



# 'NET INTEREST' GROWS AS BANKS RUSH ONLINE



## INSIDE

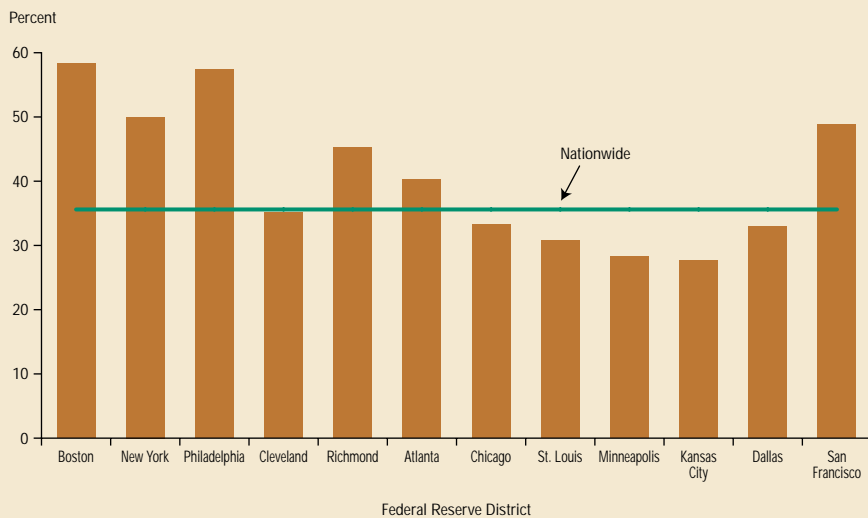
*Firm Churn on Main Street  
and Wall Street*

*Capital In and Out of China*

**W**ITH SPEED AND ingenuity worthy of any of the hottest dot-com companies, commercial banks are staking out positions on the Internet—ground zero in the 21st century battle for market share. While true Internet banks are capturing attention for their radical business strategies, community banks, often acting collectively, are quickly carving out their own online niches to attract business and strengthen customer relationships. The big banks have the most ambitious agendas, attempting to overtake nonbank competitors that early on established a strong presence in online financial services. Based on the data available, Eleventh District banks have been as aggressive as similarly sized banks nationwide in pursuing an Internet presence.

As with most electronic commerce ventures, the revenues are still small. Moreover, the risks inherent in Internet-based electronic payment systems are considerable. But the current spate of product innovations could yield the next killer application, and many more technological advances are on the horizon. For banks that manage to grab a share of the burgeoning market, the profit potential may be enormous.

**Chart 1**  
**Banks with a Web Site**  
 (December 31, 1999)



SOURCE: Reports of Condition and Income.

## The True Internet Banks

The Office of Thrift Supervision approved the first all-Internet charter, for Security First Network Bank, in 1995. The first national charter approved for an electronic bank was given to Houston-based CompuBank, N.A. in August 1997. Initially, CompuBank did not offer banking transactions over the Internet, but added that feature later. By year-end 1999, nine cyberbanks were in existence. Their business strategy hinges on keeping capital expenditures low by not operating physical branch offices. Customers transact with the bank using a personal computer and a secure Web browser—software that encrypts information sent over the Internet—ATMs, mail, telephone and fax. In most instances, Internet banks strive to underprice their conventional competitors on fees and pay higher interest rates on deposits.

As is typical in the e-commerce economy, few of these fledgling entities have achieved consistent and sustained growth and profitability. Yet some have already attracted suitors. In 1998, Royal Bank of Canada purchased Security First Network Bank as a vehicle for expanding its market share in the United States.

In January, E-Trade Group Inc. received regulatory approval to acquire Telebank Financial Corp. in what was the first merger of an online brokerage and an online thrift institution. The resulting entity offers single log-on for brokerage and bank accounts, as well as a web page with consolidated account information.

## Online Strategies

With similar celerity, traditional bricks-and-mortar banks are adopting the Internet as an auxiliary distribution channel. Federal banking regulatory agencies report that more than 3,500 banks and thrifts operated web sites at year-end 1999, and new sites are going live daily. These banks are employing various online strategies, which banking regulators classify into three broad categories.

The most basic are informational, or Level 1, web sites, which serve as marketing tools. They convey publicly available information, such as loan or deposit interest rates and product information, and may allow customers to send nonsensitive electronic mail, such as a request for a brochure. These sites may also allow the bank to collect data

about visitors to refine sales and marketing efforts.

More sophisticated web sites allow for interactive confidential information transfers between users and financial institutions. Known as Level 2, or communicative, web sites, they allow data or file uploads or downloads, enabling customers to make inquiries about their accounts, for example, or submit loan or deposit account applications.

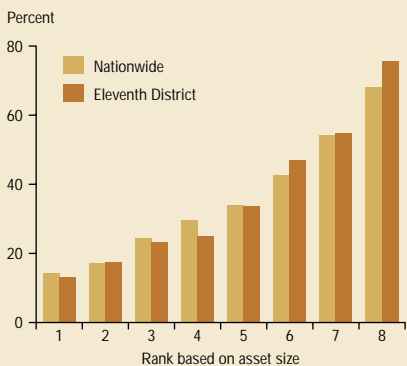
The most complex web sites are Level 3, or transactional, information systems, which allow customers to make real-time queries about accounts, update account information, transfer funds, pay bills and make other transactions. As the technology becomes cheaper and more reliable, transactional banking web sites, once the domain of the largest banks, are proliferating. Based on interviews with vendors, the Comptroller of the Currency estimates that over 90 percent of new banking web sites will be fully transactional.<sup>1</sup> As of June 30, 1998, there were 223 transactional bank web sites, based on information collected informally by the banking regulatory authorities. By year-end 1999, roughly 1,121, or about one-third of bank and thrift web sites, had transactional capabilities. Add credit unions to the number and the total rises to 2,100 transactional sites nationwide.

The attraction for financial institutions is clear. The cost of an Internet banking transaction is an estimated 1 cent, compared with \$1.14 per transaction by teller, 55 cents by phone, 29 cents by ATM and 2 cents by proprietary computer system.<sup>2</sup>

## The Mouse That Roared

Little hard data about banking web sites exist, and most of the information gathered thus far has resulted from informal monitoring by banking regulators. However, beginning in June 1999, domestic insured commercial banks were required to report the primary Internet web address of their home page on the quarterly Reports of Condition and Income, also known as call reports, that they file with the federal banking agencies. Because banks only recently began reporting this information, these

**Chart 2**  
**Banks with a Web Site,**  
**by Asset Size**  
*(December 31, 1999)*



SOURCE: Reports of Condition and Income.

web data are subject to considerable error. Based on the call reports, Chart 1 depicts the proportion of banks with web sites as of year-end 1999. The Boston and Philadelphia Federal Reserve Districts had the highest proportions of banks with web sites, at 58 percent and 57 percent, respectively. The Kansas City and Minneapolis Districts had the lowest proportions, with about 28 percent of the banks in both districts reporting a web presence. In the Dallas District, 33 percent of banks had web sites, which was just below the nationwide figure of 36 percent.

In Chart 2, the banks are divided by asset size into eight equal groups, with the smallest banks in Group 1 and the largest in Group 8. The chart shows that the larger banks are more likely than the smaller banks to have web sites. Further, Eleventh District banks closely follow the trend exhibited by banks nationwide. Of the largest banks, 68 percent nationwide and 76 percent within the District have web sites. Conversely, among the smallest banks, 14 percent nationwide and 13 percent in the Eleventh District are on the web.

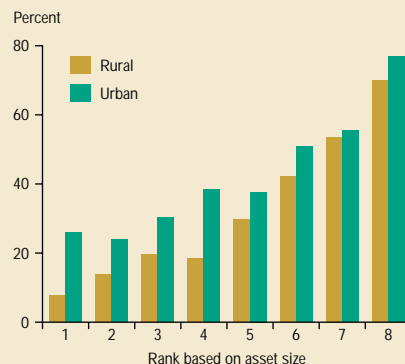
Charts 3 and 4 show the differences between urban and rural banks with regard to Internet activity. In Chart 3, U.S. banks are divided by asset size and location. Among both urban and rural banks, the larger banks were more likely than the smaller banks to have web sites. Further, among the smaller

banks, urban banks were far more likely than rural banks to have web sites. In Group 1, which represents the smallest banks, 29 percent of the urban banks reported having web sites, compared with just 8 percent of the rural banks. Similarly, in Group 2, 27 percent of the urban banks had web sites, more than double the 13 percent of rural banks. In contrast, at the other end of the size spectrum, the proportion of rural banks on the Internet equaled or even exceeded the proportion of urban banks with web sites.

Eleventh District banks exhibit a pattern nearly identical to banks nationwide, with the smaller urban banks being more aggressive than smaller rural banks on the World Wide Web (Chart 4). In Group 1, 26 percent of urban banks and 8 percent of rural banks had web sites. In Group 2, 24 percent of urban banks and 14 percent of rural banks had sites. Within the District, the larger rural banks have gone online in similar proportions to their urban counterparts.

Informal monitoring by Dallas Fed banking supervision staff indicates that more than half of state member banks in the Eleventh District maintained web sites as of year-end 1999. Of these sites, 18 percent were informational, 27 percent were communicative and 55 percent were fully transactional.

**Chart 4**  
**Eleventh District Banks**  
**with a Web Site,**  
**by Asset Size and Location**  
*(December 31, 1999)*



SOURCE: Reports of Condition and Income.

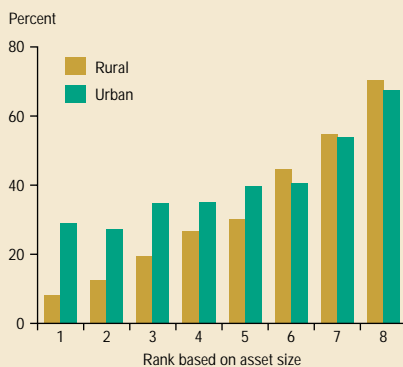
## Dot-Com Banking

Internet banking is emerging as more than a means of putting existing services online. Innovative partnerships and strategic alliances have provided many revenue-generating opportunities. Some bank web sites have bundled information and services in useful ways to create a sort of electronic resource center or virtual mall with links to other services and vendors. By positioning their web sites as an access point to a range of service offerings outside their traditional lines of business, banks are generating new fee income from advertising, referrals and commissions from their web partners.

Some financial institutions are making use of "screen-scraping" technology, which aggregates account data from various web sites with customer permission. The web site then becomes a portal for all of a customer's financial transactions. One banking web site, expected to be launched in April, will use screen scraping to assemble all of a customer's financial holdings onto one web page, including stocks, mutual funds, e-mail, credit cards and other account-related information. The site will also provide "virtual personal assistants," which can help with personal chores, shopping, travel services, news, calendars and personal-organizer tasks.

A much-anticipated new service is

**Chart 3**  
**U.S. Banks with a Web Site,**  
**by Asset Size and Location**  
*(December 31, 1999)*



SOURCE: Reports of Condition and Income.

***The banking industry has long embraced the concept of electronic financial transactions, having pioneered such services as telephone banking and dial-up personal computer banking.***

bill presentment, which is expected to do for the banking industry what online trading did for the brokerage industry. Bill presentment technology consolidates a customer's bills on one web site to allow the review of detailed invoices online. A few banks already offer bill presentment, which requires them to enter into networks with billers, such as utilities; others are in the testing stage. More than 15 million households are expected to receive their bills online by 2002, according to Jupiter Communications, a technology consulting firm.<sup>3</sup> As such, bill presentment offers a huge marketing opportunity for banks to gain insights into customers' buying habits, payment records and risk profiles.

### **Mixed Consumer Response**

The banking industry has long embraced the concept of electronic financial transactions, having pioneered such services as telephone banking and dial-up personal computer banking. Consumers have developed a high degree of comfort for using remote basic banking services, as demonstrated by the rapid proliferation of ATMs since their introduction 30 years ago.

The public is quickly becoming Internet-savvy. Already more than half of all U.S. households have at least one personal computer, up from about one-third in 1997. A PricewaterhouseCoopers survey found 43 percent of computer owners were connected to the Internet in 1999, up 50 percent from 1998.<sup>4</sup>

One of the primary uses for personal computers is to research financial information. However, widespread consumer acceptance of Internet banking has yet to be achieved. Only a small proportion of banking customers—6.6 million households—had online banking accounts in 1998, according to International Data Corp., a technology consulting group.<sup>5</sup>

A big hurdle for banks is that consumer confidence is shaky. One market study, conducted in August 1999 by Jupiter Communications, found that 64 percent of online consumers are unlikely to trust a web site, even if it prominently displays a privacy policy.<sup>6</sup>

Other industry studies have concluded that security concerns are a primary reason online users have not made a purchase.

Security risk—the potential for unauthorized access to networks, systems and databases—is inherent in electronic delivery channels. Consistent use of a range of technologies and procedures is essential to safeguard data. The major approaches include secure web servers separated by firewalls from general-purpose web servers; data encryption and digital signatures to ensure data integrity and authenticate users; and controls such as passwords and PINs, along with technologies such as tokens, smart cards and biometrics.

Federal consumer protection regulations provide an added safety net for Internet banking customers.<sup>7</sup> Many of the general principles, requirements and controls within the current consumer protection regulatory framework apply to financial services conducted electronically. For example, the Fair Credit Billing Act (FCBA) and Electronic Fund Transfer Act (EFTA) establish procedures for resolving errors on credit account and bank account statements, respectively. Credit transactions are covered under the FCBA, which is implemented by Regulation Z. The regulation limits the cardholder's liability for unauthorized use to \$50. The EFTA is implemented by Regulation E, which limits consumer liability for unauthorized transactions to a maximum of \$500. Prompt notification of an unauthorized transaction or the loss or theft of an access device could substantially reduce any consumer liability. Both regulations specify initial and periodic statement disclosure requirements.

### **The Cookie Monster**

Another critical issue is privacy, which refers to the collection and sharing of customer information. The levels of privacy on the web vary widely, and even sites with stringent privacy policies are often lax about following them. Further, web site operators with clear policies on how their customer information will be shared and monitored

are often unaware of their alliance partners' privacy practices.

A focal point of the controversy is the use of "cookies," text files planted by a web site on a visitor's computer hard drive. Cookies can convey to the web site information about a computer and its movements around the web without the knowledge or consent of the user.

In November 1999, the four federal banking agencies reported that the majority (64 percent) of the 364 financial institution web sites surveyed collected personal information.<sup>8</sup> The items collected most often were the consumer's name, e-mail address and postal address. Thirty-eight percent of the institutions that collected personal information and 77 percent of those that did not had not posted a privacy policy or information-practice statement.

The privacy issue is so sensitive that it threatened to derail the Gramm-Leach-Bliley Act, which was signed into law last November. The financial services modernization law contains a number of privacy provisions and gives federal banking regulators, the Securities and Exchange Commission and the Federal Trade Commission up to six months to issue privacy regulations.

The Federal Reserve Board, the Office of the Comptroller of the Currency, the Federal Deposit Insurance Corp. and the Office of Thrift Supervision jointly released a proposed rule on February 22. Regulation P, Privacy of Consumer Financial Information, would apply to institutions regulated by the Federal Reserve. The proposed regulations that would apply to other institutions are substantively similar.

The privacy provisions of Gramm-Leach-Bliley enable consumers to prevent a financial institution from disclosing nonpublic personal information to unaffiliated third parties. The provisions do not restrict the disclosure of such information among affiliated companies.

Under Gramm-Leach-Bliley, before a financial institution can disclose nonpublic personal information to a non-affiliated third party for marketing and certain other purposes, it must provide a description of its privacy policies and an opportunity for consumers to opt out of the disclosure. In addition, a financial

institution must provide initial and annual notices of its privacy policies to consumers with whom it establishes a customer relationship.

The Federal Reserve Board's proposed regulation implements the requirements of Gramm-Leach-Bliley by defining "nonpublic personal information," "consumer" and "customer" and by providing guidance on the timing of notices and the means by which consumers can exercise their opt-out rights. Under the proposed rule, consumers can opt out at any time. The proposed regulation also contains other provisions designed to clarify the requirements of the Gramm-Leach-Bliley Act. Public comments on the Board's proposal were due by March 31.

Expectations for privacy are far greater on financial web sites than on general e-commerce sites. Banks may be in a unique position to overcome negative customer perceptions and gain a competitive advantage over nonbank competitors by leveraging their public trust and strong reputations through effective branding strategies.

## A Melding of the Material and Virtual Worlds

Advancing technology is driving Internet banking, and it is relentless. Access to the Internet is becoming ubiquitous, no longer requiring a personal computer. Handheld wireless organizers, kiosks and interactive web television will soon be common access devices. A new generation of mobile phones provides Internet messaging and limited screen capabilities. As the mass market adopts these technologies, consumer demand for 24-hour, remote, self-serve access to personal financial information will push even more banks online. The number of households conducting banking transactions over the Internet may reach 32 million by 2003, according to International Data Corp.<sup>9</sup>

The Internet economy is forcing the banking industry to embrace new technologies, develop new business practices and adopt new ways of thinking. As a result, banks are entering untested markets, forging novel alliances, gen-

erating additional revenue streams and developing closer customer relationships. From early indications, the banking industry, in its striking transformation, has embarked on an extraordinary era.

— Karen Couch  
Donna L. Parker

*Couch is an analyst in the Financial Industry Studies Department of the Federal Reserve Bank of Dallas. Parker is an examiner in the Banking Supervision Department.*

## Notes

- <sup>1</sup> Kori L. Eglund, Karen Furst, Daniel E. Nolle and Douglas Robertson, "Banking over the Internet," *Comptroller of the Currency Quarterly Journal*, Vol. 17, No. 4 (December 1998), p. 25. The study is available online at [www.occ.treas.gov/qj/qj.htm](http://www.occ.treas.gov/qj/qj.htm).
- <sup>2</sup> Erran Carmel, Jeffrey A. Eisenach and Thomas M. Lenard (1999), *The Digital Economy Fact Book*, 1st ed. (Washington, D.C.: The Progress & Freedom Foundation), p. 65. The numbers are in 1999 dollars.
- <sup>3</sup> Jupiter Communications, press release dated January 28, 1999, available online at [www.jup.com](http://www.jup.com).
- <sup>4</sup> PricewaterhouseCoopers, news release from United Kingdom press room dated October 4, 1999, available online at [www.pwcglobal.com](http://www.pwcglobal.com).
- <sup>5</sup> International Data Corp., press release dated June 1, 1999, available online at [www.idcresearch.com](http://www.idcresearch.com).
- <sup>6</sup> Jupiter Communications, press release dated August 17, 1999, available online at [www.jup.com](http://www.jup.com).
- <sup>7</sup> Federal Financial Institutions Examination Council, *Guidance on Electronic Financial Services and Consumer Compliance*, issued July 15, 1998, available online at [www.ffiec.gov/opr071598.htm](http://www.ffiec.gov/opr071598.htm).
- <sup>8</sup> *Interagency Financial Institution Web Site Privacy Survey Report*, issued November 1999, available online at [www.bog.frb.fed.us/boarddocs/surveys](http://www.bog.frb.fed.us/boarddocs/surveys).
- <sup>9</sup> International Data Corp., press release dated June 1, 1999, available online at [www.idcresearch.com](http://www.idcresearch.com).