of forces -- apart from regulation -- has favored larger enterprises, because of high entry costs for physical networks and back-office processing, the value of vertical integration, and marketing costs.

The impact of the Internet services on these relationships is complex, but we believe that the net effect is to slash the fixed costs of financial service design, distribution, and operations. This greatly reduces the advantages of scale and vertical integration, for several reasons:

- **Lower Entry and Exit Costs -- Substitutes for Physical Networks.** The Internet provides a lower cost, *more* secure substitute for capital-intensive physical distribution networks like branch networks, foreign offices, and ATM networks. In effect, local players can now match many of the production and distribution capabilities of global companies, if not their marketing budgets.
- **Lower Entry and Exit Costs -- Other New Electronic Services.** Over time, the Internet will provide a lower-cost substitute for services that have heretofore required heavy investments in proprietary networks, including electronic data interchange (EDI), electronic payments, customer support, brokerage transactions, electronic credit analysis, and other transaction-based retail services.

These savings are largely due to the fact that the use of "open" systems has greatly reduced the costs of new services. There is now a huge external industry supplying service design -- organizations are no longer hostage to their own "IT monopolies." At one recent banking industry conference, for example, more than 600 technology vendors showed up to hawk their wares, including two dozen that specialized in turnkey Internet banking and brokerage systems for direct competitors.

Consistent with this, our interviews indicate that complete new Internet banking and brokerage sites -- including authentication, registration, security, transactions and account transfer capabilities -- can now be developed for less than \$1 million for the first 10,000 users, or as little as \$50 to \$100 per user. At least for retail transaction services, this will level the playing field considerably.

- **Lower Entry Costs, Global Marketing.** Larger players may still benefit from entry barriers due to branding and marketing. But the Internet also increases competition here, by providing a global channel that is accessible to smaller players. While large institutions may still benefit disproportionately from quantity discounts on advertising, their relative advantages are reduced.

Assuming that a small institution has interesting software and content to distribute, it can now reach a global audience for almost the same cost-per-thousand as Citicorp or NationsBank.

- **Lower/ "Zero" Marginal Costs – All Services.** If the Internet's "first-copy" costs are lower than its bricks-and-mortar counterparts, so are its incremental costs of operating and supporting new services. Indeed, in the limiting case where customers download and install the software, train themselves, and manage their own accounts, deposits, and trades, these costs -- apart from sales and marketing -- approach zero. This amounts to a *reduction in relative* scale economies, since, beyond the first customer, there is no *differential* cost advantage in having more customers.
- **Specialization and De-Integration.** There is one off-setting feature of Internet services that may lead to *greater* industry concentration in some segments. This is the fact that de-integration may permit service providers to specialize in certain upstream services that are subject to economies of scale – for example, the role of providing digital certificates for electronic transactions described in Chapter II. Providing such upstream services are a natural extension of the authentication and letter of credit functions that banks have traditionally played in payments systems. This kind of specialization is also consistent with a less-concentrated overall industry, since it fosters a freer market for intermediate services, enabling smaller retail financial institutions to compete. The recent growth of non-bank service providers like Check-free and MSFDC is an example of this de-integrated approach. We will consider its implications in the last section of this chapter.
- **Other Sources of Scale Economies.** For services that don't fit this low-entry, zero marginal cost model, there may be other new scale economies. For example, with the help of the Internet, functions like marketing and customer support can be consolidated across product lines in remote service centers, using Internet-based call centers that share on-line customer databases, real-time telephony, e-mail and self-help Web sites.

As discussed below, accumulating more customers may also provide *differential value* by facilitating "data mining," the systematic analysis of customer needs. However, this kind of analysis is most valuable when it is applied across multiple services, so we regard it as an example of scope economies.

- **Diseconomies of Scale -- Evidence to Date.** The effects just discussed are theoretical. It is also important to look at what Internet service providers and financial institutions have been able to achieve in practice. So far, there is some evidence that Internet service providers have actually been subject to some *diseconomies* of scale. As shown in **Figure 4.2** below, the experience of ISPs and major banks that have invested heavily in Internet services is that development and equipment costs have, if anything, tended to increase with service size. This may just be due to the fact that the early investors have

made costly mistakes, or that most services have so far been developed on a custom basis. These problems might be overcome by using outside vendors, or by employing new architectures that permit network services like authentication, billing, caching, and customer care to be shared across applications. But at least so far, the custom approach to Internet services has not favored larger service providers. As we noted in Chapter II, especially for institutions that wish to develop large-scale services, solving this scalability problem remains a major hurdle.

Strategic Implications – Scale Effects. For services where the "modest first-copy cost/ low marginal cost" model applies, the competitive battlefield becomes quite different from what the financial services industry has been used to:

- From a service development, production and distribution standpoint, it is now easier than ever to launch new offers. (*So much for heavy IT investments, huge internal IT departments, and long service-deployment cycle times.*)
- Given the fact that so much Internet technology is publicly available, many new service offers may be *technically* quite similar. Efforts to differentiate and position services will have to focus on *excellent user design*, emphasizing values like crisp interface design, ease of use, clear help menus, reliability, performance, integration with other existing financial services, customizability, and other distinctions that are apparent to customers. (*So much for high-cost proprietary, non-interoperable, customer-unfriendly services.*)
- Once development costs have been incurred, there are strong incentives for service providers to flood markets with a steady stream of practically-free competing offers and services, in a race for market share. Given the potential fluidity of the customer base, there may also be a tendency toward the promotion and discount wars that have characterized the airline industry. (*So much for charging customers high fees for software, services, access, transfers, or individual transactions – low marginal costs are likely to encourage flat-rate/ fixed pricing for many retail services.*)
- The strategic battle increasingly shifts toward using service design and marketing to target and acquire new desirable customers and retain the most desirable current customers. Again, good software design becomes crucial. For example, to retain existing customers, peer software can be made highly customizable. Once customers have tailored it to their needs by building in, say, their own stock portfolios and account information, preferences for news sources, and analytical tools, switching costs become much higher. Following the model that has become standard in the software industry, service providers can then reinforce these lock-in effects by providing regular upgrades, services that lock-in *groups* of customers (for example, families or investment clubs), and by integrating Internet services tightly with other financial services and channels.

- **Economies of Scope**

Scope economies pertain to the fixed and incremental costs and value of adding additional services to an existing service platform. As noted in Chapter I, the industry's experience with cross-selling to date has been largely negative. However, we believe that cross-selling on the Internet may prove to be much more successful, for several reasons.

- **Extensible Platforms – Supply.** The Internet makes it much easier to share underlying network infrastructure, customer databases, support systems, and user interfaces across multiple services. It is also much less expensive to distribute new services -- the incremental cost of adding new services to a *scalable* Internet services platform are small. By comparison, previous cross-selling efforts employed separate "stovepipe" infrastructures whose costs were *additive* at best.
- **Extensible Platforms – Demand.** Traditional financial service infrastructure also required customers to *retool* for every new service's distinctive interfaces and user requirements. But customers who are familiar with one Internet service usually find it easy to embrace others as well. To build lock-in, services can be designed tightly to integrate with each other, so that customization can be ported across multiple services.
- **Understanding Customer Needs.** The Internet also provides powerful tools for gathering data on the needs of individual customer segments across product lines, and for sharing this data across product groups. For example, "push" technology can be used to collect electronic surveys of customer needs at regular intervals. Data gathering can also be extended to incremental customers and products at very low cost.
- **Multiple Points of Customer Contract.** The Internet provides many ways of keeping in touch with customers on a "24 x 7" basis, especially where multiple services are involved.
- **Shared Infrastructure and De-Integration.** Internet technology also facilitates new kinds of partnering arrangements, permitting service providers to share network infrastructure and back-office functions without integrating all the way forward or backward into each new service. This permits them to take full advantage of scope economies – they can focus on understanding the needs of particular segments, delivering a broader range of services without having to develop them all from the ground up.

Strategic Implications – Scope Effects

- Overall, one key impact is to encourage institutions to add more and more services to existing platforms. As we'll see, this has an ambiguous impact on competition in the industry. It helps new entrants gain customers by offering

new combinations of services, but it also helps established institutions defend their existing customer bases by providing multiple services. In either case, the economics of the industry's vertically-integrated product "stovepipes" have been undermined once and for all.

- Increased economies of scope shift the focus of competitive strategy from product lines to customer segments. Since it is more feasible than ever to provide service bundles tailored to individual customers and family groups, the advantage is with those institutions that can identify customer segments and design compelling, well-integrated service bundles for them. The ability to do this kind of bundling may become more important than the ability to produce individual services. In this sense, many leading financial service companies may themselves become Internet *content aggregators*.

- **The Economies of Learning and First-Mover Advantage**

Another important Internet-based economy has to do with learning, the accumulation of useful experience with respect to service design, technology, and network management. In theory, this can provide a kind of "first-mover advantage" that doesn't depend on sheer scale or scope, but only on *cumulative* activity. Thus small players might be able to move faster and accumulate more know-how.

In practice, however, more than eighty percent of all investment in new Web-based technology in the financial services industry has so far been made by world's top twenty financial institutions. Assuming that these expenditures are correlated with learning, this might lead us to expect that learning effects would be dominated by scale effects. But there are offsetting factors.

- First, most Internet service design experience is in fact being accumulated by third-party systems integrators and software and hardware vendors that develop Internet applications for different industries. The existence of this highly-competitive technology industry is one of the most important factors driving the Internet's growth, and it is another fundamental *equalizer* within the financial services industry. This also implies that industry cost curves for financial services are no longer simply the sum of cost curves for its individual members; they also depend on costs and cumulative experience in *all other Internet-intensive industries* – as if ATM machines were also widely used in the computer, chemicals, telecommunications, publishing, entertainment, and computer-aided design industries.
- Much of this *global Internet services industry's experience* is now *public*, or at least *marketed*, available to all firms regardless of size or experience. Lead times are short, imitation is rapid, the influence of industry standards are strong, and innovation is beyond the control of any single industry player. In this environment, the goals of competitive strategy must shift from *technology dominance* and *proprietary offers* to *improved management of technology over time*,

improved service design and quality, *and timeliness* – the adroit implementation of things that most other competitors already know.

All this leaves Internet strategy somewhat indeterminate. There is plenty of room for competitors to position themselves quite differently in the market, with some focusing on being early adopters of technology or niche services that are subject to scale, and others focusing on servicing customers that want a broad product selection from one reliable vendor. While industry leaders start out with the advantages of capital, reputation, and customers, and should also be able to capitalize on the Internet's unique economies of scope and lock-in, there is also room for much smaller, more agile and innovative competitors to grab share. We will explore the new service roles available to competitors later on below.

- **The Economics of Network-Based Markets**

One other critical aspect of Internet-based services is that they are prime examples of "network-based markets." In such markets, up to a point, customers and competitors alike actually benefit from the presence of *more* competitors in the market.

For example, in the case of smart card readers, ATM machines or screen-phones, every additional interoperable device *multiplies* the value of the service to its customers – whether or not the devices are all provided by the same financial institution. From a service provider's standpoint, the existence of these network effects means that when more competitors enter the market, its growth may take off, resulting in lower costs and higher profitability that may well be large enough to compensate it for the reduction in market share. Such network effects are strongest in the case of technologies that permit two-way or multi-point communication among end users, such as the Internet or the telephone.

All this implies that it may even make sense for industry leaders to welcome potential rivals into a new high-growth market, by working with them to set standards for networked services in order to insure interoperability among competitive services. This concept is reasonably well-understood in the software and telecommunications industries, but it is not always implemented even there, because of strong rivalries among industry leaders. In general, financial services rivalries have been even stronger, resulting in a large number of cases where market standards have been stillborn, or left to the mercies of the competitive fray.

Figure 4.3 compares this kind of **network-based market** with two other kinds of markets that are beloved by conventional economists – the **neoclassical market**, and the **benign monopolist market** that was originally described by the economist Joseph Schumpeter.

In *neoclassical markets* there is a direct tradeoff between market size and market power, as represented by the industry leader's market share. The products and services offered in such markets are simple commodities that are virtually identical, never improve, and are independent of each other in consumption and production. In this

situation, any good monopolist, unrestrained by antitrust laws, will be tempted to reduce production below free-market levels in order to boost prices and profits.

Schumpeter's *benign monopolist* stands this relationship on its head. Over time, this beneficent fellow actually generates a *larger* market, by investing more heavily in innovation, helping to eliminate undesirable incompatibilities among disparate products, and providing market stability. This presumes that products and services are complex – they are diverse, change over time, and have to interoperate with one another in order to deliver value. From the supply side angle, we might also label this a "pre-Internet high tech" kind of market, where there are huge benefits to central control, vertical integration, large scale organization, and management hierarchy. In computer technology terms, we have a world in which mainframe data centers do all the information processing, security is a matter of physically-segregated, protected connections, bandwidth is scarce, and distributed decision-making is costly. In other words, it is 1970, and IBM and AT&T still rule the technology world.

In the financial services industry, this mode of production seldom resulted in monopoly *per se*. But it did tend toward a kind of "corporate feudal" structure, with the commanding heights of the industry presided over by a small number of vertically-integrated institutions, each with their own private networks and large in-house IT departments. In this world, high bandwidth was only available through leased lines, endpoints were not powerful enough to handle encryption, and there were no interoperable networks. Instead, there were many isolated, redundant private networks, developed and operated by individual banks.

Network-based markets, especially those for communications and Internet services, are very different from these other two types of markets. In networked markets, market size, growth, and profitability are maximized when industry leaders concede turf to rivals. They do so by, among other things, sharing technology, providing interoperable systems, and subsidizing the development of standards. In this environment networks are no longer centralized and isolated. There is an abundance of bandwidth that permits data storage, processing and decision-making to be distributed out to the network's edges. Security is achieved by encryption, not (for the most part) by access control. A global common platform provides a shared resource that everyone can use to his own advantage.

Strategic Implications. If we are right that Internet-based services, including financial services, are closer to the network-based market paradigm than to its alternatives, this has many important implications for financial services. Most important, at least during the "takeoff phase" for Internet-based services, industry leaders will have a shared interest in collaborating closely on common standards and platforms for services like e-cash, bill presentment, and electronic trading.

Unfortunately, as we discovered in Chapter II, the early indications are that leaders in categories like credit cards, electronic cash, and presentment have tended to polarize the industry into rival camps. That will only slow customer and channel adoption,

stunt market growth, and open the door to new third-party competitors.

- **The Economics of Search, Communication, and Competitive Rivalry**

Within any given service, Internet technology also permits instant point- and multipoint communication at very low cost, independent of distance, as well as powerful new search, agent, and match-making capabilities. These capabilities sharply reduce the costs of putting buyers and seller together, and of finding best offers. They also permit a much higher degree of continuous contact and interactivity with customers. This should help to make retail markets for financial services like loans, credit cards, and insurance more efficient and "commodity-like," reducing spreads and increasing market size. For players who have become dependent on these market imperfections, and cannot adjust, this is bad news; for those who can acquire lower cost structures – including online service distribution – the problem may provide its own solution.

Along with this increased efficiency, the fundamental pace of competition in the industry is also likely to accelerate. As Internet-based services and other electronic services proliferate, cycle times for new retail services and upgrades are likely to decline sharply, compared with past industry IT experience. To retain customers in the face of common platforms, abundant freeware offers, and short design cycles, companies will be under much greater pressure to upgrade their services more regularly, and tailor them to individual customers. Of course, at least in the US, industry leaders have long complained about excessive government regulation and the many obstacles to no-holds-barred competition. Under this combination of rapid cycle times and deregulation, they may soon grow nostalgic for the good old days before life became nasty and brutish, if not short.

II. Key Country Variables

In addition to these microeconomic forces, geographic variables also have an important influence on the impact of Internet-based services. These are especially important for global companies to understand, because they influence the degree to which Internet services can realize scale and scope economies across geographic boundaries, and because skills and experience are accumulated locally, so the choice of location for development groups becomes a key determinant of competitiveness. Since some countries are much earlier adopters of Internet services than others, they also provide an indication of where Internet-based financial services are headed.

As shown in **Figure 4.4**, the most important country-level influences include macroeconomic factors like national income and growth, telecommunications and data networking infrastructure, government policy, the role of banks and non-banks within the financial services industry, and the structure of the domestic payments system. The following describes the influence that these variables have on local markets for Internet-based services.

- **Macro-Economic Factors.** The market for Internet-based services and

financial services are strongly affected by macroeconomic factors, including the level and growth rate of income, inflation, the share of trade and investment in economic activity, and the distribution of income. As shown in **Figure 4.5**, there are strong positive relationships between country income levels, phone lines per capita, and Web hosts per capita. In fact, despite its potential for global reach, Internet activity has so far been even more concentrated among high-income countries than telephony.

As of 1997, for example, if we rank countries by income levels, the bottom three-quarters of the world's 5.9 billion people accounted for only 16 percent of all phone lines, and only *two* percent of all Web servers. At the other end of the spectrum, the US, with just five percent of the world's population, accounted for 26% of all phone lines and 61 percent of all Web servers; Scandinavian countries, with less than a half percent of world population, accounted for 2.5 percent of all phone lines and more than 6 percent of all Web hosts. Some new markets like Singapore, Malaysia, South Africa, and Korea are making efforts to overcome this gap in information technology and Internet use, but it is still increasing.

Even among countries at a given income level, there are important variations in Internet development. As **Figure 4.6** indicates, high-income countries like Finland, Sweden, Australia, and the US have several times as much Internet service activity as fellow high-income countries like France, the UK, Italy, and Germany, while some new markets actually have much more active local Internet services markets than many so-called developed countries.

There are also many other country-level variations in new financial channels beside Internet services – **Figure 4.7** provides a summary of comparative measures for a handful of key countries.

- **Telecommunications and Private Data Networks**

Infrastructure. Another important country variable is the degree to which telecommunication and data networks can support the high-speed, highly-distributed access required for Internet services. At one extreme, countries like Sweden and Finland have aggressively deployed high-bandwidth public and private data networks, and extensive Internet services. Pricing policies for access to the Internet have also encouraged its growth in some countries. For example, in the US, long-distance phone calls are subject to a 2.75 cents per minute access charge by local phone companies at each end of the call, while calls to a local ISP are offered on a flat-rate basis independent of minutes. Thus the existence of these (artificial) access charges has indirectly encouraged Internet use for long-distance communications.

On the other hand, many developing countries have for decades treated private data and long-distance telecommunications services as luxury goods that deserve to be taxed, while they have under-priced local phone service. Combined with government appetites for diverting tax revenue from the

telecommunications sector to other uses, this pricing policy has often resulted in poor service and long waits for phone lines. Meanwhile, data services, including Internet and private leased-line networking services, have been kept high cost and of limited bandwidth.

The existence of expensive leased-line tariffs in Europe and Asia also helps to account for the US's preferred role as a site for Web hosts. This is not only because most Web content has historically been developed in the US, but also because it has been much cheaper to route traffic that is headed from, say, Australia to Japan all the way to the US and back than it is to route it over private lines directly. Longer term, as larger international backbones are added and telephone tariffs are "rebalanced," the Internet may become more truly global. For the moment, its architecture and traffic patterns is very US-centric.

- **Government Policy.** We can distinguish country regimes that have been "pro-Internet" from ones that have been much less supportive. To cite a few examples:
- In **France**, in 1981 the Government and France Telecom took the lead in creating the world's first public on-line service, subsidizing the deployment of data terminals to homes and offices all over the country. In the long run, however, the deployment of this proprietary (1200 bps!) network may have actually discouraged the Internet's growth in France. Today, Internet penetration is only half that of the US, and less than a third that of Finland or Sweden. Only since 1997 has the French government decided to upgrade and open up the Minitel system to an Internet-based platform.
- In **Finland** a combination of government and industry support has produced the world's highest usage rates for Internet and wireless services, as well as one of the few all-digital telephone networks in existence. In the early 1980s Finland's Ministry of Education began to provide free Internet access to all schools and universities. It sponsored the development of a high-bandwidth network that connects leading schools, as well as educational programming delivered over the Internet to the home. Finland has also long had one of the world's most competitive domestic telecommunications markets, with 49 local telephone companies that compete vigorously against state-owned Telecom Finland. Its markets have also been open to foreign telecommunications operators since 1994. As a result, Finland now has among the world's lowest tariffs for international, wireless, and domestic calls. Another key supporter of these pro-competitive policies has been Nokia, a Finnish company that is a leading global wireless equipment competitor. Nokia understood very early that to strengthen its own competitiveness, it would benefit from having a cutting-edge domestic market.
- **Brazil** maintained a closed, state-monopolistic market for telecommunication

services from the mid-1960s until the mid-1990s. But it also permitted astronomical inflation rates as a matter of policy during this period. This had many negative consequences, but it did encourage the growth of electronic banking and relatively sophisticated private corporate data networks, because customers needed to monitor their account balances closely, while the powerful domestic banking industry had an effective monopoly on local currency savings accounts. Today, Brazil – with a population of 166 million and a per capita income of just \$5400 – has more than 1.6 million online PC banking customers, one of the world's highest penetration rates for such services. Now that telecommunications are once again being privatized and Internet services are expanding rapidly, this provides an important opportunity for Internet-based financial services in Brazil.

- In **Singapore, Malaysia, and Hong Kong**, Asian financial markets that are otherwise quite sophisticated, the Internet's expansion has been constrained by government concerns about unrestricted freedom of expression. All Internet service providers have to connect through government-run "hubs" and caching servers like Singapore's I-HUB, which are trying to implement stiff restrictions on content that the government doesn't like, and on using encryption to protect privacy. Whether or not Internet-based financial services will prosper without such privacy protection is unclear. Nevertheless, so far Internet use in these markets is soaring -- for example, in 1997, about 33 percent of Singapore households had Internet access, almost as high as the penetration rate in Finland.
- **Financial Services Industry Structure and Roles.** The structure of a country's financial services industry, and the role of banks and non-banks in its payments system, also has an important impact on the opportunities for new electronic channels.
- In **Canada** domestic banking is dominated by a half-dozen commercial banks. They have taken the lead in proliferating debt cards and point-of-sale transactions systems, though most also offer MasterCard or Visa credit cards. As in Europe, smart cards might have been another "bank-friendly" payment alternative, but Canada's high-quality telecommunications network made it easier to do over-the-phone debit card verifications. The result is that debit card transactions now dominate credit card transactions. Canada alone now registers more than three times the annual volume of all US debit card transactions. In the **US**, in contrast, the population is ten times that of Canada, but there are also more than 9000 banks and a dozen major credit card companies. The result is that credit cards, checking, and cash dominate debt cards and smart cards, which are much more "bank-friendly."
- In **Germany, Switzerland, the Netherlands, Sweden, and France**, financial conglomerates led by commercial banks have established a dominant role in such "non-bank" retail services as insurance and securities trading. In France, banks have also

led the way in encouraging the widespread adoption of stored value cards, which provided the banks with automatic debiting while respecting the limitations of the French telephone network.

III. Industry End-states

Given the economic and geographic forces at work described above, we will now try to draw some implications of the growth of Internet-based services for the future competitive landscape in financial services industry. Our objective here is not to forecast the industry precisely, but to develop a framework for thinking about industry alternatives, identifying how they depend on strategic choices as well as partly-exogenous forces like technology. One key theme, in fact, is that the landscape is not "beyond our control" – it depends a great deal on the strategic choices and management skills of industry members.

- **Alternative End-states**

As a forcing device, it will be useful to start out with the following thought experiment – thinking five to ten years down the road, what alternative competitive landscapes for the financial services industry are possible? In principle, as we saw above, this outlook should really be developed for each geographic market, but we will focus here on the US market.

One way to proceed is by describing alternative possibilities for industry structure. As depicted in **Figure 4.8.**, every retail financial service consists of similar generic "upstream" and "downstream" activities. As we explored earlier, the Internet is likely to have a profound impact on the benefits of vertical integration across these activities, as well as economies of scale and scope.

By focusing on alternative levels of scale, scope, and vertical integration, we can identify the alternatives shown in **Figures 4.9** and **4.10.**

It is important to emphasize that each of these alternatives is an extreme case. It is not likely that any of them will ever appear in pure form. Indeed, as we will argue, the "mixed cases" are the most interesting. But real-world analogies exist for most of them, as indicated in the last column in **Figure 4.9.** The following describes each alternative, grouped by the effect on industry competition.

1. **Base Case.** This alternative is a rough approximation to current conditions in the US retail financial services industry, with limited realized economies of scope and scale and a high degree of vertical integration. Under this kind of industry structure, financial institutions tend to specialize in a limited range of products and services and there are a large number of non-dominant suppliers for almost every retail service.
2. **Consolidation Alternatives.** Two of our eight industry end-states might favor a much more consolidated industry than exists today, supposedly because of newly-tapped economies of scale and scope.

- a. **Specialized Giants.** This end-state resembles the global pharmaceuticals industry today. The industry comes to be dominated by a comparative handful of (physically global) companies, each of which specializes in a narrow range of products. This is consistent with an industry characterized by limited economies of scope, strong economies of scale and vertical integration, and high barriers to entry and exit, where major banks, brokerages, and life insurance companies gobble up direct competitors in their own service arenas, but respect inter-service boundaries.
- b. **Conglomeration.** In this end-state, in addition to economies of scale, vertical integration, and high barriers to entry, there are also powerful economies of scope. This leads to an industry dominated by a handful of financial conglomerates, each of which delivers its own menu of multiple services. This doesn't necessarily mean that every global giant offers exactly the same service menu. Some might choose to specialize in particular customer segments. Nor does it rule out new entrants, although it does give current industry leaders the "pole position." Finally, it doesn't indicate which leaders from different service segments like banking, brokerage, payments, and insurance will dominate. That requires a separate analysis of the gains from cross-service integration. (See below.)

This end-state is the one that is most consistent with the recent consolidation trajectory that the worldwide industry has been on. To some extent, it resembles the situation that prevailed in the US computer and telephony industries until the early 1980s.

3. **Re-intermediation Alternatives.** Once we allow for the possibility that economies of vertical integration, entry barriers, and exit barriers may become less important than they have been up to now, there are many more interesting possibilities to consider.
 - a. **Fragmentation.** At one extreme, under conditions with limited economies of horizontal or vertical integration and limited economies of scale, the industry might become highly fragmented, with many firms specializing in a narrow range of services. It would also be more turbulent, because it would be open to smaller entrants and there are lower exit costs. This resembles the situation in the current US Internet service provider industry, which now has more than 4300 ISPs.
 - b. **Dominant Front-ends.** In this case there are powerful economies of scope downstream, reflecting the value of having multiple services available through a common, easy-to-use interface. At the same time, there are no compelling economies of scale upstream, or integration economies, so "backend" functions like support or network services are delivered by independent suppliers. This resembles the original Microsoft/ Intuit scheme to mediate access to multiple financial services through a common software interface. In that scheme,

Microsoft/Intuit would have owned the customer relationship.

A more open example of this model is the Internet itself, with Netscape and Microsoft providing dominant front-end browser interfaces to access thousands of independent Web services. As the front-end provider's control over customer relationships decline, this end-state converges with the affiliated networks end-state, in which multiple services are collected at an electronic mall or collected and evaluated by the same intelligent agent. This end-state exhibits all the properties of network-based markets, including high entry barriers once dominant interfaces are established, and increasing returns to deployment.

- c. **Dominant Backends.** In this end-state, economies of scale are important for upstream activities like network authentication or billing, but there are limited economies of integration and scope. The result is an industry where multiple retail service providers (or agents) contract with independent upstream service bureaus for shared, private-labeled services. In this end-state, new entrants may specialize in upstream activities that are subject to scale economies, becoming dominant suppliers to formerly-integrated firms. This resembles the situation in the airlines reservation and ATM network services, where individual firms found that it was advantageous to join together to realize upstream economies in network services. It is also the approach recently pitched to smaller banks for services like bill presentment by MSFDC and Check-free. (See below.)
- d. **Independent Distributors.** This end-state builds on the last one by adding downstream scope economies, so that groups of upstream specialists sell their services to independent retail service distributors. Each distributor owns the relationship with its customers, and configures packages of services to fit their needs. From the customer's standpoint, unlike the affiliated networks case, these services appear to come from vertically-integrated companies. This is similar to the "bilateral oligopoly" that characterizes the first-run film distribution business, with independent film studios selling to independent distributors. As new services are developed, they are added by distributors as competition dictates.
- e. **Affiliated Networks.** In this end-state there are scope economies, and perhaps some upstream economies of scale, depending on the affiliate's size. Unlike the "dominant front-end" end-state, there are also benefits from integrating into upstream activities. In order to realize the benefits of offering multiple services to customers, industry members join together and present their services through common interfaces. Beyond that, there are many possible variations, depending on the degree to which affiliate members share revenues and customer data, or actually integrate their individual services. At one end of the spectrum is AOL's on-line financial mall, where direct

competitors have minimal relationships with each other. That also resembles the situation in Internet publishing, where publishers maintain their own editorial operations, but provide readers with linked access to other "non-competing" publishers' sites to capture their loyalty and minimize search costs. If the AOL front-end to such services were to acquire significant market share, with its own special super- services and customers, this end-state would begin to converge with the "dominant front-end" end-state discussed earlier.

At the other end of the affiliate network spectrum, a small group of banks, insurance companies, and brokerages might agree to provide a common Internet front-end to their respective services, effectively merging their online services.

- **Key Industry Drivers**

These end-states are just limiting cases, and there is no reason to expect that any of them will come to dominate the industry exclusively. Their relative prospects are determined by variety of industry drivers like trends in technology, channel structure, and customer needs. One approach to identifying these industry drivers is the standard "five or six forces" laundry list shown in **Figure 4.11**.

This model focuses our attention on industry drivers like the following:

- **Technology** - the rate of technical progress in key Internet technologies – including trends in economies of scale, scope, and vertical integration;
- **Regulation** – the degree to which regulatory barriers to financial service convergence, global competition, and Internet service growth are maintained or altered;
- **Supplier Behavior/ New Entrants** – the buying power and competitive behavior of suppliers of capital, labor, technology, and new entrants to the industry;
- **Customer Needs and Preferences** – trends in customer preferences and needs by segment, for Internet services in general, new electronic financial services, and existing financial channels, as reflected in the rate of adoption for Internet and electronic payments services;
- **Channel Behavior** -- the market power and strategic behavior of financial service channel partners and distribution partners, especially potential channel partners for new services;
- **Intra-Industry Behavior and Standards-Setting** – the competitive and cooperative behavior of industry members, especially their success in

establishing standards for new services.

One key limitation of this static economic forces model is that, especially in network-based markets like Internet services, these factors are not really independent of each other. There are important feedback loops and influences on expectations that undermine the assumption that demand and supply are independent. One such relationship, the interaction between standardization, market growth, and innovation, is shown in **Figure 4.12**. As indicated, up to a point, industry standardization for service platforms has a *positive* impact on customer adoption, by providing customers access to multiple, interoperable services. It may also help to stimulate innovation, investment, and new entry, by concentrating development activity around standard platforms, causing it to focus on retail applications and services rather than mere "plumbing."

Taking these dynamic effects into account helps us to distinguish among the chances for different industry endstates, because they vary considerably in the degree to which industry players are encouraged to pursue more open strategies. For example, the fragmentation end-state depends upon a high degree of industry standardization, while the conglomeration end-state relies on vertical integration. To the extent that the rivalries behavior of industry leaders makes it difficult to achieve standards except by "defacto dominance," this is likely to inhibit the fragmentation end-state's chances. On the other hand, to the extent that industry leaders understand that in young, high-growth network-based markets, adopting standards can boost market growth, the de-integrated end-states become more likely.

- **The Prospects for Particular End-states**

Armed with these drivers and our analysis of Internet economics, we can begin to draw some conclusions about the prospects for particular end-states. The drivers affect these prospects quite differently. The following examines the impacts of each driver separately, and then considers their overall effects.

- **Technology/ Supplier Behavior.** Continued innovation in Internet technology is likely to support more highly-distributed services and lower entry barriers, which is favorable to the fragmentation and the independent distributor end-states. It also tends to support economies of scope on both the production and consumption side. This is favorable to the conglomeration, dominant front-end, independent distributor, and affiliated networks end-states, and less favorable to the fragmentation, specialized giant, base case, and dominant backend end-states.

The implications of technical trends for scale economies and the end-states that rely on them are more ambiguous. They may result in increasing scale economies for some upstream services like certificate authorities, Internet credit reporting, and billing. At the same time, they tend to decrease entry barriers and scale economies sharply for downstream services. On balance, this favors those end-states that assume declining scale. This works against the dominant backend, specialized giant,

and conglomeration scenarios.

Internet technology also do not favor the proprietary, vertically-integrated approach to development and delivery required by the specialized giant, conglomeration, affiliated network, and base-case end-states. The outlook for the affiliated networks scenario is more positive, if it is defined to include existing vertically-integrated players aligning to resell each others' services.

- **Deregulation.** Continued deregulation favors consolidation of services and channels, by removing barriers to cross-service integration, and by permitting the realization of other economies that have been bottled up. It also supports the trend toward de-integration, by removing regulatory barriers to service disaggregation and specialization. At least in the US, antitrust laws may continue to be an obstacle to the dominant front-end, as they were in the case of the proposed Microsoft-Intuit acquisition. But competition among a limited number of dominant front-ends might be tolerated.
- **Suppliers/ New Entrants.** Increased availability of outside technology vendors favors less-integrated end-states, as do declining entry barriers and a growing supply of specialized service providers. Declining entry barriers for individual services like electronic brokerage also help to promote a more fragmented, free-wheeling industry structure and a "best-of-breed" alternative to scope economies.
- **Industry Behavior -- Standards.** In the context of network-based services, the most important form of industry behavior has to do with standards-setting. Recent trends toward increased collaboration among Internet service developers help to encourage de-integrated end-states, by promoting the use of interoperable platforms. The end-state most benefited by standardization is fragmentation, where standards are a necessary condition for arms-length agreements among upstream and downstream service specialists. There, industry standards provide a substitute for scope economies – they encourage customers to aggregate "best of breed" services for themselves. Standards also facilitate sharing of service offers among existing vertically-integrated providers, aiding the "affiliated networks" end-state.
- **Channel Behavior.** The growth of channel partners for Internet-based financial services is fundamentally inconsistent with the consolidated end-states, where service providers rely on their own internal direct sales, marketing, and support groups. Beyond this, the growth of new Internet channels such as electronic malls, search tool providers, and online services like AOL encourage the growth of a fragmented, competitive industry, by reducing entry costs and by providing a readily-accessible customer base. Channel partners may also provide a substitute for aggregation of services and scope economies by financial service companies, providing support for the "fragmentation" end-state. Finally, to the extent that electronic channel partners are able to promote standard front-ends that integrate upstream

financial services, they support the "dominant front-end" end-state.

- **Customer Needs and Preferences.** The impact of this factor depends on the mix of customer preferences for financial services. To the extent that key segments prefer integrated ("one-stop") services, it reinforces those end-states that take advantage of the Internet's scope economies. Other customer segments may prefer more narrow specialized offers by established firms; while still others -- "do-it-yourselfers" -- may prefer to assemble their own portfolios of "best of breed" individual services, encouraging the fragmentation end-state -- for example, some on-line investment clubs have developed quite sophisticated portfolio selection tools of their own.
- **Industry Dynamics.** In terms of the dynamic effects described above, the strongest effects are for end-states that encourage standardization, high rates of innovation, new entry, and rapid market growth. The fragmentation, affiliated network, and independent distributor end-states encourage all these feedbacks. There are much weaker feedbacks for end-states that rely on proprietary solutions or vertically-integrated, slower moving organizations.
- **Summary – End-states Outlook.**

The impacts of these factors on alternative end-states is summarized in **Figure 4.13**. Overall, the industry drivers appear to favor less integrated outcomes, especially the affiliated networks, independent distributor, and fragmentation end-states. The most important implications of this analysis are as follows:

1. **Toward De-Integration and Scope.** Since Internet-based services are just beginning to capture market share, we don't expect them to deflect the whole industry from its consolidation trajectory over night. However, in network-based markets, new dominant interfaces and ways of doing business can be established quickly. The consolidation trajectory is not favored by any of the industry drivers that we have considered. One clear implication is the possibility of a rapid shift from an industry led by vertically-integrated, slow-moving, go-it-alone, scale-oriented, product-centric institutions to an industry that is much *more fleet-footed, partner-rich, scope-oriented, and customer-centric.*
2. **Toward Re-intermediation.** While there is much uncertainty about precisely which end-states will prevail, the balance of forces identifies the short list of key alternatives shown in **Figure 4.14**. All these more likely candidates open the doors to a significant amount of new entry, market growth, and re-intermediation.
 - **Affiliated Networks/ Independent Distributors.** As noted earlier, these two end-states differ primarily in the degree to which services are integrated by one service provider at the front end. For purposes of this discussion we can combine them, because in the real world they are likely to converge, given the interest of existing institutions in survival. This is the outcome that gives the most comfort to industry

incumbents, once they recognize that physical consolidation is unnecessary and wasteful.

Both of these end-states bet heavily on the producer and customer benefits of multi-service scope. They assume that cross-service integration is valuable to customers, as well as less expensive to provide under Internet economies, *and* that this integration can best be provided by service providers rather than customers themselves. Finally, they assume that upstream service providers may enjoy some economies of scale.

On these assumptions, these end-states have many strengths, especially with respect to industry dynamics, because they are likely to encourage standard setting, new entrants, and innovation.

The major weaknesses of these industry end-states is the radical change in behavior that they require with respect to partnering and de-integration, and the implicit assumption that service providers can integrate services together better than customers can do for themselves. To fully realize their potential, the theoretical benefits of integrating and cross-selling multiple services must be realized. This may be less likely under the weaker forms of affiliated networks – will a credit card affiliate really recommend a consolidation mortgage from another affiliate to replace customer credit card debt? It is also not easy to implement true cross-selling even within a single organization, where separate product groups have a tradition of maximizing their own sales. Without strong cross-selling, the affiliated networks and independent distributor endstates may both degenerate to their weakest form, with third-party service providers like AOL or Intuit offering mall-like collections of independent services.

- **Dominant Front-ends.** A second end-state that is consistent with de-integration and re-intermediation is the dominant front-end. As discussed, this is the original Microsoft/Intuit model. This scenario received a great deal of attention from the financial services industry before the Intuit acquisition was blocked, because it was mortified at the prospect of having to compete with Microsoft for space on the desktop. However, the real victory in this battle has been won by the Internet, not the US Justice Department. While retail finance applications like Intuit's Quicken™ and Microsoft Money™ still have a commanding share of the PC desktop personal finance market, and Intuit has added services like bill presentment to their Internet offers, the key threat to financial institutions from these software players is no longer due to their control over the desktop.

The Intuit acquisition was proposed in the "pre-Internet" days of 1995. These days, even if customers use Quicken™ for all their

accounting and check-writing, it is simple to write an Internet-based front-end that encapsulates those functions and integrates them into a broader service. The value of Quicken's "shrink-wrap" installed base for purposes of reach financial services customers is also now much lower, since it has become easy to distribute, install, and support new software over the Internet. Regulators also don't think much of the dominant front-end scenario, nor do leading channel partners like AOL or major banks, unless it would lead to their own dominance. Finally, as discussed below, the "dominant front-end" scenario ignores the rise of new upstream services that are subject to important scale economies.

Accordingly, the chances for the dominant front-end end-state look slim, unless it converges with the "affiliated network" end-state, attracts a solid foundation of financial industry incumbents, and acknowledges the existence of economies of scale in new upstream services. In fact this is precisely the direction that both Intuit and Microsoft have recently been headed.

- **Fragmentation.** Another interesting alternative is the fragmentation end-state, in which industry de-integration is taken to the limit. This does not imply that customer-side scope economies are eliminated – instead, customers may be able to use the Internet itself as a kind of electronic mall, using software tools like expert agents and search tools to design their own individual collections of "best of breed" services.

Under these conditions, the "spot market" for Internet-based financial services become highly competitive, with numerous players upstream and down competing on an arms-length basis for customer cash balances, attention, and orders. This creates several kinds of entry opportunities and "upstream" service roles, including software-defined expert agents, and network advisory services like Intuit's BankNow.TM

The end-state assumes no benefits from vertical integration and limited economies of scale. It also assumes a high degree of industry cooperation around the formation of standards for electronic payments, bill presentment, and other key services, so that these are in the public domain rather than controlled by handful of market leaders. Given these conditions, the propagation rate for this end-state could be very high, because it encourages high rates of innovation and entry.

- **Dominant Back-ends.** This last "more likely" end-state allows for the fact that a combination of de-integration and the growth of Internet services will create opportunities for new upstream services

that are subject to scale economies. As discussed below, these include such services as electronic bill presentment, digital certificate authorities, electronic payments, and advisory networks. A superset of the fragmentation scenario, this recognizes that even while the Internet has chipped away at scale economies in traditional services, it also added these other services that are in fact subject to *even more powerful* increasing returns and specialization.

Across these more likely end-states, therefore, one key unresolved tension is between those that rely on service providers to deliver economies of scope to customers, and those that rely on customers themselves, their software agents, or other new intermediaries. Another is the tension between the positive and negative effects of the Internet on scale and vertical integration. Together these tensions set the stage for a battle between traditional institutions that are struggling to catch up and reform, and new entrants from very different backgrounds who are poised to eat their lunch.

IV. Strategic Implications -- New Battlegrounds and Roles

As just noted, our end-states analysis begs several key questions about precisely which new services will be enabled by the Internet, how existing services can be integrated to realize scope economies, and what new strategic roles might be adopted by different players to shape end-states to their advantage. The last section of this chapter examines these issues.

- **New Services Battlegrounds.**

We have already identified several new service opportunities that are likely to emerge in the context of a less integrated, more Internet-centric industry. Some of these provide opportunities to recreate the global scale economies that are disappearing in other parts of the business. Unfortunately for industry incumbents, there are strong first-mover advantage for these opportunities, and the first-movers to date have all been outsiders who are solidly grounded in Internet technology and mores.

Electronic Payment Systems. One primary battleground, especially for banks, will be for control over the payments system. There are at least two retail arenas here that will be hotly contested, because they threaten to re-intermediate the banks' relationships with their retail customers.

- **On-line Bill Presentment.** Retail demand for billing services are likely to grow rapidly in the next three to five years. Of course non-Internet systems for bill payment, including automatic debit and online authorizations for bill payments, have existed for more than a decade. But the combination of Internet bill presentment and payment is much more powerful. This is because of the benefits of being able to review, manage, and store electronic bills directly, and authorize funds transfers from any Internet access point. Eventually, customers and merchants will also be able to use the Internet for direct funds transfers among themselves, without any bank intermediation at

all.

The immediate challenge for the banks is that bill presentment may gradually cause them to lose control over their customer accounts. Furthermore, any system that improves the efficiency of the payments system -- by speeding up payment and billing cycles -- will result in lower average idle balances, an important source of "free funds" for banks and other financial institutions.

Of course it is unlikely that banks can hold up the wheels of progress in this arena forever. And if they offer these services themselves, they may be able to strengthen their positions with respect to non-banks. But they must carefully consider the implications of the alternatives shown in **Figure 4.14**.

1. **Individual Bank Aggregation.** One approach would be for *individual* banks to aggregate bills. If this were successful, it would retain a larger share of customer balances with banks, because of their influence over permissible payments methods and fees. But it faces many obstacles.

First, most communities are served by multiple banks, so if individual banks try to aggregate bills, merchants have to provide redundant billing data to multiple banks. This is not as great a burden as it might seem, if the Internet is used to establish links between biller sites and bank sites. But it leads directly to a second problem.

This has to do with the fact that financial institutions themselves account for a significant share of retail bills and statements, while many retail customers have relationships with multiple institutions. Banks and credit card companies are not prepared to transmit each others' bills to these customers.

In fact most billers, including banks, would prefer to maintain the direct customer interface and "eyeshare" that billing provides. Billers may even be able to generate advertising revenue from their installed bases of billable customers.

There are also significant network economies in bill presentment. The value of the service is increasing in the number of merchants, payments providers, and customers that are signed up to use a given interface. This argues against having each bank develop its own proprietary service from the ground up.

Finally, some customers may be more comfortable dealing directly with individual billers for privacy reasons. Or they may find it more convenient to deal with third-party billing aggregators who pool a larger share of electronic bills and permit more payment alternatives.

One interesting variation on this bank-led approach would be for a bank to provide customers with software agents that poll the presentment sites of individual billers automatically, collecting the latest bills and account data..

This would overcome many of the concerns about privacy, cross-bank billing, and scale economies just noted. But it presumes that most merchants have already established their own presentment sites.

2. **Individual Merchant Aggregation.** As noted, many billers, especially the larger ones, prefer to aggregate bills themselves, because this preserves direct links to customers. From the customer's standpoint, it is also private. But it also complex, because there are many more merchants than banks or aggregators.

From the banks' standpoint, this approach also has several disadvantages. If merchants control presentment – by presenting bills at their individual Web sites, with multiple payment options, as some utilities have recently done -- it becomes much easier for customers to switch payments and accounts among deposit-taking institutions. Payments could be made from brokerage accounts, money funds or any other accounts that allow on-line transfers. Combined with easy online account opening, this may lead to the same kind of account shopping that has is prevalent in long-distance telephone service.

Of course, banks could still compete for cash balances by offering better yields, account terms, and customer service. But they would lose control over this important customer interface, and there be a much more competitive market for checkable deposits, which now amount to more than \$642 billion in the US alone. As electronic payments become cheaper and easier, there would also be a reduction in transaction and cash management fees from payment-related services like wire transfers, paper check processing, automatic debit, and ATM machines, as well as much higher velocity for demand deposits. Payment-related fees have recently accounted for as much as a quarter of bank non-interest income at leading banks.

Note that once major billers and banks have adopted direct presentment strategies themselves, they are less likely to cooperate in aggregation schemes that disintermediate their relationships with customers – there are high "facesaving" costs to reversing such strategies.

3. **Third-Party "Private Label" Aggregation.** A third alternative is more friendly to banks, but it also poses risks for them. This relies on third-party service providers to aggregate bills and control payment methods. A pre-Internet version of this is found in Brazil, where banks are extremely influential, and bank-mediated billing has long been the rule. Because of high inflation rates, poor postal service, and the absence of alternatives to bank deposits, there have been strong incentives to keep assets in banks and pay all bills electronically. Long before the Internet, therefore, banks established a national registry for all bills, where merchants could register bills under a standard numbering system. Customers simply instruct their banks to pay

these bills electronically by bill number.

In the US, the role of the bill registry has been assumed by third-party billing aggregators like Checkfree and MSFDC. So far they have operated on a "private label" basis, signing up billers, and providing presentment services through individual banks, or affiliated networks of banks like Integriion.

This approach solves four problems. First, merchants are relieved of the burden of having to deliver their bills electronically and register them with multiple banks. This is most burdensome for small billers, though Web development costs for billing services are already pretty modest, and are declining.

Second, the aggregator's independence solves the problem of financial institutions having to handle each other's bills. Third, it permits third-party aggregators to specialize in the business of electronic billing, realizing network and scale economies. Fourth, by giving banks a lead role in service resale, this approach also wins their support in recruiting more banks and billers.

However, this solution still requires that merchants give up their exclusive billing relationships with customers. From the customer's vantage point, it may deliver less attractive payment alternatives than other options, because of bank influence. It may also require customers who have relationships with more than one financial institution to duplicate payment activities.

Finally, from the banks' standpoint, there is a risk that this alternative will clear the way for direct retail services by third-party aggregators, or succeed so well that aggregators acquire upstream market power.

4. **Third-Party Direct Aggregation.** In this alternative, third-party aggregators no longer just offer their services through banks or merchants – they serve retail customers directly. This is the "nightmare scenario" currently being pursued by Intuit, which is signing up merchant billers and banks to facilitate a kind of bill payment mall that offers offering presentment services to retail subscribers. If direct aggregators succeed in gaining a critical mass of cooperating billers and banks, this model could have great appeal to many customers. It would realize the scope economies of "one-stop billing," and might also offer a wider selection of payment alternatives.

Since much of bill presentment is local, one key challenge to this option is to round up enough smaller billers to handle a significant share of customer traffic. Another is that it is likely to alienate many banks. From their standpoint, depending on how this alternative is implemented, it threatens to disintermediate their customer relationships, reduce idle cash balances, and increase competition for the balances that remain.

To forestall this threat, financial institutions, especially banks, would have to seize the initiative in shaping third-party presentment services. At least up to now, however, unlike Brazilian banks, US banks have deferred to technology-based entrants like Microsoft, Intuit, and Checkfree. **Figure 4.15** summarizes the competing interests of merchants, banks, and third-party aggregators in this new electronic billing arena.

- **Electronic Currency.** Another threat to the role of banks in the payment system is from smart cards and electronic cash. While ATM machines for cash and debit cards for "near cash" have been very convenient for customers, the ability to download electronic cash over the Internet to smart cards will be even more convenient, if the new devices achieve wider acceptance among banks and merchants. Card standards and interfaces are progressing, and retail electronic commerce is also beginning to take off, so smart cards will see high growth in the next few years. As in the case of bill presentment, this would make accounts at banks and non-banks -- especially brokerages -- much more fungible. It also creates a new role for third-party service operators as organizers of smart card services and networks.

The need to turn "card cash" back into real cash gives banks a short-term advantage in this market, given their unique role in distributing paper currency. But smart cards clearly reinforce the longer-term trend toward increased competition for cash assets, lower average balances, and lower ATM and check processing fees.

Strategic Implications -- New Payment Systems. By taking the lead in establishing standards for smart card and bill presentment services, banks may be able to buy time for their current position in the payments system. As the capabilities of Internet-based cash transfers and bill presentment become more accepted, however, it may be harder to resist customer pressures to open up the bank-centric payments system to other short-term asset managers, including brokerages and their financial advisors.

In terms of industry end-states, this analysis favors those with de-integration, increasing economies of scope, and scale economies for upstream services. Among the industry's leaders, some increased conglomeration may result from the effort to provide more cash management options within the same vertically-integrated institutions. At the same time, however, groups of major banks will also partner with third-party service providers who specialize in these services. So the growth of these upstream providers for payment services will accelerate the trends toward affiliation and de-integration.

- **Certificate Authorities.** As discussed in Chapter II, the emergence of digital certificate authorities is closely linked to the rise of electronic commerce and on-line financial transactions. The need for certificates arises from the fact that, left to its own devices, the Internet is a weak authentication system, where anyone -- or any Web site or software program, for that matter -- is free to assume other identities. This creates a need for strong authentication,

where trusted institutions stand behind identity claims and swear – by way of digital certificates -- that, indeed, the person at other end of the connection really is who he says he is.

Strong authentication only becomes crucial in context of a large e-commerce market, which is still some way off. Already, however, more than a dozen players have entered the certification business. Conspicuously absent from the list are financial institutions, despite the fact that certificates are central to secure on-line financial services. One might have also thought that authentication is complementary to the traditional roles played by banks as notary publics, issuers of letters of credit, and deployers of tested telex and other "trust-based" services. Such authorities will acquire direct relationships with retail and wholesale customers. There are also natural economies of scale, scope and networks in this service, so there is a strong possibility that a handful of dominant certificate authorities will emerge from the pack. Especially if certification were extended to new areas like legal documents, software and personal identity, it would also provide a large global market. Finally, the entry of leading banks into the market could do much to legitimize electronic commerce and finance, helping the whole market take off.

Strategic Implications – Certificate Authorities. Given all these attractions, as well as the need to defend against re-intermediation, financial institutions should consider carefully their current course of abdicating certification to phone companies and technology upstarts. Major banks, in particular, might do well here. But timing is critical, because there is strong first-mover advantage, given the importance of network economies and scale economies in this market. If the current market for "identity" certificates is dismissed as non-threatening or too small, it could prove much more costly to re-enter the larger market later on.

- **Virtual Private Advisory Networks** A third new kind of service that is made possible by the Internet channel is the retail financial advisory network. While independent financial advisors are hardly a new concept, the Internet greatly enhances the reach and collective power of such advisors. On the supply side, the technology makes it easy to assemble a virtual private network of independent experts in areas like tax, retirement planning, securities analysis, portfolio management, insurance, and mortgages, and perhaps geographic, industry, and macroeconomic specialists as well. These experts can provide clients with a combination of real-time and off-line individual financial planning and analysis. Like their clients, they can be located all over the globe. With the help of technologies like agent, publish-and-subscribe, and Internet groupware, they can deliver analysis that is carefully tailored to specific customers and timely.

Depending on the advisors' roles in portfolio management, planning, and recommendation of specific products, their compensation could be based on a combination of a fixed percentage of assets under management, "success" fees, fixed fees for plan reviews, or project-related charges. Unlike conventional insurance agents or brokers, they would not be compensated on the basis of transactions or the

sale of specific products -- that would undermine their independence.

Some industry leaders like Merrill Lynch have already begun to offer their own vertically-integrated versions of such networks to key clients. For such institutions, which already large groups of internal experts available in many fields, the Internet is just another channel. To promote their financial service cross-roads sites, Intuit's www.quicken.com and Microsoft's www.moneyinsider.msn.com site also offer online access to rosters of financial planners, "free" (advertising-subsidized) advice on specific subjects, and individual advice from selected experts by way of e-mail and chat rooms.

Strategic Implications – Advisory Networks. Longer term, the Internet creates an opportunity for financial advisors to form their own for-profit networks, in addition to reselling their services through cross-roads sites or the online service sites of other financial institutions. In this sense it creates the possibility of a new "unbundled" advisory service model, with richer content and different pricing. This approach has several advantages. First, for customers, an independent network is likely to be more objective. Second, if an expert network were available for resale, it could save smaller institutions the cost of developing in-house networks. Third, for the experts themselves, network would permit them to organize and market their expertise without linking up exclusively with individual vertical institutions. That, in turn, may help networks sign up better experts in a variety of disciplines. In time this could become yet another example of Internet re-intermediation, this time of financial analysis.

- **Cross-Service Integration Battlegrounds**

As we argued in the end-states discussion, one of the Internet's most important implications is that it provides new opportunities for scope economies and cross-selling. Some of these are on the production side, where infrastructure, customer databases, software distribution, and support are easier to share once customers are on-line. While some services are much more amenable to supply-side integration than others, it would take us far afield to explore all the technical details of integrating particular services.

The more important strategic issue is on the customer side, where scope economies arise from the fact that customers derive more value when multiple services are linked together, configurable to individual interests and needs. This raises the question of precisely how service bundling should be done – which *service clusters* are valued by different customer segments, which institutions are best positioned to deliver them, and how new entrants can help.

The key point here is that scope economies pertain not only to the recombination of traditional financial services, but also to the recombination of services and products that have up to now been largely disconnected. Already there are several cases of multi-service Web sites that trespass on traditional service boundaries, most of them offered by aggressive new players. Intuit's cross-roads site, www.quicken.com, is an

outstanding example. As one might expect, it provides online sales capability for Intuit's own money management and accounting software products, including TurboTax™, Quicken™, and Quickbooks™. But it also offers gateways to a rich variety of *retail and small business customer-oriented content*, including:

- Financial advice, news, and analytical tools for specific subjects like tax, mortgages, insurance, retirement planning, securities analysis, new IPO listings, and small business;
- Connections to online sites where securities, auto insurance, term life insurance, auto loans, credit cards, personal loans, and mortgage loans can be priced, applied for, and in a growing number of cases, purchased online;
- Electronic commerce sites of special interest to small business and retail customers, providing pricing and ordering capabilities for items like computers, office equipment, finance books, corporate coffee purchase programs, and even used autos.
- Competitive pricing information for financial services – an up-to-the-minute comparison of terms and rates for credit cards; state-by-state comparisons of interest rates on mortgages, personal loans, and auto loan; and comparisons of on-and off-line commissions for almost fifty brokerage firms.

Some of these offers turn out to be shallow, but the overall collection is quite useful. Interestingly, Intuit's motivation is not to generate direct revenue from financial services purchased through the site, but to acquire a large affluent customer base that uses it as a daily cross roads. That helps sell software, but it also generates advertising revenue. Microsoft's www.moneyinsider.msn.com site, originally developed as part of the Microsoft Network's proprietary online service, and now open to the public, has a similar approach.

Other new entrants have taken a more product-centric approach to cross-selling, keying off customer interest in finance-able products like cars and homes, and providing online access to providers of financial services like mortgages, car loans, and home and auto insurance.

All these new entrants share one rather simple, but crucial, strategic choice. They have decided to look at financial services from the *retail customer's* point of view. They address these services in the context of the customer's frame of reference – not asking, for example, "precisely what kind of mortgage or whole life insurance policy do I need," but "how do I buy a house?," "how can I finance tuition costs," or "how much do I have to save to retire at age 55?" They use the Web's extensible platform to provide integrated access to multiple services and products from very different industries in order to answer these customer questions in a holistic way. They also exploit the Internet's power to make financial services markets more efficient, by

providing a torrent of information about comparative pricing and terms, as well as increasing online ordering capability.

Strategic Implications – Cross-Service Integration. Ordinary financial institutions will have their work cut out for them to keep up with this new customer-oriented, cross-service approach to financial services – this *is* already the key battleground. Clearly they will have much more work to do than simply stitching together multiple services on a Web site, integrating back-office and delivery systems, and adding firewalls.

As we saw in Chapter III, in adapting to this approach, many institutions start out with bad habits. These include slow development cycles, discomfort with "open" technologies, weak partnering skills, and a pattern of looking at customer needs through supply-side lens. Too many of them have also developed vested interests in market imperfections or aggressive sales tactics that lead to artificially-high spreads, fees, and commissions, as well as outright disinformation -- insurance policies sold on fear rather than need, mutual funds sold on hype rather than value, credit cards and other loan products sold on the basis of "easy money." We believe that the Internet will have a purgative effect on such practices, as it grows in penetration and ease of use. Institutions should prepare for the not-too-distant day when these imperfections fall prey to the Internet's incredible power as an *arbitrageur* and *educator*.

But retail institutions also bring some advantages to this cross-service battleground. The conventional list offered by an industry consolidator would probably include high-powered back-office systems, proprietary networks and technologies, branches and ATM machines, capital resources, regulatory privileges, brands, management skills, and their ways of doing business. We have argued, however, that many of these advantages *will soon no longer be* advantages. Indeed, in Internet space, many of these supply-side advantages – including regulatory privileges – are becoming harder and harder to defend, while others *just get in the way*. If these were the only determinants of comparative advantage, many financial services institutions would already be well on their way to extinction, displaced by a more agile new species of service providers.

What is distinctive and *perhaps* sustainable about existing institutions, however, is their most unique asset – their customer relationships. Properly managed, these provide an opportunity to generate deep insights into customer needs and segmentation and focus the technology on providing tailored offers that fit better than anyone else's.

This will not be easy. Successful institutions will have to:

1. Invest much more heavily in understanding service needs from the customer's perspective, identifying *new clusters of services* -- including non-financial services -- that respond to key customer segments.
2. Develop multi-service offers that address these needs. This is likely to require *new alliances or partnerships* with other service providers, including technology providers and many others outside the conventional industry.

3. Develop *new profit models* and substitutes for services that are most threatened by the inexorable trend toward more competitive markets. In the brokerage arena, for example, where online commissions per trade are already down to \$8 or less, traditional market leaders are exploring new pricing alternatives, such as providing an unlimited number of trades for a flat fee.
4. Develop *new cost structures* for competitive services, by making greater use of online delivery channels. In this case, one impact of online services – sharper price comparisons – helps to drive another, lower-cost distribution.
5. Redirect existing technology spending toward genuine innovation – a steady stream of *superior service designs*, rather than "proprietary" technology.

V. Summary – Industry Impacts.

On the supply side, all this adds up to an industry that, under the impact of new Internet-based services, will rapidly become much more competitive and dynamic. This implies increased customer churn, faster upgrade cycles, many new niche entrants and affiliate groups, and new upstream service providers. The stresses and strains of all these discontinuities are likely to have a bi-polarizing effect on industry structure. They will increase the gap in performance between winners and losers.

In this complex environment, however, with so many diverse customer segments, delivery channels and initial market positions, there will not be just one winning formula or dominant end-state. Even for competitors of the same size in the same submarkets, there are many degrees of strategic freedom. They include (1) *customer segment focus*, the degree to which institutions concentrate on the needs of particular customer or geographic segments; (2) *scope*, the breadth of services offered; (3) *innovation*, the degree to which an institution is a first-mover or an imitator with respect to new services; (4) *integration*, the question of how much origination, distribution, and selling are handled by internal channels or outside suppliers and channel partners; and (5) *pace*, the speed with which new and upgraded services are introduced.

Precisely who wins and loses in this environment will no longer be determined by sheer size or proprietary technology, but by the ability to partner, take customers into account when designing new services, and handle all the other special management requirements of Internet technology. Everything rests on deft management and customer insight, not engineering.

The good news is that even with increased competition, new electronic services are likely to sharply accelerate the growth of the global retail financial services market, by making delivery systems more efficient, reducing prices and spreads, undermining geographic and segment barriers, and increasing customer value. For those players who are up to it, the result will be a much larger and more attractive retail financial services market, with more satisfied customers than ever before.