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## **E-Banking in Rural Area - Recent Trend and Development: A Case Study**

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### **ABSTRACT**

*This paper discusses recent trend and development of e-banking (banking though Internet) for small and community banks in rural areas through a case study. The applications of e-banking of several local banks in rural areas are investigated and examined. The research objective is to investigate the trends and level of prevalence of on-line banking (i.e., e-banking) focusing on some emerging issues and challenges. Managerial implications are discussed with suggestions for future research.*

Keywords: Internet Application, E-banking, Local and Community Banks

### **INTRODUCTION**

The Internet has changed the operations of many businesses, and has been becoming a powerful channel for business marketing and communication (American Banker, 2000). The banking industry has followed this trend in recent years, and sometimes called "e-banking" referring to all banking transactions now completing through Internet applications (Blair 2001, Fugazy 2000). Some key issues addressed in the recent literature about the e-banking include: customer acceptance and satisfaction, services rendered, value added for both consumers and banks, privacy concerns, profitability, operational risks, and competition from non-banking institutions (Boss, et al., 2000). In addition to previous electronic banking delivery systems - automated teller machine (ATMs) and telephone transaction processing centers, online banking provides banks a new and more efficient electronic delivery tool (Costanzo, 2000). E-banking has been viewed as an advanced upgrading from previous electronic delivery systems to open many new business opportunities for the banking industry (Ebling, 2001). A survey revealed that at that time there was a planned \$2 billion new investment in the new electronic banking technology within the banking industry (Radeki, et al., 1997). Among surveyed banks at the time, about two third (66%) planned to invest in telephone banking technology, and the remaining one third (34%) already targeted e-banking options.

There have been several major challenges and issues faced to the e-banking growth and the e-business in general. One major obstacle addressed most is the security concern (Feinman, et al., 1999; Financial Service, 2001). Another issue challenged e-business (including e-banking) is the quality of delivery service - including both delivery speed (i.e., short advance time required in ordering) and delivery reliability (i.e., delivery of items/services on time) (Furst, et al., 2000). Limited payment options available to online customers are also being complained (Furash, 1994). Additionally, customers (who are non-computer "genius" like most senior citizens) have been reluctant in their choice of doing business (including banking transactions) online and worried their unfamiliarity about the computer placing them in a disadvantageous position (Johnson, 1999).

It has been predicted that to be successful in long-term, the operations of an e-business must compete differently from those traditional business counterparts (Furst, et al., 2002). That is, the strategic positioning decision of an e-banking operations must establish its own unique competitive priorities and "order winning criteria"- to obtain competitive advantages (over its traditional business competitors as well as its e-banking counterparts) and sustain its customers on a regular basis (Klinkerman 2000). Currently there are two different approaches in e-banking: a

separate (from its traditional office) Internet e-bank with all transactions being transacted online, or to add an online banking section to the services already being offered by its major bank office (Hackett 2000). This research is an attempt to address some key strategic issues of e-banking - especially from the perspective of small and community banking institutions through a case study. Specifically, the e-banking operations of three local banks in Georgia are investigated and examined.

## THE BANKING INDUSTRY AND THE TREND IN E-BANKING

Banking has never been more important to our society than it is today. The advance of communication and computer technology and the availability of the Internet have made it possible that one can do most banking transactions from a remote location even without stepping into a physical financial structure - i.e., the emerging of e-banking (Bruene, 2002). E-banking has been viewed as a revolution progress in the banking industry. For instance, 20 years ago, 70% of all consumer financial transactions went through a bank office with brick and mortar structures. Today, less than 30% of the same consumer financial transactions run through a branch office or the lobby of a main bank office (Online Banking Report, 2000). As a result, the banks, as an industry, are formulating strategic plans to fight back in winning their customers (Healy 1999). The industry believes that by adopting new technology, the banks will be able to improve customer service level and tie their customers closer to the bank. Meanwhile, the banking industry has been also looking for new methods to expand its customer base and to counteract the aggressive marketing effort of those non-traditional banking entities (Graven, 2000). Through the competition, many banks quickly realized that there are a momentous number of customers like to do banking electronically. As such, many banks, based on their existing 24-hour telephone banking systems, have developed and implemented several important e-banking applications so that their customers now are able to pay bills, transfer money among accounts, check account history, download statement information, and computerize their checkbooks online all at easy and around the clock (Morral, 1995).

Facing extremely intensive competition from non-banking sector, the banking industry has adopted a more aggressive approach to fight competitors for the financial services market share. For example, a number of banks, especially some community banks, decided to provide Internet access to their customers and becoming the dominant provider of local Internet connection services for the local community, thus hoping to *lock* in customers to their financial institution (Klinkerman 2000). Some larger banks are stepping ahead to install advanced software to process all consumer loan applications on-line, a new paperless e-loan process. Customers will receive hard copies of all documents signed for their personal records. And interestingly, the signatures will be created from images collected by special electronic signatures (e-signature), which has been available and legal since 2000.

As an integral part of the e-business, the e-banking has been growing at a rapid pace. It is believed that the e-banking will help banks to cut costs, increase revenue, and become more convenient for customers (Halperin 2001). Due to different motivational factors, however, banks have placed different investments in their e-banking efforts. While larger and national banks are leading in the e-banking forefront, the same can not be said about smaller and community banks - only about 7% of smaller community banks were reported to explore the e-banking operations (O'Connell 2000). This has been attributed to the fact that those smaller community banks were in general *lack* in both financial and technological resources in their e-banking efforts. While more variety of e-banking services has been projected, over half of the growth in e-banking services was predicted from smaller community banks.

Currently, the e-banking operations focus mainly on business lending and credit card businesses, other than rely on deposits for funding. For smaller community banks, this is consistent with recent reports that smaller banks are concerned about traditional sources of funding and view the addition of e-banking as a way to offer products that reduce their dependence on core deposits. E-banking options also generate a higher proportion of their income from nontraditional activities - over 50% more of their profits from non-interest income comparing to banks without e-banking operations. As a result, these banks have adopted a business strategy of using the e-banking to target business customers and more wealthy consumers for not only in loans but other fee income services (Stamoulis 2000).

The application of e-banking has also been proven as an effective way to reduce the costs of operation for the financial institutions. For instance, e-banking services will allow banks to reduce expenditures on physical structures. Larger banks that maintain expensive branch networks tend to have the greatest incentive to adopt e-banking services. In comparison, smaller banks have higher start up costs and tend to have a high initial technological cost in developing e-banking services (Treadwell 2000). In fact, most small banks were motivated to develop e-banking services for potential future cost savings and gaining a competitive edge in the competition. That is, among 85% banks nationwide offering e-banking, the biggest growth has been coming from small and local

community banks (Timmons 2000). Another recent trend revealed is that about 93% of consumer deposits were served by the banks with e-banking services.

Another important benefit from e-banking is a more effective information collection and management. The Internet is an extremely efficient channel for banks to collect the information from customers and manage information flow to meet a wide-range financial needs of individuals and businesses. In fact, offering e-banking services is not only allow small banks to enter markets and reach customers that were previously off limits to them, but also to provide a considerable economies of scale in record storage and data processing - which were only available to large banks (which have the necessary equipment)

Currently it is believed in general in the banking industry that a combination of a low percentage of customers using e-banking services on a consistent basis and a relatively low start-up cost in developing e-banking services - will make the impact of e-banking (positive or negative) quite limited on the bottom line of most financial institutions (Marenzi, et al., 2001). Many small banks that offer e-banking services were unprofitable in the book, as those banks had to absorb all related costs of developing e-banking services during the first few years on their annual balance sheets. On another hand, e-banking services could be highly demanded and desirable to accommodate the sudden, rapid growth that has occurred in other information-intensive industries such as travel and securities brokerage.

The e-banking sector has been growing to reach a competitive level. Some new e-banking services have gained a growing popularity such as e-payments and statement aggregation. It is predicted that the service of *statement aggregation* will become a critical e-banking feature in the future (Stoneman 2000). This service is used to drive new business, increase profitable cross selling opportunities, and initiate improved service quality and quickly becoming popular among bank customers. E-banking has become a serious competitor to traditional banks, especially in large urban areas. With the advantages of quick and easy application process, less and less technical glitches, more funding options for banking customers, and low minimum opening deposit requirement, traditional banks nowadays have to compete more relying on their conventional face-to-face services, first-name calling friendly environment, and trust and secure feeling of transacting business with a person in a financial institution (Hirst 2000).

There are several important decisions a bank must make in the development of e-banking services. On the top of its priority list is to address the bank's privacy policy and procedures – which will be scrutinized by the related governmental regulatory bodies. The development of a comprehensive privacy policy and security system must be the first step in the implementation of e-banking services. Second on the priority list should then be focused on e-banking disclosure policies to fully define the bank's responsibilities and liabilities and also those of its customers regarding the e-banking service. Next decision should consider the package of e-banking services to be offered to its customers, ranging from a standard package (including funds transfer and balance inquiries), or a more complex service offerings (including bond purchases, ACH file transfers, wire transfers, and e- payments), and even a whole package (including Federal tax payments, cash orders, bill payment, direct payment, new account enrollments, and commercial cash management). There could be a huge cost savings from those e-banking services. For example, assuming a consumer would need to write 10 to 15 checks per month on average. If e-payment service is used by 95 millions households in the U. S., American consumers could save more than \$5.6 billion annually in postage cost only.

Finally, the development of e-banking service has encouraged the adoption of a decentralized approach to give banks more needed flexibility to distribute Internet access to a much larger number of employees and potential customers. The decentralization approach is motivated by the fact that a decentralized system could respond to customers' e-requests in a more timely fashion. In fact, the most criticized aspect of the current e-banking service is the slow response to customers' e-requests. Customers do not like to be ignored. Under today's highly competitive market, banks must respond to customers' requests in their e-banking services more promptly and forcefully. In the following sections, the e-banking operations of three local community banks are described.

### **A CASE STUDY: E-BANKING OPERATIONS OF THREE LOCAL BANKS IN GEORGIA**

#### *E-Banking at the Bank Of Gary, Georgia*

The Bank of Gray is located in Gray, Georgia. The bank is the second oldest financial institution in the community - with a total population of approximately 26,000. The major banking products offered to their customers include: a

wide range of checking accounts, other traditional savings accounts, money market accounts, and other interest bearing accounts such as: the certificate of deposit accounts, individual retirement accounts, and other trust services. The *bread and butter* of the bank, however, has been its tremendous growth in customer loans.

The Bank of Gray has been the community leader in regard to utilize the Internet for its customers. For instance, the bank was the first one to advertise its home page on the Internet, and then signed up local merchants to join them in putting together Internet shopping services. The Internet has been a great source of advertisement for banks to help their local community merchants as well as to promote their own e-banking services of a wide range to its customers. The bank is recognized as the leader in promoting e-business across a wide range of industries. One key e-banking service currently offered by the banks of Gary is that new customers now can apply for opening a new bank account online - 24 hours a day electronically with necessary e-signatures. This e-banking service has been able to free up more personnel to attend to other duties and more emerging service requests that require face-to-face attentions. The new account information will be eventually uploaded electronically to the host mainframe computer and then downloaded for verification and conformation. The customer has an option to retain paper copies for their personal records, while the bank is no longer retaining hard copies to reduce its operating costs. At the time of this research project, the Bank has been considering to develop e-banking service of loan application process, so as to maintain its market leading position within the local community.

The Bank of Gray started its e-banking development by setting up an informational web site to gain an Internet presence and examined the e-banking programs of other leading institutions. Based upon industry experiences, the bank then addressed the issue of privacy of customer information to ensure strict privacy protection of customers. The bank refrains from revealing customer account information to third parties unless (1) the information is necessary to complete a transaction initiated by the customer, (2) the release is required by law, or (3) the customer requested that the information be released. The bank has decided to employ a wide selection service strategy with regard to its e-banking operations. Towards this end, the bank has adopted automation for many of its financial services, such as: automated teller machines, electronic funds transfer systems, MICR coding on negotiable instruments, optical scanners, and computerized bank statements. Currently, the bank (like most small local banks) is only able to offer three basic e-banking services: balance inquiry, e-billing payment, and e-transfer between different accounts. In contrast, many larger banks tend to offer a premium e-banking service package - consisting of all three online services above plus other advanced online services including: online credit applications, new account online setup, online brokerage services, e-billing, e-insurance package, cash management, and fiduciary services. It has been suggested that the bank should move in this direction once their clientele becomes more comfortable with the e-banking services. Another e-banking service under consideration is to offer cash management services to their customers to preserve their best commercial customers.

The Bank of Gray started offering e-banking services in July 2000 and currently (July 2004) has 3000 e-banking customers (a town with a total population of 5,000 and 20,000 in the surrounding area). The current e-loan process is not well received by many consumers - as it is uncomfortable, time consuming, and not open for a better loan application. The Bank of Gray has learned that by helping customers researching loan rates and applying for loan with other lenders, the bank could maintain their primary relationship with these satisfied customers. In addition, the bank has also realized the importance to have a better online loan application service in the competition. For instance, the bank is fully aware that there are so called e-banks (i.e., Internet-oriented banks) that will close six-figure home equity loans without the customer leaving their homes. Those e-banks hire a freelance notary to drive to the customer's house on a weekend to close the loan. Those e-banks will clearly become a new threat to the traditional brick and mortar small community banks in the future competition. In this regard, the bank decides to focus on staying in tune with the new technological developments. A good example is a growing popularity of new e-banking services such as e-payments and statement aggregation - that has been recognized as a critical e-banking feature in the future. As these new e-banking services have been used to drive new business, increase profitable

cross selling opportunities, and initiate improved service quality by reducing servicing costs. The bank has decided to start a value-added account aggregation service soon to stay on the cutting edge of e-banking technology. With its operations strategy - as a cost leader in the e-banking industry while offering high quality products and services, the Bank of Gray is confident that the bank will succeed in its e-banking business.

#### *E-Banking at the Milledgeville Century Bank & Trust, Georgia*

Century Bank & Trust (CB&T) is a privately owned bank located in Milledgeville, Georgia. Its major services offered are various types of checking accounts, savings accounts, personal and commercial lending, credit cards, and

a full-service Trust and Investment Department. It serves primarily the Milledgeville and Lake Sinclair area, but has customers across Central Georgia. CB&T targets individual customers as well as business customers in an attempt to gain more of the market share in local market and increase shareholder wealth. The company's main competitive advantage is its relatively small size and personal atmosphere. Their overall strategy consists of gaining and maintaining customers through devoted, one-on-one attention and providing a friendly "hometown" business and working environment conducive to customer comfort and ease.

CB&T began to react to the sweeping e-business trend in the fall of 1998. The bank currently is basically taking a "follower strategy" in the market and playing "catch-up" in the e-banking development. The bank first established an e-banking task force which studied the market as well as their competitors. After determining the basic needs for their e-banking system, other than developing in-house, the bank outsourced its website design for a best online solution to an outside company - known as *Digital Insight*. That is, the e-banking system of CB&T was designed, created, and operated from the outside by *Digital Insight*. In comparison to an in-house developed e-banking system, the outsourced approach empowers financial institutions (like CB&T bank) to provide best e-banking solutions to their retail and commercial customers via more a cost-effective, outsourced service. More specifically, for CB&T bank, an outside service bureau (*Digital Insight*) in fact operates and maintains its e-banking system from outside locations (not the client's), handles all facets of the system, and responds to client requests to fix any running errors that may occur. This approach allowed CB&T to concentrate on their core competencies in their daily operations while at the same time moving into the new e-banking era smoothly.

CB&T currently only offer some basic e-banking services to customers: (1) *Providing service information online* - the bank placed the information and rates about all of their services online to all customers and non-customers alike who can access the Internet. (2) *Providing online account access* - the bank allows both business and personal customers to access their accounts on-line. Also, customers are able to download account information directly to their Quicken (or other Microsoft Money financial) software so that they can incorporate the information in their budgeting and money-management processes - which has been credited by many of its business customers for more efficient and cost-effective services. (3) *Providing e-payment service* - a very popular and rapidly growing e-banking service, also called as "on-line bill payment." This service, for a small monthly fee, allows customers to set-up automatic payments to be drafted out of their CB&T accounts at agreed upon days of the month. Using it as a competitive edge, this service is offered free to employees, senior customers, and customers with the VIP Golden Web account. (4) *Providing other online banking services* - such as online application for credit cards, loans, and online transactions for buying CD's or dealing with IRA accounts.

The e-banking system also brings new issues and challenges, such the imbalance between the capacity and workload. For instance, CB&T currently has about 750 customers who signed up for the e-banking services with about 1,200 total accounts. Among them, about 60 are signed up for e-payment service, up to 15% of the total checking accounts of the bank. While the online services save customers time and effort, the bank discovered that offering e-banking services is very labor intensive on the administrative end. That is, though the inputs from traditional teller services are cut in a big way, the transactions must still be processed right along from the teller stations. Another challenge is about how to keep its traditional high quality services into its new e-banking system. Being in the service industry forces the bank to compete using higher quality and greater levels of customer service. The quality of bank services is highly dependent on the training and actions of each employee, due to the fact that most banking services offered from bank to bank are very similar, with only the customer service and employees differentiating them. As knowledgeable employees with accurate transaction skills are the key to the success of the bank, CB&T has worked closely with its outsourced on-line service provider to provide high quality e-banking services through its Website.

As in many local banks, key concerns of CB&T for providing e-banking services are customers' information security and privacy, as well as related government regulations. During an e-banking process, very sensitive information, such as bank account numbers and credit card numbers are traveling through the Internet. Given the importance of such information and potential consequences of misuse, banks must provide the highest level of security possible for its e-banking customers. In this effort, CB&T currently asks its online service provider (*Digital Insight*) to employ all available and necessary measures to ensure customers' safety. In addition to those unique customer passwords required to access individual account information, the bank also embraces and promotes highly the e-banking tips provided by the Federal Deposit Insurance Corporation (FDIC) to its customers. CB&T has been in full compliance with all regulations regarding e-banking services in place today.

Currently, providing e-banking services has not been viewed as a really high priority to the management of CB&T, as the bank believes that its e-banking now is costing more than savings, so far has not significantly contributed to

the banks success in the marketplace. On another hand, while the bank has been satisfied with its current e-banking services, suggestions and recommendations have been made to improve and streamline the system: (1) the bank has asked for its main page to be updated more timely and formatted in a manner of more user friendly; (2) a more persuasive promotion of the e-banking should be conducted more regularly; (3) a company-wide training and customer service for e-banking initiatives should be implemented; (4) the bank should integrate more services into e-banking operations and search the areas where e-banking operations could further cut its daily operating cost, (5) the bank should provide more useful links on its e-banking website to its business partners; (6) the large “dead space” of its current website should be used to add more eye-catching pictures to make it more appealing to consumers surfing the net; and (7) finally, the bank should consider to take over its website from its current online service provider and running it “in-house”, so that the bank could have total control of its website and be able to make necessary changes more quickly and effectively.

### *E-Banking at Robins Federal Credit Union – Georgia*

In 1954, thirteen Robins Air Force Base civilian and military personnel formed Robins Federal Credit Union (RFCU). Today it is one of the largest credit unions in the State of Georgia. The banking strategy of RFCU is to offer a return to its members in the form of higher dividend, lower loan rates and a full line of quality low cost services including: checking and savings accounts, certificates of deposits, individual retirement accounts, club accounts, loans for mortgages, vehicles, recreational and equity lines, as well as several different types of Visa charge cards, as well as a range of investment services for educational or retirement purposes. RFCU has two major competitors: the small hometown community banks and the larger city banks. The business strategy of RFCU is to move customer's along the new technology trend (such as online banking services) to retain customers and create a proposition that stimulates growth within an established customer base and attracts new customers.

RFCU started offering e-banking services with online account application, then followed by providing its online banking service package to all members free of charge. Currently its e-banking service package includes: online access to current balances on all loans and all checking and savings accounts, downloading quicken files for easier reconciling of monthly statements, online viewing recent banking activity, online inquiry year to date tax information for IRA's, dividend and interest earnings, online transferring funds between accounts, as well as the Web Bill Pay service - an online bill payment service that allows members the convenience of paying bills directly through the Internet.

Credit unions, like Robins Federal Credit Union (RFCU), were slower at the beginning than large competitors to embrace the Internet and e-banking applications. Lately these smaller institutions had joined in this direction with strategies for promoting the e-banking services very innovative and unconventional. For example, as credit unions focus on member satisfaction, RFCU has realized that e-banking services can increase customer satisfaction, boost retention, and improve profits.

Like in traditional banking, the quality of e-banking services are measured by the following criteria: (a) speed and ease of enrolling for on-line services; (b) ease in understanding disclosure information, rules, and regulations; (c) user-friendliness of the main Web page; and (d) timeliness in receiving confirmations of bills paid, loans paid, or transfer of money between accounts. RFCU currently offers a full range of e-banking services for its customers and those services appear to be of adequate quality in all the criteria above.

Robins Federal Credit Union's e-banking service, while still in its infancy, is increasing customer satisfaction, boosting retention, and improving profits. The bank has invested and will continue to invest in features such as customer service, account management, funds transfer, lending, and e-payments. As a “brick and mortar” bank, RFCU is meeting and exceeding customer needs with its e-banking services.

## **A FOLLOW-UP SURVEY AND RESULTS ANALYSIS**

To capture the newest trend and development of e-banking by small and local community banks, a questionnaire survey was conducted from January to March of 2005, after the descriptive investigation of the e-banking operations of the three small and local banks discussed above. Four local banks in the middle Georgia area were selected for this survey research, including the three described above. The survey focused on three primary areas and perspectives of e-banking operations for small and local community banks: current status of their e-banking operations, current e-banking services provided, and future directions of their e-banking operations.

This paper presents only some preliminary results of the proposed survey research. The current status of their e-banking operations of the surveyed banks is summarized in Table 1. For example, as shown in Table 1, a 50% surveyed banks had their e-banking Websites designed by the in-house IT professionals and thus gaining the capacity of upgrading and maintaining their e-banking services on a timely fashion, while another 50% depending on outside IT professionals and as a result slower in responding any emerging demand and request. In terms of their e-banking operations development, majority have started their e-banking services over three years or longer, even starting with a very limited available service options, now have learned practical lessons through their experiences and ready for further exploration. Among four surveyed banks, one is the branch of a larger regional bank with over 2000 customers, and all other three are categorized as small and local banks with customers from 500 to 2000. Consequently, all four banks have their customers primarily by individuals and only one plus some small businesses (the branch of a larger regional bank). Not surprisingly, all four banks reported that their revenues are mostly generated by their individual customers.

The current available e-banking services provided by the surveyed banks are listed in Table 2. It can be seen that those basic online services are now available by all survey participants, such as: inline account inquiry, online account application, online financing options, Internet checking and savings account, online purchasing of CDs and IRAs, and even online payment option. Some newer e-banking options, however, are only available by two relative larger banks (50%), including online services to small business, online trusts fund account management, online investment brokerage service, and Internet insurance option. It indicates a clear direction for the future e-banking development for those small and local community banks. More discussions will be reported in a later paper.

Who is the primary designer of your local website?	In house IT professional/staff	50%
	Outside IT professional	50%
	Help from local community	0%
	Help from higher level Government Agencies	0%
	Other	0%
How long has the current Website been established since the last overall design update?	Less than a year	0%
	Between 1-2 years	0%
	Between 2-3 years	25%
	3 or more years	75%
How many customers does your bank serve?	500 – 2000	75%
	2000-9999	25%
	10000-14999	0%
	15000-19999	0%
	20000+	0%
Your banks customer base is primarily comprised of:	Individuals	100%
	Small Businesses	25%
	Corporate Clients	0%
Your bank generates the most revenue from:	Individuals	100%
	Small Businesses	0%
	Corporate Clients	0%

**Table-1: Current E-Banking Service Status.**

Four key questions about the future direction of their e-banking operations are asked in the proposed survey and the results are presented in Table 3. When asked for the major challenges and difficulties for their current e-banking operations, a half (50%) argued for the lack of in-house IT professionals, as expected that the delays and slow responses from outside IT technological support when those small banks outsourced the development of their website design and e-banking service operations. In an Internet era, customers have been very unhappy about the slow response to their e-request and expected a more timely result. While each has a 25% response to the need for more employee trainings in IT technology, more innovative design of e-banking services, and sometimes increased extra workload due to the task of processing all those online requests. Those areas certainly demand more detailed



exploration and investigation for the continuing future research. In comparison, all surveyed banks indicated that e-banking operations will be ranked as a high priority for in the near future. But for timely updating their e-banking Website, only one bank (25%) answered that it updates on a daily basis, another one (25%) doing it weekly, and another two banks (50%) would not keep their e-banking Websites updated until the end of each month. As a result, those two banks admitted that they had heard from their customers complaining about this issue and they do have a plan to improve in this direction.

Which of the following E-Services does your bank provide?	Bank 1	Bank 2	Bank 3	Bank 4	Total Percentage
Online Inquiry	X	X	X	X	100%
Online Payment	X	X	X	X	100%
Mortgage Application		X	X	X	75%
Information/ About Us	X	X	X	X	100%
Small Business		X	X		50%
Locations	X	X	X	X	100%
Employment Information	X		X		50%
Trusts		X	X		50%
Financing	X	X	X	X	100%
Estate Planning		X	X	X	75%
Brokerage		X	X		50%
Loans	X	X	X	X	100%
Checking/Savings	X	X	X	X	100%
Investment Management	X	X	X		75%
ATM/ Visa Check Card	X	X	X		75%
CDs and IRAs	X	X	X	X	100%
Insurance	X		X		50%
Commercial and Corporate		X	X		50%

Table-2: E-Banking Services Offered.

What major challenges and difficulties has your bank faced when dealing with E-Banking?	Lack of in-house IT professionals	50%
	Lack of interest from customers	0%
	Extra workload from processing online banking services	25%
	Need for employee training in IT technology	25%
	The innovative nature of E-Banking	25%
	Others	0%
	Is E-Banking a Priority for your bank in the future?	Yes
No		0%
How frequently do you update your services and website?	Daily	25%
	Bi-Weekly	0%
	Weekly	25%
	Monthly	50%
In which direction does your bank believe that the Banking Industry will shift?	Traditional Banking	50%
	E-Banking (greater than 50%)	50%

Table-3: Future Direction of E-Banking.

## CONCLUSIONS AND FUTURE RESEARCH

The banking industry has been a leader in the Internet application in recent years. "E-banking" (referring to all banking transactions completing through Internet applications) has thus become a hot topic in the related literature. Some key issues addressed in the recent literature about the e-banking include: customer acceptance and satisfaction, services rendered, value added for both the banks and consumers, privacy concerns, profitability, operational risks, and competition from non-banking institutions. Smaller community banks, among others, are more interested in the e-banking services to gain competitive edges over their larger counterparts. This paper describes a case study of three such small local banks and their efforts in developing and operating their e-banking services. Both their successes and struggles discussed in this paper could provide some meaningful insights and serve as comparative examples (i.e., benchmarks) in evaluating the performance of e-banking operations, especially for those small and local community banks. A follow-up questionnaire survey is conducted to collect updated information about the recent development of the e-banking operations for those banks discussed in this paper. Some preliminary results of this survey are explored and discussed accordingly. For future research, more similar small and local community banks will be selected to further collect the information about their newest trends and development in their e-banking operations - to enhance managerial implications to be learned from this project.

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