

Examining the Performance of Internet-Based Business Models: Evidence from the Internet Banks

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Abstract

Technology and innovative thinking have changed the design and delivery of banking services dramatically these days. An Internet bank is an electronic, virtual bank having little or even no branching system and relying on others' physical networks to meet the majority of customers' physical transaction needs. The critical success and failure factors of Internet Banks have been explained only by the economies of scale, and the learning and experience effects of Internet Banks based on the perspective of ecologies. In this study, the critical success factors of Internet Banks are investigated based on the strategic choice by organizations and the resource-based view of the firms instead of an organizational ecology perspective. To this end, 31 major Internet Banks have been classified by the size and profitability of banks and three strategic groups have been derived. The three representative company cases dealing with 2 successful cases and 1 failed case were analyzed, and the critical success factors of Internet banks were derived. Academic and practical implications are discussed.

Keywords: *Internet Banks, Business Model, Banking, Profitability, Critical Success Factors*

1. Introduction

The Internet has altered the way in which many industries conduct business. Banking is no exception as technology and innovative thinking have changed the design and delivery of banking services [1]. There are two general business models to provide Internet banking: “bricks and clicks” and “Internet-primary” banks. The “bricks and clicks” model utilizes traditional brick-and-mortar offices, supplemented with the Internet, similar to a firm with a physical market presence, such as Barnes and Noble, also operating a website where products can be purchased. Most banks using the Internet have chosen this model to provide increased customer service or product-enhancement rather than for primary product delivery. In contrast, the “Internet-primary” bank model is an electronic, virtual bank having little or even no branching system (bricks) and relying on others' physical networks to meet the majority of customers' physical transaction needs.

Nearly half of all U.S. banks and thrifts were operating transactional Internet Web sites at the beginning of 2002. But most of these firms have adopted a “click-and-mortar” business model in which an Internet Web site is used to complement existing brick and mortar branches. Only a few dozen banks and thrifts have adopted a pure Internet-only strategy that eschews physical branches entirely; by-and-large, these firms have generated sub-par

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earnings. For every Internet-only bank or thrift that has achieved marginal levels of profitability, another has exited the market through liquidation or acquisition or has abandoned the pure Internet only business model and established physical branches. Government regulators have become increasingly risk averse with banks and thrifts that deploy, or wish to deploy, this business model.

Recently Internet Banks have been increasingly concerned about the various aspects—the extension of Internet Banking Service, the expensive efficiency, and the service differentiation. The establishment of Internet Banks will be raised by the mitigation of financial regulation that bring down the fund scale by the Bank's Law, take some preventive measures by the real-name financial transaction system in Korea.

Although there has been much concern about the establishment of Internet Banks in Korea, the research related to this issue has been insufficient. The Internet Banks have a similar feature by general banks—e.g., trade types with customers, risk management, capital power, and local networks. Considering the emerging variety of Internet Banks due to the continual development of the Internet and information technology, the fact that little research has been conducted about this topic is remarkable in the near future. Previous studies on the survival, extinction, success, and failure of Internet Banks [2, 3] have been based on the perspective of organizational ecologies. Because the fact that the history of research about Internet Banks is relatively short, the perspective of organizational ecologies is based on the success and failure factors of Internet Banks. Instead of organizational ecologies perspective, this research takes the theory of the strategic choice by organizations and resource-based view of the firms.

In this study, the success factors of Internet Banks are explored on the strategic choice by organization and resource-based view of the firms. Because Internet Banks don't have an appearance cases, this study would be analyzed with case studies by the foreign Internet Banks in the U.S., E.U., and Japan. This research recognized the fact that foreign Internet Banks would be discriminated against by the strategic types, and this would be indicated to show the strategic groups by the representative three companies.

2. Conceptual Background and Related Studies

2.1. Business Models and Internet Banks

Definitions for business models vary widely, incorporating organizational narrative [4], processes that convert innovation into value [5], recipes for firm activities that incorporate organizational design and strategy [6], “flows” of information and resources [7], and designed structures such as the firm's set of boundary-spanning transactions [8]. Most studies, however, fail to clearly distinguish the business model from received organizational constructs such as strategy, in part because the construct emerged as a term of convenience in the popular press and practice community [9]. The lack of a convergent, well-defined theoretical construct has led to inconsistent empirical findings in its effect on firm performance and organizational change. Disparate definitions suggest that business models for growing firms could be inherently uncertain [10, 11] or, alternately, path dependent and predictable [12].

The role of managerial agency in determining organizational structures resonates with the configuration of firm products, activities, and markets [13]. Managers and entrepreneurs rationally assess existing and potential business models to establish new organizations and ensure firm survival [14, 15]. Practitioner-focused work interlinks business models and strategy and suggests that business model innovation is the cornerstone of long-term performance. Alternate analyses suggest that firm performance is linked to business model fit with strategy [16] or business model consistency across international subsidiaries or partners

[17]. The business model as design requires that managers implement a single business model to avoid operational inefficiencies [18]. On the other hand, the coevolution of strategy and business models may occur as a cumulative, emergent process directed by purposive, coordinated learning [19]. Even if business model change is initiated and executed top down, emergent business models may deviate from agent-driven design [20]. In addition, questions of business model path dependence remain unresolved. Studies have found path-dependent transitions between business models in manufacturing [21] and biotechnology [12], but other research suggests that business model evolution is inherently uncertain [11]. General mechanisms for the evolution of successful or dominant business models remain unexplored. A theory of business models in which organizational outcomes are primarily influenced by managerial knowledge, expertise, choice, and execution has practical appeal but does not clearly explain business model innovation, the contingency effects of resource acquisition and deployment, or opportunity creation. Parallel research in multiple contexts has emphasized the business model as a component of organizational design without converging on its components.

The RBV (resource-based view) commonly links business models to resource acquisition and allocation [22]. Hamel [23] suggests that firms must acquire resources concomitantly to the implementation of new business models. Mangematin et al. [24] present a business model typology within the French biotech sector based on the financial, human, and social capital resources that drive organizational forms. The inclusion of knowledge and dynamic capabilities into the RBV paved the way for more linkages between the business model and RBV. Venkatraman and Henderson [25] suggest that leveraging traditional and knowledge assets enables virtual organizing as a new business model. “New economy” firms have been credited with leveraging intangible assets to generate extraordinary value [26]. Eden and Ackermann [27] define the business model as the dynamic capability that links the firm’s distinctive competencies to organizational aspirations and outcomes. An alternate perspective links the business model to social networks and knowledge sharing [28].

Few studies frame the business model as an evolving bundle of activities, a “complex set of interdependent routines that is discovered, adjusted, and fine-tuned by ‘doing’” [29]. Some variants connect the transactive element of market need to the key business activities [30]. In this evolutionary framework, business model elements are discovered experientially and evolve without managerial agency. The RBV has permeated much of the research on business models, influencing theory building and empirical analysis. No consensus has emerged, however, on how business models interact with appropriability regimes, and much of the research on business models framed within RBV does not clarify how business models differ from product–market positioning strategy.

Internet Banks have been defined as banks using the Internet instead of face trade through a branch office. The Internet Banking System, by offering the dimension of channel diversification in the existing banks, has been discriminated against [31]. Theoretical Internet Banks have preserved attractive features by distinguishing themselves from traditional banks [2]. By eliminating a physical location and hiring fewer employees, Internet Banks be able to decrease operation and labor costs.

The primary stage of Internet Banks was mainly established as a type of complete non-storage, the Internet Banks were reinforced the scale power to use for the part of off-line channel by the ATM and the Internet Cafe in this recently. In the first stage, since only the Internet was unitized as the sales channel, this was called an Internet Only Bank or an Online Bank. Recently the Internet has been used as the main channel, and the off-line channels have been used as complementary channels; we let them call Internet Primary Banks, or Online Primary Banks.

The Internet distribution channel can add value to banking franchises in a number of ways, depending on whether it is used to augment physical branches (click-and-mortar banks) or in place of physical branches (Internet-only banks). The strategic core of the click-and-mortar banking model is to route standardized, low-value-added transactions (e.g., bill payment, balance inquiries, account transfers, credit card lending) through the inexpensive Internet channel, while routing specialized, high value-added transactions (e.g., small business lending, personal trust services, investment banking) through the more expensive branch channel. By providing an option for customers who want to do some but not all of their banking over the Internet, a click-and-mortar bank may be better able to retain its most-profitable customers. In contrast, the strategic core of the Internet-only business model is to reduce overhead expenses by completely eliminating the physical branch channel. If this results in lower fixed costs, Internet-only banks can set narrower variable margins (by paying higher deposit rates or charging lower fees and lower loan rates) but still maintain normal returns on assets and equity. Narrower margins should grow the bank faster by bidding customers away from competitors, resulting in faster earnings growth.

But the Internet is not merely a distribution channel for banks: adopting an Internet Web site can affect a bank's production function and alter its product mix, and these effects are likely to be strongest at Internet-only banks. Internet-only banks are poorly suited for "relationship lending," in which risk is assessed via personal knowledge and direct monitoring of idiosyncratic borrowers (e.g., small business loans or farm loans) and are better suited for "transactions lending" in which borrowers apply for loans on-line, risk is assessed via automated credit scoring models and controlled via large numbers diversification and securitization of relatively homogeneous credits (e.g., mortgage loans, auto loans, and credit card loans). Thus, the choice of a distribution strategy—and by extension, the choice of a loan production process—is likely to have implications for optimal bank size. Because automated lending technology exhibits a low ratio of variable costs to fixed costs, Internet-only banks may have access to greater scale economies than traditional branching banks.

2.2. Competitiveness of Internet Banks

A few studies explore the technological and customer adoption aspects of Internet banking [32, 33, 34, 35, 36, 37]. Additionally, a few studies evaluate accounting performance of Internet-primary banks [38], but to our knowledge none evaluate profit efficiency.

Studies that examine Internet bank performance using accounting ratios often focus on ROA or ROE. Overall, the analyses conclude "bricks and clicks" and Internet-primary banks underperform traditional banks, even after considering age, de novo status, and size along with other operating performance variables. For example, Furst et al. [39] find "bricks and clicks" banks, which are typically large, urban banks with high fixed costs, have ROE significantly lower than traditional bank ROE. Furst et al. examine the advantages of being a "first mover" and estimate logistic regressions to determine factors affecting adoption of Internet usage. The authors find profitable banks are more likely to adopt Internet usage; however, they are less likely to be among "first movers." More important to our study is the authors' finding that de novo "bricks and clicks" banks are significantly less profitable compared to non-user de novo banks.

De Young [40] finds ROA and ROE, along with other accounting ratios, are typically lower for "pure-play" Internet banks (comparable to our "Internet-primary" banks) relative to traditional banks. He suggests pure-play Internet banks attempt to overcome poor performance common to start-up banks by increasing skilled workers' salaries and cutting overhead cost. However, empirical findings indicate Internet-primary banks are unsuccessful

in overcoming the performance challenges attributed partially to an inability to cross-sell products.

De Young [38] explored the success and failure factors of Internet Banks as a disadvantage of neo-company based on both learning and experience effects and the bank scale economies. This research analyzed the primary stage of Internet Banks in 1997-2001; these results similarly have an effect on both the traditional and new banks. According to the earning rate of Internet Banks, the interest scale is also similar to be derived in the same research result.

Sullivan [42] reports Internet adoption by traditional banks in the tenth Federal Reserve District (i.e., the “bricks-and-clicks” model) is largely related to bank size and type with small community banks’ having low rates of transactional websites and larger banks’ having high Internet banking adoption rates. Large banks using transactional websites have higher real-estate loan proportions than large banks without web presence. Community and large regional banks using the Internet have significantly higher average expenses to operating revenue measures. One bright spot for Internet-using banks is that community banks with transactional websites have higher loan-to-asset ratios. However, the banks using the Internet also have higher non-current loans (although not significantly different from community banks’ loan portfolio without transactional websites).

In an international study, Delgado et al. [43] examine European Internet-only banks’ performance. Their analysis confirms technology-based scale economies and a shrinking profitability gap as compared to traditional banks as Internet-only banks grow in asset size.

To summarize the literature on Internet-primary banking, there appears to be potential for cost reductions, new products and markets, and augmentation of customer service, but whether these benefits have been realized by US Internet primary banks remains in debate. We explore this issue using profit efficiency measures to learn if Internet-primary banks have improved their performance as the delivery system matures. We choose profit efficiency because Berger and Mester [44] argue that profit efficiency is a superior metric for evaluating how well management turns inputs and expenses into outputs and revenue compared to the best-practice bank producing a similar product mix with differing business strategies.

3. Methods

This research selected the methodology of a case study that was mainly identified the success factors of Internet Banks. The case study is a viable tool for the restricted cases due to the fact that it relies on the experiment so as to the analytical generation rather than relies on a survey design so as to generate the statistical data [47]. This case analysis accepted the methodology of multiple-case studies. The methodology of multiple-case study has merits to present a high result of validity and reliability through between replication and pattern match of the multiple-case compared with a single case study [47].

Since the selection of case study distinguished with the types of Internet Banks, the representative company cases were selected to represent different strategic groups. 31 major Internet Banks operating in the U.S., E.U., and Japan were analyzed and three strategic groups in overseas markets were derived: ① 1-Group (Moderate): size bank – large, profitability bank – medium. ② 2-Group (High): size bank – small, profitability bank – large. ③ 3-Group (Low): size bank – small, profitability bank – small. In the kinds of 3-strategic groups, the 2-Group (High) recorded the high business performance compared with the 1-Group (Moderate) and 3-Group (Low). As the classification of strategic group matches and classifies in the generic competitive strategy by the Michael E. Porter [10], the following is classified: ① 1-Group (Moderate): cost leadership. ② 2-Group (High): Differentiation. ③ 3-Group (Low): Reactor (Figure 1).

This research selected three companies that represented the three strategic groups, and followed the process of historical-evolution by looking at the success and failure factors of the three firms, and analyzed the causes and the nature of the success or failure factors of Internet Banks. In addition, the researcher examined the cause and the nature in the success and failure of private companies regarding the multiple cases, totally it was clarified as what is the main success factors of Internet Banks. Each representative company case was chosen from a strategic group: ① 1-Group(cost leadership): ING Direct in Canada. ② 2-Group(Differentiation): Seven Bank in Japan. ③ 3-Group(Reactor): Net Bank in U.S. Since each strategic group was investigated, the representative cases were examined into the main statues and core factors.

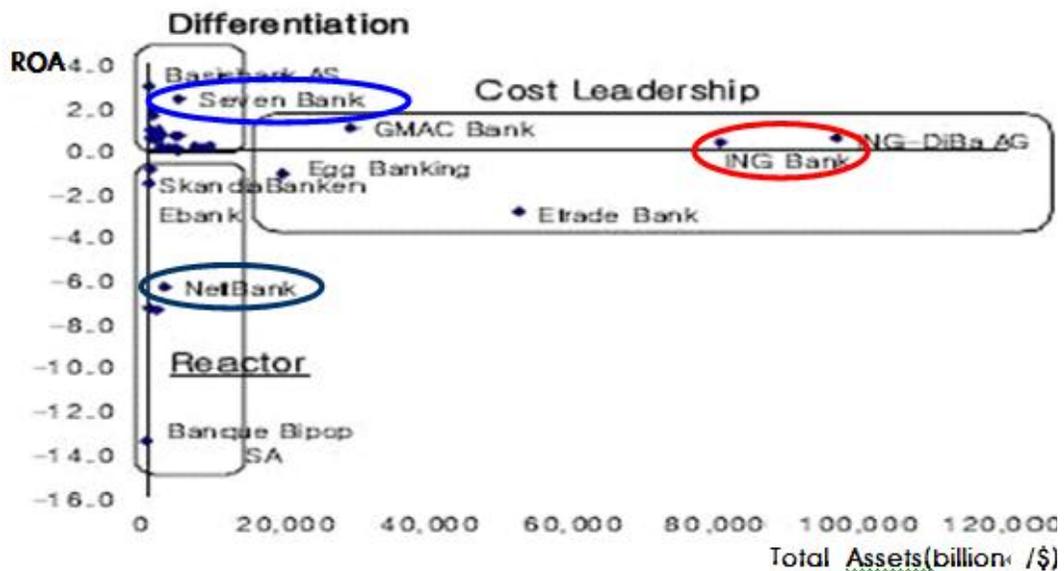


Figure 1. Scale and Profitability of Internet Banks

4. Results

4.1. ING Direct

ING Direct was established as a direct-banking franchise of ING Group in Canada in 1997, and it was begun to make profits as the ING Group in 2001. ING Direct has 17.5 million customers from 9-countries (U.S., Canada, UK, Germany, French, Spain, Italy, Netherland, Australia etc.), and recorded the pretax profit of 7.17 billion Euro in 2006.

The core success factors of ING Direct are summarized as glocalization. The scale of business expanded to entry into the countries based on the successful business in one country (globalization); at the same time the customer and market of the emerging countries compatibly gains complete success (localization).

ING Direct is effective for adopting a clear or simple strategy for the type of investment commodity and utilizing higher interest rates commodity through the cost reduction by offering or dividing in the stage of market entry.

Another main success factor is to be able to operate the “think global and act local” for other countries by the banks through an effective controlling structure based on the principle of a “fleet of companies”. The consist of nine the countries for ING Direct where the most of bank as like “the fleet of companies” is the part of form to be permit in the fairly autonomy, it has the part of form to be make in the autonomy for the business decision making.

According to the fact that the knowledge share is cleared over national boundaries through the various societies or the conferences, the organizational learning effect can try to advance to the maximization. The organizational learning effect for the knowledge share also could be maximized by various societies—e.g., directors’ conferences, marketing conferences, sale and operations conferences, IT conferences, and global conferences attended annually by 200 managers.

The approach of global dimension and local dimension was synthetically utilized customer management, and customer management was suitably analyzed the market situation. The reliability and flexibility of IT through the standard IT-Infra and the partial alteration system have been secured, and this reliability, flexibility, and user-convenience are some of the main success factors of ING Direct.

4.2. Seven Bank

Since the appeasement policy of financial industry in Japan, Seven Bank was established the name of IY Bank in April 2001; after that the Seven Bank was changed in October 2005 and was attained higher growth and a sustainable profit in 2003. There was over 15,000 ATMs (automated-teller machine) and over 500 finance agency in Japan. Recently, the financial demand of Japanese tourists extends the business, and the customer could be serviced money with a bank card or a credit card from ATMs.

The stockholders are widely organized (September 2006): ① SevenEleven: 24.9%, ② Itoyogato: 16.1%, ③ Mitubishi UFJ BANK: 4.9%, ④ Cooperate Value Up Fund: 4.5% etc.

The success factors of Seven Bank are clearly defined what is a core resource and capability of the firm. Seven Bank is utilized in tactics by the effective focused-strategy. Most cost is spent on a wholesale construction, and the ATM Network by not costing much effectively uses resources.

The sales strategy using ATM Network by the Seven Bank was clearly defined as a core competency, as was indicated by the results, and successfully was evaluated and received it is called ‘Convenience Financing’. Establishing ATMs is not necessary an additional resource in Seven Bank; it is clearly defined that the ATMs is the core resource it is able to use in the practical strategy by the various finance service.

The utility of ATM network has been steadily increased so that it was formed an alliance with various finance agencies. This is an additional confirmation of the effective strategy of using core resource through ATMs. SevenEleven and Mitubishi UFJ BANK in Tokyo have demonstrated a professional capability or have created the synergy, and this also points to the main success factors for the retrenchment of marketing cost by changed the name in the Seven Bank.

4.3. Net Bank

The Internet Bank of Net Bank, which was established in 1966, initially preformed in the black and, was evaluated as a successful model of Internet Bank in 3 years hence by making profits in 1999. Thereafter, Net Bank took over both the Market Street Mortgage Corporation in 2001 in Florida and the Resource Bancshares Mortgage Group in 2002, and it pursued to

increase its profit base by focusing on the house secured loan. However, the process of expanding by the Retail Banking, the Financial Intermediary, and Transaction Processing was caused by the irrational investment, it was recorded a deficit in 2005, was went bankrupt in September 2007, and was taken over by ING Direct.

The diversification of unreasonable business by large scale construction of ATM networks in the U.S. was determined to be the main cause of bankruptcy. In the primary object of individual, small and medium sized enterprises, the retail financial services as part of the Retail Banking, the Financial Intermediary, and the Transaction Processing in business were extended to attempt an unreasonable enterprise.

Although the customer of Critical Mass were ensured in the early stages of business, this target based on extending the profit basis did not effectively realize the stage of business in the conversion. In the same of Internet Banks, the early stage of customer security which offered a high interest rate of commodity by reducing the local operating costs was succeed; therefore, the later stages could not be prepared the success factors of convert strategy. After the customer security of Critical Mass, the profit extended strategy was demanded, and the strategy of Net Bank organized a new customer security by aligning the various firms and extending customer encounters, such as ATMs.

In the attempt to offer the various commodities through the variety of needs satisfaction in finance agencies by the customers, the uncertain of target customer was incurred to the external outsourcing of core competency. All sorts of the deposits and loan commodities were basically classified as commodity strategies, and these were alienated professional companies.

To improve the weak point of brand power of Internet Banks, the absence of marketing strategy was attained an exaggerative situation both in the marketing costs and indirect costs of other Internet Banks.

4.4. Summary of Results

The success factors of Internet Banks for this study would be explored based on the strategic choice by organizations and resource-based view of the firms. This research discovered the internal factors by the organizational strategy, the organizational structure, the process, and the technology.

The Internet Banks operating in overseas markets have been classified by the size and profitability of banks, and three strategic groups have been derived. The first types of groups by the cost leadership strategy pursued the cost efficiency, the larger-size, and the standardization; the second types of group by the differentiation strategy utilized the core competency in the niche-market (the representative company by Seven Bank); the last types of groups by the Reactor strategy was consisted with the definite strategy(the representative company by Net Bank). In the three strategic groups, the differentiation groups were firstly ranked as having the highest performance, the cost leader groups were secondly ranked in the middle of performance, and the lower performance groups were exposed the Reactor.

The main success factors of Internet Banks can be understood by multiple-case studies Firstly, the perspectives of strategy are critical to understanding the main success factors for the acquisition and preservation of competitive advantages. Secondly, the perspectives of resource-based view emphasized the acquisition of competitive position in the firm by the firm-specific organizational mechanism. In the case study of research results, ING Direct organized the core competitive of assets operation, and Seven Bank adopted the organizational strategy on the channel by the ATM. On the other side, Net Bank was confused the core competitive and imitated the offline system of traditional banks.

The organizational perspectives were successful in reducing the marketing cost and public relation cost by the brand power in the mother of Internet Banks. The process perspectives were succeed in offering loans with high or lower interest commodity by reducing the operating cost in the branch offices and employees. The technology perspectives were successful in retaining the internal of the internet and information systems by the operating business of Internet Banks.

Internet Banks are necessary to arrange the conditions for the stable growth from a short-term extended perspective. As shown in the overseas cases, Internet Banks need to overcome the increase of marketing costs, the expansion of service costs, and the limitation of customer encounters, etc. The differentiation strategy is important for the competitive achievement and the competition mitigation.

In according to emerge the Internet Banks, the existing general banks devoted the diversification of profit structure and entry of overseas market, as well as the enhancement of cost efficiency against the new competitive condition [49].

The policies authorities have to continuously endeavor for political consideration through the development of financial markets and stability of the financial system by each complementary equipment and regulation system in the system of Internet Banks.

5. Implications and Conclusion

In this study, the success factors of Internet Banks have been investigated based on the strategic choice by organizations and a resource-based view of the firms instead of an organizational ecology perspective. In the three representative company cases that were analyzed, the critical success factors of Internet Banks were derived and the considerable points when operating Internet Banks were discussed.

The theoretical contribution of this research is that offers a new based theory about the success factors of Internet Banks and derives the success factors of Internet Banks. The practical contributions of this research are that offers guidelines for the successful operation of Internet Banks in Korean Market and also have practical implications.

In spite of its contributions, the research has certain limitation. Firstly, the failure factors of Internet Banks were shown significant differences in the growth stages. Secondly, this research investigated the success and failure factors of Internet Banks through attached importance of common properties, and the property of inherent business was not reflected deeply. Despite these limitations, this study offers a variety of data that implications for both qualitative and quantitative studies in the future about the success factors of Internet Banks.

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