

# E–Banking and Emerging Multidisciplinary Processes: Social, Economical and Organizational Models

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### **Chapter 1**

Global E-Banking Trends: Evolution, Challenges, and Opportunities ..... 1  
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The traditional mode of delivering products and services by banks to the consumers is through a single distribution channel and that is physical bank branches. Financial services industry is metamorphosing due to the advent of Internet, rapid technological evolutions, deregulation, globalization, as well as the impact of changing competitive and regulatory forces. In order to cope with the quick changes in the business scenario, banks started to rely on distribution channels as an alternative strategy for differentiation and gaining further competitive advantage. The abovementioned paved way for the development of the e-banking phenomena. This chapter attempts to provide a comprehensive explanation of what e-banking is, the evolution of e-banking, existing trends of e-banking in developed, developing, and newly industrialized nations, future directions for further possible research, and concluding remarks. The content provided in this chapter would be useful for existing and potential banks to better understand the global e-banking trends and thus aid in the effective formulation of channel management strategies and reap the benefits out of it.

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There are many proposals offer anonymous and non-repudiation e-payment protocols. But they have the drawbacks that the anonymity can be misused by fraudulent to perform a perfect crimes. Currently, the hot research concentrates on the accepting of e-payment protocols where the anonymity of the coins is cancelable via a trusted authority in the case of criminal entities. In the chapter, we suggest an efficient protocol for e-payment scheme that offers a good level of security with appreciate to its efficiency. The proposed protocol prevents the blind office and the bank from impersonate an entity, so that

the entity could not repudiate it when the entity misused a coin. Another benefit is that it is constructed from efficient cryptography schemes so that its security can simply be analyzed. The strength of this scheme is in its easiness. So, we claim that the suggested protocol is more efficient than the existing schemes, since it allows to both a blind office and a bank to impersonate an entity to find and to spend a coin without to be noticed. It might cause a repudiation difficulty where the entity can repudiate his bad activities by proposing that both the bank and the blind office acted inaccurately. Other relevant issues related to the new protocol will be discussed in the section of the security of the scheme.

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The objective of the chapter is to present a brief review of e-banking services especially in the developing economies, highlighting the major challenges of e-banking in the developing economies with a guideline or recommendations to address those challenges. Technology has introduced new ways of delivering banking to the customer. Developed countries (DC) customers of the e-banking services are fully aware of the services but the customers in the developing economies are still lag behind. It is clearly seen that delivery channels are lacking in meeting the demands of the customer by not making them aware of e-banking and using obsolete or not too up-to-date technology. I would thus conclude that banks in the developing countries should drown themselves in all the intricacies regarding e-banking to determine ways that will affect the customers in and use it to their maximum benefit. The other issue is that there are very few or no banking facilities in the rural areas and furthermore, access to the Internet is close to impossible in these areas therefore awareness and utilization of these services is very little or none at all. At last but not the least is that banks must adapt to the electronics age. Consumers demand it. Economics drives it. Banks must exploit it.

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In today's business environment, knowledge is increasingly recognized as the most important and valuable asset in organizations and a key differentiating factor in business. Therefore, many organizations are positioning themselves strategically based on their tangible and intangible internal resources, and their capabilities rather than on their products and services. However, in order to an organization to be successful in the exploitation of knowledge assets to drive competitive advantages, a holistic approach that spans Knowledge Management (KM), business strategy, and organizational and human factors should be used. The aim of this study is to investigate the effect of some factor on KM Strategic Alignment between KM and business strategy in the banking sector at Persian Gulf Countries. The results

have indicated factors such as knowledge sharing, trust, openness to change, IT infrastructure and skills, and existence of CKO are strongly correlated to the strategic alignment between KM and business strategy. Thus, managers in the Persian Gulf banking sectors should adopt new rules using flexible organizational culture, reforming and redesigning their organizational structure, and incorporating an advanced information technology in their operations for competitive advantage.

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Internet banking strategy can be generally very challenging, but more challenging in an economic environment infested with high degree of corruption, insecurity, bad governance, poverty, and financial system instability. Due to its global nature, Internet banking, under such situation, is threatened by the easiness at which off-line crimes are transmitted into online businesses, and the difficulty in building trusts and confidence in online business relationships. Using the Nigerian case, this chapter aims at establishing some theoretical link between offline country image and Internet banking reputation. The chapter summarizes the structural and regulatory challenges in the Nigerian banking system. It represents and relates the country's socioeconomic conditions with its Internet business reputation, and lays down past regulatory and global efforts to control the menace of the Nigerian version of Internet frauds. The last two sections of the chapter, respectively, suggest some future research direction and conclude the chapter.

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Internet is not simply one more distribution channel among the multi-channel strategies used by the financial industry; it is fostering new “e-Business Models” such as Internet-primary banks. However, in spite of its strong development potential, this type of bank has often achieved a weak breakthrough onto this market and shows modest financial results. The goal of this chapter is to study the “e-Business Model” of Internet-primary banks and to determine if it can perform better than the “Business Model” of a traditional bank.

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Nowadays, e-banking plays an important role in e-society and human life. Imagine an e-society without e-banking is not possible. The e-banking is considered as an enabler factor to e-business, e-commerce, e-government, and other e-initiatives. Despite the pivotal role of e-banking in our lives, yet a comprehensive conceptual model of electronic banking success factors has not been provided by the researchers. The present chapter is trying to provide a comprehensive conceptual model by categorizing factors affecting implementation of electronic banking. In this regard, the factors affecting implementation of electronic banking was classified based on Co-structural factors, Content factors, and Context factors. We called this conceptual model as the Tri-Category (3C) Model. The questionnaire used for gathering data. The results showed that there is a positive relationship between successful implementation of e-banking and attention to Co-structural, Content, and Contextual factors. At the end of chapter, several recommendations have been offered to implementing successful e-banking.

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*Vadlamani Ravi, Institute for Development and Research in Banking Technology, India*

This chapter introduces Banking Technology as a confluence of several disparate disciplines such as Finance (including risk management), Information Technology, Computer Science, Communication Technology and Marketing Science. It presents the evolution of banking, the tremendous influence of information and communication technologies on banking and its products, the quintessential role played by computer science in fulfilling banks' marketing objective of servicing customers better at a less cost and thereby reap more profits. It also highlights the use of advanced statistics and computer science to measure, mitigate, and manage various risks associated with banks' business with its customers and other banks. The growing influence of customer relationship management and data mining in tackling various marketing related problems and fraud detection problems in banking industry is well documented. Of particular significance is the set of latest trends this chapter presents in terms of biometric ATMs, RFID enabled bank notes, Antiphishing techniques that make Internet banking secure, and the applications of Web 2.0 in banking. The chapter concludes by predicting that the Banking Technology discipline is all set for rapid growth in future.

### Chapter 9

Application of RFID Technology in Banking Sector..... 149  
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Nowadays, the banks are using new technologies to provide better services to customers. One of these new technologies is RFID. In this chapter, first a brief introduction presented about RFID technology and its components. Then, some applications of RFID in banking sector such as RFID applications in the cheques between banks, reducing the manual operation, customer relationship management, track-

ing and tracing, money transferring system, countering counterfeiting, contactless smart cards, people identification, phone banking, establishing security, checking purpose, and so on are explained. Finally, some of the barriers to technology acceptance by the customers and some methods to data protection and increasing security in RFID systems are described.

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The emergence of e-banking has created a significant transformation towards the services provided by the banks. E-banking provides alternatives for faster delivery of banking services to a wider scope of customers, hence creating a major impact towards e-society. Nowadays, e-banking has gained increasing popularity in delivering online services for e-society. However, prior to the implementation of e-banking, several factors and best practices must be identified to ensure a more efficient execution of e-banking services towards the development of e-society. E-banking factors are found to have a significant effect on the success of e-societies.

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