

E-BANKING - RECENT TREND AND DEVELOPMENT: A CASE STUDY

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Abstract: This paper presents a case study about the recent trend and development of the Internet application in one key service industry: financial institutions - like investment firms and commerce banks. 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, especially for smaller local banks. Two local banks (in the state of Georgia) are selected in this research project for comparative analysis purposes. Managerial implications are discussed with suggestions for future research.

INTRODUCTION

The Internet has changed the operations of many businesses. With more than 300 million computers on more than 200,000 networks worldwide communicating with each other, the Internet has been becoming a powerful channel for business marketing and communication. As a result, more and more companies, especially small firms and new start-up businesses, take their business online to take full advantage of this huge potential market. Because this new *virtual* marketplace allows small companies competing with business giants by *just* having a better web presentation of their products. New entrepreneurs and traditional mid-sized businesses were the pioneers exploring on the forefront of e-commerce.

The banking industry has followed this Internet application trend in recent years, and somehow becoming in its Internet application - sometimes called "*e-banking*" referring to all banking transactions now completing through Internet applications. 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 application of e-banking to gain certain competitive edges over their larger counterparts.

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. While ATMs were first introduced in early 1980s and initially an attempt to reduce operating costs, telephone call centers were developed in the 1990s to handle simple transactions and provide added customer services from a remote location where labor costs were relatively low but work ethics were relatively high. E-banking has been viewed as an advanced upgrading from previous electronic delivery systems to open many new business opportunities for the banking industry. A survey (in 1997) revealed that at that time there was a planned \$2 billion new investment in the new electronic banking technology within the banking industry (Radeki, etc. 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 in the practice to the online business growth is the security concern. Customers are certainly concerned of giving their bank account number (or a credit card numbers in e-retailing) online and somehow afraid to pay an invoice through Internet. 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). Limited payment options available to e-customers (i.e., online customers) are also being complained for more creative variety. Additionally, many 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 and the Internet placing them in a disadvantageous position.

As those concerns above becoming major challenges and issues to the growth of e-business (as a whole), it has been predicted that to be successful in long-term, the operations of an e-business (including e-banking) must compete differently from those traditional business counterparts. 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. 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. Both approaches have advantages and issues to be addressed in practice.

This research is an attempt to address some key strategic issues of e-banking - especially from the perspective of (relatively smaller) community banking institutions through a case study - the impact of e-banking at the two local banks in Georgia.

THE BANKING INDUSTRY AND THE TREND IN E-BANKING

Banking has never been more important to our society than it is today. The American economic system would fail overnight without a competent and efficient banking system. Banking may become a necessity but banks are certainly not. In fact, traditional banks have been diminishing at an alarming rate. For example, banks held approximately 75% of national financial assets in the 1960's. Due to the increasingly intense competitive nature of financial services, banks today hold only about 20% of these assets. Banks supplied 46% of national business credit a few years ago. Today less than 30% of national business credit needs are filled by banks. Meantime, the advance of communication and computer technology and the availability of the Internet have finally 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, the e-business application in the banking industry.

E-banking has been viewed as a revolution progress in the banking industry. Traditionally, banks have heavy investments in brick and mortar structures and a large cast of employees. In comparison, the e-banking revolution includes much more than the wholesale side of the bank 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. Today most people when asked about where they are banking answer with a traditional bank name. It is expected, however, 5 years down the road, many customers may answer the same question with a non-traditional banking competitor - ranging from AT&T, Visa, Prudential, even Microsoft. As predicted by Microsoft's Bill Gates - "*Banks are dinosaurs and will be replaced by microcomputers.*"

Foreseeing the threat and the challenge from the above Mr. Gates' comments, as an industry, the banks are formulating strategic plans to fight back in winning their customers. Their first target is the new technology - including all new telecommunication and computer technology. 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. Through the competition, many banks quickly realized that there are a momentous number of customers like *e-banking* - to do banking electronically. As a result, many banks, based on their existing 24-hour telephone banking systems, have developed and implemented several important e-banking applications so that their customers (who own personal computers with modems and have an Internet access services) 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

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. 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 in 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. Due to different motivational factors, however, banks have placed different investments in their e-banking efforts. It is reported that only about 20% of national banks offered e-banking options in 1999. 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 in the same year. 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. The financial performance results from the reported e-banking operations are relative positive. The financial institutions now offering e-banking services have been reported more profitable than the banks not offering these options. More wider variety of e-banking services were projected - that about 50% of all national banks would start to offer e-banking in 2001 and over half of the growth in e-banking services would be from smaller community banks. At this time, there is no comprehensive summarized information regarding e-banking activities in the United States. The lack of such reporting data leads to no accurate and detailed information about e-banking activities nationwide. The FDIC estimated that the number of banks with their own Web sites were more than doubled from 1997 to 1999 (from 1500 to 3500). The corporation also approximated that about one-third of the total 10,000 US banks now have their e-banking web sites. Among them, approximately 1,100 of those Web sites are transactional and active in their e-banking operations.

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.

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 maintains 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. 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 45% banks nationwide offering e-banking, the biggest growth has been coming from small and local community banks. Another recent trend revealed that about 93% of consumer deposits nationwide are served by the banks which offer e-banking services. That is, about 9 out of 10 banking industry customers today have access to e-banking services. Under the pressure of competition, many banks are not only increasing their customers' access to the Internet but also expanding their range of e-banking services. For example, the number of banks offering online cash management services is estimated to increase by 500%, while the online insurance offerings are projected to increase by 280%, and the banks planning to offer e-billing is projected to increase by 200%. Currently, larger banks are leading in this front.

There is also a gap in perceived demand for e-banking services between larger banks and smaller banks. Specifically, about 46% small banks in a survey reported that they have no immediate plan to offer e-banking to their customers, because they still have questions about if the benefit from e-banking services would outweigh the added expenses associated with offering e-banking services. Their doubt was based on the following projection - even the number of online users was estimated to increase from 5 million households in 1999 to as many as 32 million households over next 5 years - it is only about 1/3 of 93 million U. S. households with a banking relationship. The projection above implies that only a minority of the household customers of banks currently offering e-banking would take advantage of doing their banking transaction online.

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-ranging 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. The exception to this statement, of course, can be heard among some larger banks which have a large share of current e-banking market. Many small banks which 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. If the proposed marketing effort proceeding and related security concern being solved in a near future, as general banking public has so far not been swayed enough by e-banking products and services to merit an extensive change in their banking habits.

The e-banking sector has been growing to reach a competitive level. For instance, there was fewer than 400,000 households (less than 5%) of those banking online that had switched account relationship to Internet-oriented brand banks in 1999. The figure is increased to 7% (or 700,000 households) a year later in 2000. When including all B2B e-billing transactions, the total was up to 2.5 million (or 21%) (Online Banking Report: Internet Strategies for Financial Institutions, 4). 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. This service is used to drive new business, increase profitable cross selling opportunities, and initiate improved service quality. *Yahoo.com* was first to launch account aggregation service (during 2000) involving email statements, email alerts, online loan decisions, fraud protection, and inter-bank funds transfer capabilities. This new e-banking service was quickly becoming popular among bank customers.

Applying the Internet in the banking industry in U.S. started in 1995 (Wells Fargo Bank *only*) and has grown to over 3,000 in 2000. The financial institutions that have an accessible Internet homepage to their customers have grown from 50 in 1995 to 10,000 in 2000. Meanwhile, the number of e-banking customers has increased from 300,000 in 1995 up to 11 million in 2000. The monthly online credit application - one of key e-banking services - has grown from none in 1995 to 10,000 applications per month in 2000. It has been estimated that with the development of new viral technology, e-banking household penetration would be reaching 15% in 2000, 20% in 2001, and 25% in 2002.

E-banking has become a serious competitor to traditional banks (i.e., banks without e-banking services), especially in large urban areas. With the advantages of quick and easy application process (a few minutes online to open a new account comparing normally a two-hour process in a bank office), less and less technical glitches (unexpected time out due to customer overload), more funding options for banking customers (including: credit card, wire, e-check, mail, and direct deposit), and low (even no) 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.

There are also new comers in the competition of financial service industry - who offer many financial services similar to those provided by traditional banks. Many of those new alternative financial services providers are Internet-based (called e-service vendors) and have become another threat in the competition to traditional banks. A good example is a company called *WebTone Technologies* - which is characterized as the first company to amalgamate Internet customer services and email with call center telephones. This company now provides many new e-services to e-banking operations to consolidate and track customer requests by using customer's preferred channel to improve the quality of service while reducing the costs. Another e-service (called "*duet*") is able to enable real time interaction between financial institutions and banking customers to review forms and documents concurrently and send records back and forth to resolve any service conflicts.

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.

Several successful emerging information technology and security systems are reported now available in the marketplace. Those reported systems are able to protect customer privacy concerns and will remove one of the key concerns by current e-banking customers. In short, 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. The disclosure policy may differ from bank to bank but must share one important element regarding privacy. For instance, it should clearly speak out that it is the customer's responsibility to maintain the confidentiality of his or her password, and to notify the bank as soon as possible in the event the password has been compromised. Next decision normally should consider the package of e-banking services to be offered to its customers (like product/service design in a traditional operations of a business). Those e-banking services could be 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 (most via e-mails) in a more timely fashion. Currently, some banks have assigned an employee with the title of e- banking branch manager – who will proactively manage the e-banking delivery (in a virtual branch office). The major responsibility of this e-banking manager is to reduce response time to customer e-mail requests, as it is critical that bank review messages frequently and acts promptly on customer requests with consistency and the appropriate level of urgency. In fact, the most criticized aspect of the current e-banking service is the slow response to email messages. 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.

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, is its tremendous growth in customer loans. The bank has a very personal approach to lending money within their community, like offering a loan from \$100 up to \$1,000,000 with proper collateral to secure the loan request.

The Bank of Gray defines the bank's overall mission as to remain an independent community bank serving the financial needs of its local market. The bank is the market leader for its community and has been sustaining over 90% of the estimated local market share since 1996. However, the recent competition has been coming from several surrounding local banks that have moved into this community to compete for market share. The two major competitors, for example, the Exchange Bank (headquartered in Milledgeville, Georgia) and Magnolia State Bank (headquartered in Eastman, Georgia) had *invaded* into this community in 1998, and since have gained over 15% market share from the Bank of Gray. The Bank of Gray strategically countered the competition by building a new \$2 millions state of the art banking facility in 1999 with online banking in their plan. There are also outside competitors as well as the community-wide competition for financial services. For instance, many large financial brokerage firms (e.g., Merrill Lynch) and insurance companies are now offering individual retirement accounts through distance. The larger discount stores such as Wal-Mart and K-mart are also attempting to gain entry into the market of financial services by providing a one-stop shopping convenience for their potential customers. The bank has grown in asset value from \$65 million in 1993 up to \$170 million in 2000. The loan portfolio has gained dramatically during the same period of time - from \$31 million in 1993 up to \$110 million in 2001. The growth has come from the influx of business in the land development and real estate mortgage market for the local community. The bank has also focused on increasing the revenue stream in its non-interest income products including: automated teller machine fees, checking account fees, and non-sufficient funds fees. The focus on fee income helped to counteract the resulting increase in the cost of funds in the competitive financial service world.

The Bank of Gray was also 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 (except as a local ISP - Internet service provider). In fact, the bank is considering to turn into a local ISP (in a near future) to counteract higher charged national ISP providers such as America Online and Microsoft Network.

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 has invested in the technology advancement since later 1990s to prepare the bank for the Internet era. Today, the bank provides all of its 30 full time employees with a personal computer setting up at each workstation - all connected via Internet through a local area network. The computer networks and online capability are then used for processing new accounts, consumer loan origination, regulatory compliance disclosures, word processing, spreadsheets, asset/liability management, liquidity management, telemarketing, and customer information files. From the beginning, a major concern of bank's management regarding offering e-banking service was the security system of this *virtual* bank. The bank currently uses a three-tiered security system to ensure safety. The first stage uses encryption. The second tier is designed to prevent unauthorized access from both inside and outside of the bank. The third level is an individual vault system. A computer hacker would have to penetrate each account, one by one, starting from scratch each time if the goal is to *steal* money from more than one account. The bank also assures their customers if the security system is breached the bank will refund the lost money to their customers rather than face the public relations problem of having an unsafe security system.

The Bank of Gray started its e-banking development from early setting up an informational web site to just gain an Internet presence. The e-mail system and its communication capacity were next introduced to both bank employees and its customers. The bank's senior management attended seminars and read trade publications to better educate themselves to prepare for the Internet banking explosion. The bank also examined the e-banking programs of other leading institutions (like *SunTrust bank*). Based upon industry experiences, the bank then addressed the issue of privacy of customer information to ensure strict privacy protection of customers. For this purpose, the bank also limits access to customer financial information to only those employees who need such access. The employees are fully trained in how to protect the privacy of customer financial information. 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 (White Paper: Privacy of Customer Information, 1).

The Bank of Gray 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 of Gray (like most small local banks) is only able to offer so-called basic e-banking services - consisting of the three core online services: balance inquiry (of all accounts available), 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 the three core online services plus at least three other advanced online services. These advanced online services involve from online credit applications, new account online setup, online brokerage services, e-billing, e-insurance package, cash management, and fiduciary services. It has been suggested to the Bank of Gray that the bank should move in this direction (offering the acceptance of credit applications online) 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. (Note: The Bank of Gray does not offer cash management services for the time being.) Because the bank will need offer this service to preserve their best commercial customers.

The Bank of Gray started offering e-banking services in July 2000 and currently has 2000 e-banking customers. The bank used both printing ad and display banners in early years both inside and outside of the facility. This marketing effort resulted in an initial influx of 120 e-banking customers in a month (August 2000). The bank continued their newspaper and banner campaign to increase the total e-banking consumers up to 170 by September 2000. The last updated records showed that over 2000 members participating in the e-banking services as of May 2002 (a town with a total population of 5,000 and 20,000 in the surrounding area). A monthly activity report for January 2001 showed some interesting data. The bank's homepage had 1048 successful logins for the month with 248 failed attempts to sign - which generated 49 account lockouts. In this month, the bank had 1,024 hits to view account summary information; 833 hits to view checking account, 27 hits to view savings account, 22 hits to access certificate of deposit account, and only 8 times to access loan information. In addition, there were 1,023 hits to view checking account history, 262 hits to view banking new service messages on the web site, 34 transactions for funds transfers, 12 times to access savings account history, and 67 times for pin number change requests. Meanwhile, the e-banking branch manager had to perform 2 account lockouts during the month due to unauthorized usage on the web site. For comparison purposes, a later 3-month period summary revealed a remarkable increase in almost every e-banking service item (mentioned above), ranging from 50% increase in online loan application to a 300% increase in checking account inquiry.

The online loan and trading has been receiving some bad press recently. The dot-com companies such as "*iOwn.com*" and "*Mortgage.com*" have faded away along with their inflated stock prices. The online loan lending industry had learned from the mistakes of these maverick companies. For example, 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 research loan rates and applying for loan with other lenders, the bank could maintain their primary relationship with these satisfied customers. The level of service displayed by helping customers in this matter could then result in more loyal customers. In addition, the Bank of Gray 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 of Gray 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. Because the service of statement aggregation has been used to drive new business, increase profitable cross selling opportunities, and initiate improved service quality by reducing servicing costs. The Bank of Gray has decided to start a value-added account aggregation service soon to stay on the cutting edge of e-banking technology.

In terms of aligning the responsibilities of e-banking services, the Bank of Gray (as a small bank) decided to take a centralized approach for control purposes (while most large banks use a centralized approach). Under such a centralized approach, same bank employees will be responsible for performing majority of related e-banking services including: reviewing and responding to secure messages, providing direct customer support and confirming that the customer balance and transaction file update to Internet banking is performed successfully, establishing new customers and accounts, and providing centralized support for the bank's use of all related Internet product.

The Bank of Gray understands the importance of quality in the e-banking service competition. The bank has been quite successful in making adjustments to improve customer-driven service quality. As a successful business will accurately reach its customers' expectation, the bank developed a series of quality improvement programs for its e-banking branch. For example, a critical criterion for quality service in the e-banking business is its response time to customers' requests (e-requests via e-mail system). The bank has properly trained all employees (who will work in the e-banking branch) to promptly handle customers' requests in a timely fashion. The bank uses its job enrichment and job enlargement programs to counteract long customer service response time. 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. Familiar with the recent stories of both success and failure of many dot.com companies, the bank is prepared with the possible ups and downs in its e-banking operations and will adjust its strategy to any dynamic changes in the industry accordingly.

E-BANKING AT THE MILLEDGEVILLE CENTURY BANK & TRUST, GEORGIA

(Note: This section is currently underdevelopment. Like the Section-3 above, the section will discuss the operations and all related issues and challenges in the e-banking services of this small bank, located in Milledgeville, Georgia.)

CONCLUSIONS AND FUTURE RESEARCH

The banking industry has been a leader in the Internet application trend in recent years, and "*e-banking*" referring to all banking transactions completing through Internet applications has 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 application of e-banking to gain certain competitive edges over their larger counterparts. This paper describes a case study of two such small local banks and their efforts in developing and operating their e-banking services.

Currently, the overall operations posture for the Bank of Gray is externally supportive. The bank continually seeks ways to develop competitive advantages to gain market share, including its e-banking services. In fact, managing and developing technologies (especially IT and Internet technology) presents a serious challenge to the senior management of the bank. The bank does believe that its e-banking operations might be the deciding factor to make or break the bank in the long term.

From the early discussions, the operations activities of Bank of Grey (and Milledgeville Century Bank) appear to be compatible with its strategy for competing in the e-banking industry. Though their business strategies and operational activities have made a significant contribution to their competitive advantages and successes in the marketplace, as well as its struggles in the process. Both their successes and struggles could provide some meaningful insights and serve as comparative examples (i.e., benchmarks) in evaluating the performance of e-banking operations, especially for small local and community banks in an empirical and comparative study.

This is a first preliminary result of an ongoing research project - evaluating the business strategy and operational activities of e-banking business for both their successes and failures through comprehensive comparative studies. Two small local banks are selected and described in this paper. More e-banking companies will be chosen for further analysis and evaluation - to enhance any managerial implications to be learned from this project. More results and analysis will be presented in a later (more completed) paper.

(Note: References available upon request from Jiaqin Yang, Georgia College & State University.)