Community banking in the e-business era

Peter Southard  
Pennsylvania State University

Keng Siau  
University of Nebraska

Follow this and additional works at: https://scholarworks.lib.csusb.edu/jiim

Part of the Management Information Systems Commons

Recommended Citation
Southard, Peter and Siau, Keng (2002) "Community banking in the e-business era," Journal of International Information Management: Vol. 11 : Iss. 1 , Article 9.  
Available at: https://scholarworks.lib.csusb.edu/jiim/vol11/iss1/9

This Article is brought to you for free and open access by CSUSB ScholarWorks. It has been accepted for inclusion in Journal of International Information Management by an authorized editor of CSUSB ScholarWorks. For more information, please contact scholarworks@csusb.edu.
Community banking in the e-business era

Peter Southard
Pennsylvania State University - Erie

Keng Siau
University of Nebraska - Lincoln

ABSTRACT

This paper reviews how existing and potential uses of Internet technology can generate a competitive advantage for rural community banks. To do so, it offers a framework for analyzing Internet technology investment decisions. Organizations in this segment of the banking industry are often more removed from centers of technology and have traditionally been more conservative in their approaches to information technology (among other things). Banking Associations have developed in the U.S., such as the Independent Bankers Association, to try and help community banks coordinate marketing, legislative, and other issues that they have in common. The use of Internet technology can and will have a great strategic impact on the operations, management, and marketing for these banks and their associations. After a review of current technologies and their uses, the paper will identify specific opportunities for inter-, intra-, and extranet applications that could be used to enhance the internal and external competitive factors of these more isolated businesses and their associations. The paper will then present a framework for evaluating investment decisions in this new technology.

INTRODUCTION

Information technology (IT) is evolving rapidly. If this sounds like a familiar statement, it should. Virtually every article in business today includes that proclamation somewhere. The follow-up to that statement that is often repeated is how these changes are affecting the way businesses do business. IT is changing how companies relate to customers (or vice versa or both), how they relate to other businesses, and how they relate to themselves. Deitel et al. (2001) defined e-business as the exchanges between these groups and the operations, such as production, infrastructure and management, required to handle them electronically. Many of the concepts and approaches that business managers learned from experience or higher education thirty, or as recently as three, years ago no longer hold true. Totally new kinds of business are emerging, ones that were inconceivable a few years ago. It one adds to this the impact that technology has had in shrinking the world into a single global community, then the way in which managers have to conceptualize their competition and their processes alters dramatically.
In addition to the changes in business processes that this technology brings about, it is changing the power structure of the transaction process itself. The consumer is able to exercise more power than ever before. As Fingar et al. (2000) noted, information is power and the consumer is now presented with more information than ever before. As many other articles cite, business has become, and will continue to increase its focus towards being, customer-centric. Businesses wishing to develop strategic and tactical competitive advantages must recognize the need to tailor their products towards the individual customer.

Although new technology has changed the way businesses must operate, it is essential to realize that the idea of using information technology to establish a competitive advantage is not a new one. Michael Porter and Victor Millar (1985) authored an article explaining how information accomplishes this. They also describe how IT changes the roles between organizations, their suppliers, and their customers. The age of the article helps illustrate that these changes have been taking place over a period of time with some organizations recognizing the significance of the change and building on it. Those who do not will not survive.

Banks are no less affected by these changes than any other business, maybe more so due to their heavy reliance on information systems and customer contact. For the smaller community banks (defined in the next section), with their more limited financial resources, deeper traditional corporate culture, and often remote geographic locations, the changing external environment can sometimes be overshadowed by the more immediate needs of the local community. This short-sightedness could prove fatal. The opportunities provided by the advances in information technology are not only crucial to the survival of the community bank, but also provide avenues of growth and competitive advantage that were not previously available to the smaller bank. Many of these institutions are hesitant to make the necessary investments to obtain this advantage, however, because they lack the expertise or knowledge to acquire it and the ability to quantify the benefits of such an investment.

**Community Banks**

The majority of the commercial banks in the U.S. are considered community banks. Community banks are characterized as smaller, locally owned and managed financial businesses. Many of these banks have assets under $100 million and almost all have assets less than $1 billion.

Community banks assert that they offer many advantages over their larger competitors including more personalized service, as their Boards of Directors are local, allowing faster and better decision making due to personalized knowledge of the community. They also tout the fact that their deposits are returned to the community in the form of local loans. They cite the fact that they, too, are a small business in the community, so they are better able to serve other small businesses there.

Overall, their hallmark key advantage is the personal touch they offer. This is also the key to their competitive advantage that they can exploit through the use of Internet technology.
Information Technology, Internet Technology, and Community Banks

Information technology and e-business encompass a wide arena from telephone communications to process simulation for business reengineering. Community banks are already familiar with IT as banks, in general, were the early adopters of the data processing and storage capabilities offered. Unfortunately, since then, the adoption of new IT has stagnated for most community banks.

An explosion of articles that nearly rivals the explosive growth of the Internet itself has appeared in the last two years regarding the use of the Internet, along with the associated technology of intranets and extranets, in community banking. Many community banks are wondering if they, too, should join in this technology revolution. Based on a review of the literature, not only is developing an effective e-business strategy important to the growth and competitive position of these banks, but their very survival may depend on it.

The literature appeared to encompass four main areas. These were: (i) marketing the community bank through the Internet; (ii) home banking services; (iii) sharing of industry, value chain, and internal bank information through intranets, and (iv) other services that could be accessed through Internet portals provided by the bank such as agricultural, legal, and legislative information as well as personnel and community issues. These four areas are more thoroughly examined in the following discussions but all of the articles agreed on one thing. It was vital for even the smallest of community banks to establish an Internet presence if it planned on competing in the future. "Online banking is here to stay and community bankers should embrace it as one highly effective tool (not only for) customer retention but growth" (Peterson, 1997).

For those community banks with web sites, having an Internet presence for marketing purposes appeared to be the original intent. Even today, this remains the main, if not the sole, function of most small banks' contact with cyberspace. Despite this, the growth in bank web pages has been phenomenal. In 1994, there were less than a dozen banks in the U.S. with a web site (Angehnn & Meyer, 1997). In early 1996, approximately 130 of the 10,000 banks in the U.S. has web sites (Castleman & Thompson, 1996). Even small banks in the Midwest United States have been entering the Internet arena. A search of two rural U.S. states revealed that, as of December of 1997, twenty-one banks out of a total of 326 banks in the state of Nebraska had Web pages. This equates to 6%. In the neighboring state of Iowa, 62 of the 465 banks there, or 13%, has Web pages. By 2001, 92 of the 275 Nebraska banks (33%) and 183 of the 427 Iowa banks (43%) had an on-line presence. Most of these were smaller rural community banks. The American Banker's Association (ABA) 2002 poll indicated that 73.6% of community banks responding had some type of website (Cocheo, 2002) but what the website provided varied tremendously. These figures are echoed by a survey done by Grant Thornton LLP (anonymous, 2001a). In addition, most state banking associations have their own Web pages. Many of these bank web pages, however, were no more than an electronic form of the bank's lobby brochure although this is quickly changing as indicated by the ABA poll (Cocheo, 2002) and by Johnson (2000). According to the writers, banks will need to do much more with their Web presence if they want to remain competitive.
"Home banking products are no longer a matter of *if* but a matter of *when*" for community banks today (Newkirk, 1996a). Even Microsoft's Bill Gates, often critical of the banking industry's lack of attention to information systems (calling them 'dinosaurs'), points out the advantages of home banking services to the banks themselves (Gates, 1996). Many authors have predicted that Internet transactions would soon become the dominant method in banking because they will be easier, cheaper, and faster. Brewer (2001) noted that 3.5 million households were using online banking in 1997 with that number projected to increase to 25.2 million in 2003. Banks that have offered intranet banking have seen the number of customers using those services double (Stafford, 2001). This, in turn, will accelerate the already stiffening competition in the banking industry (Wilson, 1997).

Intranet popularity is growing as knowledge about this unique technology is evolving (Gandy, 1997). In 1997, the U.S. company, Norwest Mortgage (purchased by Wells Fargo Bank in 1998), began an intranet experiment that allowed not only the sharing of information throughout the company but also access to the system, through the Internet, by the sales force operating from remote laptops (Allen, 1997). Norwest's advice: "It's the fastest growing technology we've ever known, and it's here to stay. Learn about it and learn as quickly as you can" (Allen, 1997).

The writers also praised the other information sources that were available to small community banks via the Internet. Opportunities abounded such as agricultural, weather, and stock reports for the small banks so dependent on commodity situations (Smolenski, 1997a). In addition, the more isolated rural banks can find resources to fill personnel vacancies via the Internet, along with other human resource needs (Smolenski, 1997b).

One of the best analogies of what e-business means to banking, and the possible trap community banks may fall into, was summed up as "if a mirage is seeing something that isn't there, cyberspace is the exact opposite - not seeing something that is really there: (Peterson, 1997). Unfortunately, little information or structure has been proposed for analyzing investments in Internet technology (Sriram, Stump, & Banerjee, 1997). A few practitioner articles begin to look at some of the strategic factors (Davidson, 2000) but none really take the next step to offer a logical approach to Internet investments. What are the possibilities and strategic opportunities posed by this new technology for these community banks and their associations and how should these unique companies approach investment decisions regarding it? These are questions this paper explores.

**INTERNET OPPORTUNITIES**

Opportunities for gaining a competitive advantage using the Internet lay in three general areas: the Internet itself, intranets, and extranets. Each one is examined in turn.

**The Internet**

The two major opportunities involving the Internet itself include marketing and home banking.
Internet Marketing

"As of September 2001, 143 million Americans, or about 54 percent of the population, were using the Internet, and new users were adopting the technology at a rate of more than two mission per month" (Cable News Network [CNN], 2002). This major exposure can be purchased for far less than many executives think. Setting up the site can cost less than $1,000 and monthly maintenance can be as little as a couple of hours per month (Smolenski, 1997c). The total cost of going 'on-line' averages around $50,000 with annual hosting and maintenance costs averaging $22,000 (Sheshunoff, 2000). It appears that many community bankers likely feel that setting up a site is not worth the expense, judging by the small percentage of banks in Iowa and Nebraska that do have one. Bankers likely feel that few of their existing or potential customers either have access to or would use such a site but the statistics say differently. One small community banker noted, "don't be limited in your thinking. Even small villages in Asia, Africa, and South America are connected to the Internet, sometimes without telephones" (Chamberlain, 1997). Community bankers would likely be surprised how high the numbers were if they polled their rural customers to find out exactly how many of them are actually connected to the Internet.

Using a web site for marketing involves much more than merely advertising products and services. It offers community banks the opportunity to do a myriad of things and to capitalize on their major strength, personal service. Part of the appeal of the community bank is its ability to act as a sponsor and proponent of the community and to build personal relationships. This aspect is what web sites can do best and should be reflected both in the community bank's general marketing strategy and in its Internet strategy. Showcasing community activities and attractions, offering multilingual sites when appropriate, and displaying other links to the community can have great public relations benefits for community banks (Hlava, 1997). Being able to interact with the web host helps to build better relationships with the customer, playing to the community bank's key advantage. This provides interest and value added information which web users are not only looking for but also seem to find essential if they are to spend time at and repeat their visits to the site (Schwartz, 1998). The current term for these links to information not directly tied to the bank is a 'portal.' As Cocheo (2001) noted, the portal provides that 'sticky' feature of a bank website that draws web users to the site, keeps them there, and brings them back again.

The need for this increased marketing effort and the need to compete through the Internet medium is demonstrated by comparing community banks to the large industry leaders in terms of their IT positioning and investments, illustrated in Figure 1.

Smaller community banks do not always suffer a great operations gap versus leaders, such as Citibank (now in the process of merging with Travelers), but with the terrific sums of money that the leaders are investing in technology for Internet banking and marketing, smaller banks will quickly fall behind in market share unless they make their presence felt in this competitive industry (Anonymous, 2001b).
Home Banking

Home computer banking, as an alternative delivery system, is also growing rapidly. Many writers feel that is how all banks will compete in the future. This method offers tremendous opportunities to community bankers to reach customers they never thought they could have, in ways they never knew existed a few years ago. "Technology will allow banks to be closer to customers, to deliver a wider range of services at lower costs, and to streamline internal systems so that all data is gathered together in one place where it can be used to spot trends that can lead rapidly to new products" (Gates, 1996). Computer banking has no physical or geographic boundaries. With it, the community bank can have a 'branch' wherever a customer (or potential customer) has a laptop computer and a cell phone, even in the cab of the combine, without the expenses of brick and mortar and tellers. This creates competitive advantages in at least two ways. First, the bank is able to tailor products and services to individual customers, satisfying consumer demand for 'mass-customization.' Second, allowing the customers to do for themselves, they feel greater satisfaction and the bank provides fewer resources resulting in lower transaction and production costs (Fingar et al., 2000).

Two types of home banking exist: closed and open systems (Kalakota & Whinston, 1997). A closed system is wholly owned by the bank and consists of in-house or third party software. Users must dial in to the bank through a modem. Open systems incorporate standardized technology, such as the Internet, as its base. This area is the basis of a bank's e-business component to their Internet strategy.
Most authors reviewed agree that home banking would be the method that allows community banks to compete more effectively against each other and against the larger metropolitan banks. Home banking allows community banks to do what they do best, tailor products to the individual customer and gain a competitive edge through differentiation. Although most banks that currently offer home banking services do it through proprietary software, the future is through the Internet, which eliminates many of the problems associated with proprietary versions, particularly lack of mobility.

**Intranets**

One application of the Internet often overlooked by small banks is the use of intranets. These are internal communications networks based on Internet technology. It is a new and growing field filled with possibilities. Three general types of benefits can accrue to the organization from the use of intranets; streamlining business processes, facilitating information dissemination, and enhancing communications and collaboration (Adam, Dogramaci, Gangopadhyay, & Yesha, 1999). These benefits enable the development of a competitive advantage.

Even small community banks often consist of many different departments and branches, each department or branch attempting to serve the customer independently and marketing its own products. Unfortunately, these departments are oftentimes isolated from one another, both physically and in terms of information. Branches are isolated from each other and the main office. Although there is usually a mainframe database that contains a limited amount of common information on a customer, it is still rare to have all the information regarding a single customer located in one place.

Intranets offer the opportunity to share many different kinds of information through a common platform. For example, consumer lending could log onto the intranet to discover that the individual is already at their loan limit due to advances by the commercial lending department. The west side branch would be able to find all the necessary information to complete a real estate loan application on an east side branch customer. "The intranet could find and put together information from the main customer information system, from mortgage application systems, and even from imaging systems. . . . Once a document is in the system, the use of an intranet means that the image is no longer available to a closed workflow environment, such as a mortgage application environment, but can also be made available to other staff, such as the bank manager who may have to deal with any problems with that customer. It also means that the documents can be passed between different workflow systems, reducing the need to undertake multiple data entry activities" (Gandy, 1997). In other words, intranets reduce work (and associated costs) and speed service to the customer, both critical elements for small community banks under heavy competition.

For the U.S. company, Norwest Mortgage, an experiment that began in the IT department has spread throughout the mortgage lender (Allen, 1997). It is used for "moving information throughout the corporation" and allowing a traveling sales force to gain data from and submit information to the company (Allen, 1997).
For community banks, which often have branches in various scattered communities, intranets can offer tremendous savings in time and travel. "Intranets are ideally suited for companies in which employees are geographically dispersed . . ." (Gupta, 1997). An example would be the possibility of 'virtual' loan meetings where officers can confer over the intranet rather than travel the lengthy distance to a central office. These savings in time and direct costs provided by IT create a competitive advantage for the organization.

Extranets

Extranets are the newest innovation based on Internet technology. Simply put, they are networks between a business and the other members of its value chain.

Extranet opportunities for community banks lie both upstream and downstream. Smaller banks often have to outsource many services that large metropolitan banks are able to maintain in-house such as legal council, real estate services, and even IT itself. Extranets offer a way to link these services in a more timely and efficient manner. Upstream, community banks can link to their suppliers such as appraisers, title companies, attorneys, and other real estate and commercial lending related firms. These are also check printers, credit reporting services, investment companies, and other services from which the bank needs to obtain information and goods for themselves and their clients. Less cumbersome and restrictive than an EDI (electronic data interchange) system, the extranet can streamline transactions between banks and their suppliers to the benefit of both.

Downstream, community banks have the opportunity to forge strong links to existing and potential clients, particularly their large commercial accounts. By providing direct and timely access to the local bank, both in terms of information on their own account and in terms of other valuable services and value-added information, clients will become more reliant on the bank and less on outside vendors or middlemen. For example, if the client is currently using an outside market data source, the bank can now become the client's provider by having that information available on the extranet, cementing closer ties to the bank. The extranet provides an affordable supply chain management tool. This tool enables the community bank to gain a competitive advantage by: lowering costs, increasing the quality and breadth of the service offerings, and developing long-term relationships with both suppliers and customers.

This is also an area where the community banking associations can play a key role. With information hook-ups to all the member banks, an association can be in constant and instantaneous communication. This can facilitate distribution of vital information regarding legislative topics, marketing, regulatory problems, and even such things as check-kiting schemes and other crime issues. This is a critical service to the community banks, which do not have the larger staff to monitor these areas. Law enforcement agencies could also be a part of the network. Instant alerts to such problems could save untold dollars for these semi-isolated institutions.
ANALYZING INTERNET INVESTMENTS - A PROPOSED FRAMEWORK

The review of industry and academic writings makes it clear that a typical cost benefit analysis is generally inappropriate for analyzing technology options. The reason for this is that the returns from IT investments are extremely difficult to quantify. Few banks have seen a dollar and cents profit from their web activities (Cocheo, 2001, 2002; Hamlet & Strube, 2000). This difficulty in putting a dollar value on returns should not be construed as meaning that the technology does not create value added services; it does, however, complicate the way in which community banks should approach this complex and ever-changing target tagged with the nearly mystical term of cyberspace. It is not nearly as mystical as the name implies. Even the smallest banks can gain a basic understanding in a short period of time. Several resources in the way of texts, classes, and consultants are available on E-commerce and Internet technology development. Many practitioner journals have regular sections dedicated to assisting their subscribers in entering this arena. Lamb (2000) offered an Internet lending model. It was based on three broad models presented by Stave Davidson of America’s Community Bankers. The three models, aggregators, portal model, and enablers, illustrated three outsourcing techniques for offering on-line lending programs. Hamlet and Strube (2000) offered a simple generic framework consisting of three stages: fundamentals, dynamics, and intelligent e-banking.

Each of the precious frameworks provided simple but limited guidance for community banks investment decisions. Those frameworks can be further expanded, however, to provide a more comprehensive strategy. Organizations can begin to make decisions based on the straightforward framework laid out in Figure 2. The framework generally aligns with the stages described by Nolan (1979) in his stage growth model of data processing functions and incorporates Hamlet and Strube's ideas.

Figure 2. Five Step Framework for Analyzing Internet Technology Investments

<table>
<thead>
<tr>
<th>Applications</th>
<th>Introduction Step 1</th>
<th>Infiltration Step 2</th>
<th>Adoption Step 3</th>
<th>Expansion Step 4</th>
<th>Virtuality Step 5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Basic Web Site</td>
<td>Interactive Web Site/ Home Banking (Closed System)</td>
<td>Intranet</td>
<td>Extranet/Hone Banking (Open System)</td>
<td>Web-based Business</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Technical Complexity</th>
<th>Simple</th>
<th>Relatively Simple</th>
<th>Complex</th>
<th>Very Complex</th>
<th>Very Complex</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Functional Areas Involved</th>
<th>IS, Mktg., Lending, HR, Operations</th>
<th>All</th>
<th>All, Supply Chain</th>
<th>Global</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Capital Requirements</th>
<th>Small</th>
<th>Small - Medium</th>
<th>Medium</th>
<th>Large</th>
<th>Large</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Size</th>
<th>Small</th>
<th>Small</th>
<th>Medium - Large</th>
<th>Large</th>
<th>Very Large</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Analyzing Return</th>
<th>1st Level (Direct)</th>
<th># Active Hits, Length of Visits</th>
<th>Length of Visits, # Contacts Made, Loan/Deposit Volume</th>
<th>User Participation, Productivity, Decision Time Savings</th>
<th>Transaction Cost/Time Reduction, Sales Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>2nd Level (Indirect or competitive advantage)</td>
<td>Market Share, Name Recognition</td>
<td>Customer Satisfaction</td>
<td>Improved Decision Quality, Morale, Options Theory Benefits</td>
<td>Options Theory Benefits</td>
<td>Options Theory Benefits</td>
</tr>
</tbody>
</table>

Published by CSUSB ScholarWorks, 2002
This framework represents the advancing stages of knowledge, expertise and use of Internet technology within the organization. As the organization proceeds through these steps, its ability to develop a competitive advantage over its competition increases. The time required to do so and the company's place within the table as compared to its competition will determine the amount of the advantage.

The table summarizes and organizes the previous discussion concerning applications, technical complexity, and the functional areas affected by the technology. They evolve on a relatively straightforward schedule.

In step one, the "lobby brochure" stage, a small web site is offered that basically mirrors the information a customer could receive by merely visiting the brick-and-mortar facility. Step two adds increased sophistication, generally with database access, whereby customers may obtain information not generally available such as employment information, interest rate calculators, and account information. It is at this stage where the bank usually introduces portal technology enabling the customer a gateway to relevant information, both financial and personal, that provides a value-added dimension to the website (Cocheo, 2001; Lamb, 2000; Saylor, 2000). Step three continues to add features and complexity with the addition of intranet capabilities to assist in connecting internal customers of the bank. Step five opens the system even further to allow use of the network to external supply chain partners. Finally, Step six illustrates a totally ubiquitous system with all members of the value chain seamlessly integrated.

Capital requirements are fairly self-explanatory and are dependent on the method and complexity of the system developed and whether the system is developed in house or outsourced. As mentioned, basic web site development can be accomplished for as little as a few hundred dollars although the average system will cost $50,000. On the other end of the spectrum, a complete virtual e-business can run into the hundreds of thousands. The actual cost to the organization of each incremental step will vary tremendously depending on several factors. These factors include the specific skills and infrastructure already present in the bank, the decision as to outsourcing, and the complexity of the application to mention a few.

It is very doubtful that community banks can ever compete, on an overall investment basis, with the large commercial banks. This is alluded to in an editorial in the Community Banker Journal (Anonymous, 2001b). However, the community bank can enhance its key advantage, customer relationships, through the use of Internet technology. In this aspect, community banks can use Internet technology to create a competitive advantage, not only over their community bank competition, but also against the 'large' bank. This point is not precluded by the editorial and is reiterated by several authors (see e.g., Brewer, 2001; Davidson, 2000).

The incidental costs in the table are by no means an exhaustive list. They are meant to stimulate the organization to consider all of the 'soft' costs that are normally involved in any long-range project. Maintenance is always an issue. Nothing damages the credibility and professionalism of an organization more than an out-of-date site. Time and resources will always need to be allocated to assure that the site and system are functional and timely. The AOL and Encyclopedia Britannica fiascos are ample proof of this. The size and type of costs involved escalate as the
scope of the projects increase. Capital requirements and incidental costs provide the 'cost' side of a cost/benefit analysis. The 'benefit' side is a little harder to quantify.

Analyzing return is the most valuable and yet the most difficult area within the framework. The 1st level is concerned with direct methods of measurement that are available to evaluate some of the benefits of the system. Unfortunately, many of the value-added features of Internet technology are not directly measurable in this manner. Hamlet and Strube (2000) noted that the addition of another delivery channel to the bank's existing cost structure will not generate an immediate cost savings. For this, a second level is needed, one that looks at the indirect value and competitive advantage created. As mentioned, this area has seen little research in defining definite methods for evaluation. Hamlet and Strube (2000) suggested a comparison to the implementation of Automated Teller Machines (ATMs) where Internet investments are evaluated such that online costs do not exceed the per-customer overhead costs of ATMs. A more specific evaluation method is also possible.

Three areas of general value creation can be identified that hold for all six steps. These include individual/workgroup productivity and decision quality improvements, process performance improvement, and competitive advantage. While the first two do have some ways to quantify their returns, it is the third area where Internet technology really performs and which is the hardest area to measure. One possible answer, familiar to bankers, would be the use of options theory (e.g., securities options). Using this analogy, the nature of the benefit is fourfold (Applegate, McFarlan, & McKenney, 1996).

a. Direct benefits accrue when value-added applications are bundled with the platform.

b. Second-order option benefits are obtained when the IT platform is used to support future applications that would not be possible if the platform was not in place.

c. Proprietary benefits accrue when the availability of the IT platform provides the firm a distinct competitive advantage independent of the applications that may or may not be created on it.

d. Strategic necessary benefits are derived when the availability of the IT infrastructure is required to maintain a favorable competitive position within an industry."

As a bank advances through the six steps, more empirical data will accrue to allow more meaningful benchmarks for return. Until then, banks must rely on less concrete methods and accept that they will be early adopters of technology, knowing the risks and returns this provides.

It is important to note that this framework should be applied within the bank's overall business strategy. As Brewer (2001) noted, the on-line functions should be used to enhance, not replace, the community bank's traditional strength of building close customer relationships.

**DISCUSSION**

The future of small community banks is bright, if they keep abreast of the changes taking place around them. Banking itself is changing. Some predict it will be virtually unrecognizable
in a few years. The world's first "cyber-bank" is open, an example of a Step 6 bank. Security First Network Bank FSB opened its "doors" on October 18, 1995. Although absorbed by RBC (Royal Bank of Canada) on August 21, 2001, it continues to operate. It is a virtual bank. There are no "offices." It exists on the Internet only. In its first eight weeks, it had received 1,000 applications for checking accounts from 40 states (Newkirk, 1996b). As technology evolves, so will all of the industries around it. Banking is one of them. The question is whether community banks will join in. Based on the number of small community banks across the U.S. that have already begun to form their Internet strategies and on the attention it draws in their industry journals (there is now a permanent department in the Independent Banker Journal called Cyberworld), they will.

One of the biggest inhibitions bankers have regarding Internet technology is security (Csinger & Siau, 1998) or the risk associated from the lack of. Community bankers not only have to deal with their own fears but also the knowledge that they usually have a more conservative clientele that is also very security conscious. Perceptions are the key and these are gradually changing. Current technology makes inter-, intra-, and extranets as safe as any other form of electronic business that the bank (and their customers) already performs. Stafford (2001) noted that risk transfer is an important element of Internet banking with insurance being a useful tool. Another tool she mentions is that of the outside firm to monitor, evaluate and test possible weaknesses in the system. Brewer (2001) and Siau et al. (2001,2002) also stressed the need for a strict privacy policy that assures the customer of the safety of conducting transactions on-line.

Within the strategic planning process, the bank will need to evaluate its security needs to address these risks. For each need, technology can offer an appropriate security measure from simple password protection, as used in ATM transactions, to firebreaks and firewalls that prevent tampering with vital data. New advances in technology are making transactions over the Internet safer and safer each day.

As Stafford (2001) explained, managing and controlling the risk associated with Internet investments is the same as with any capital investment. It is, as always, a function of strategic planning, leadership, and proper controls, much of which is accomplished with the training and education of the management and staff involved.

On the other hand, banks must also consider the risks of not using the technology. Three different risks are always associated with any business (i) demand risk or the risk of losing customers; (ii) innovation risk or the risk of not being as innovative as the competition; and (iii) inefficiency risk or the risk of failing to meet the competitor’s costs (McKeown & Watson, 1997). Internet technology offers a way to reduce all three of these risks.

Competition will lead the small community banks, and their associations, to the current opportunities presented by Internet technology. How well a bank approaches and meets this challenge will spell the difference between success and failure. The framework offered here can help the bank evaluate where it is and where it is going.

Following the merger of Citicorp and the Travelers Group, one community banker was quoted as saying, "I look at it (the merger) as an opportunity. Every time there's a merger, there
are more customers and less service" (NewsREal, 1998). It is Internet technology that will enable community banks to exploit this type of opportunity and provide that service.

**CONCLUSION**

The intent of this paper was to stress that the importance of Internet technology and e-business to community banks is not something that is coming in the future. It is now. Their customers and suppliers are joining the cyber-community in droves. If the community bank is not there to welcome them with open arms willing to form close relationships, there will be someone there who is--the competition.

Community banks need to form their e-business strategy now, if they have not already done so, and take actions to implement it using the technologies described in the paper. The basic framework for analyzing investment decisions in Internet technology proposed in this paper can be just the portal to a whole new world for the community bank. The six steps outlined can be the first steps to opening up new markets, saving costs, increasing profits, and being an effective and responsible citizen of the cyber business community. The community bank's stakeholders expect nothing less.

**REFERENCES**


