IHRA
UNIVERSITY OF COLOMBO

INSTITUTE OF HUMAN RESOURCE ADVANCEMENT

UNIVERSITY OF COLOMBO, SRI LANKA

Masters Degree in Business Management - Course No.01

3rd Semester Examination

(Held in January, 2014)

MBM 11 – Management Information Systems

Instructions to the Candidates

(1) Total number of pages – Six (06)

(2) Total number of questions - Eight (08)

(3) Answer any Four (04) questions **including the question number one** (01)

(4) If a page or a part of this question paper is not printed, please inform the Supervisor immediately.

(5) Time allocated for the examination is three (03) hours.

(6) Write your index number in all pages of answer script

(7) Tie up all answer sheets at the end of the examination

01. Read the following case and answer the question given at the end.

Care of State Bank of India

The State Bank of India (SBI) is the oldest and largest bank in India, with more than $250 billion (USD) in assets. It is the second-largest bank in the world in number of branches; it opened its 10,000th branch in 2008. The bank has 84 international branches located in 32 countries and approximately 8,500 ATMs. Additionally, SBI has controlling or complete interest in a number of affiliate banks, resulting in the availability of banking services at more than 14,600 branches and nearly 10,000 ATMs.

SBI traces its heritage to the 1806 formation of the Bank of Calcutta. The bank was renamed the Bank of Bengal in 1809 and operated as one of the three premier "presidency" banks (the presidency banks had the exclusive rights to manage and circulate currency and were provided capital to establish branch networks). In 1921, the government consolidated the three presidency banks into the Imperial Bank of India. The Imperial Bank of India continued until 1955, when India's Central bank, the Reserve Bank of India, acquired the majority interest in the bank and changed its name to the State Bank of India (SBI). In 1959, the Indian government passed the State Bank of India Act, resulting in the acquisition (majority shareholding) of eight state-affiliated banks and the creation of the State Bank of India Group (SBI Group). The SBI itself is now majority owned by the Indian government, which purchased the shares held by the Reserve Bank of India. The State Bank of India and its affiliate banks are profiled in Exhibit 1.

Exhibit 1: profile of the State Bank of India and (Sara?) Associate Banks (May 2008)

Profile of the State Bank of India and Associate Banks (May 2008)

Bank Name	Headquarters (City, State)	Branches	ATMs
State Bank of India	Mumbai, Maharshtra	10,000	8,500
State Bank of Bikaner and Jaipur	Jaipur, Rajasthan	833	336
State Bank of Hyderabad	Hyderabad, Andhra Pradesh	965	450
State Bank of Indore	Indore, Madhya Pradesh	301	235
State Bank of Mysore	Bangalore, Karnataka	654	247
State Bank of Patiala	Patiala, Punjab	766	353
State Bank of Saurashtra	Bhavnagar, Gujarat	452	190
State Bank of Travancore	Trivandrum, Kerala	706	331

Unlike private-sector banks, SBI has a dual role of earning a profit and expanding banking services to the population throughout India. Therefore, the bank built an extensive branch network in India that included many branches in low-income rural areas that were unprofitable to the bank. Nonetheless, the branches in these rural areas bought banking services to tens of millions of Indians who otherwise would have lacked access to financial services. This tradition of "banking inclusion" recently led India's Finance Minister P. Chidambaram to comment, "The State Bank of India is owned by the people of India."

A lack of reliable communications and power (particularly in rural areas) hindered the implementation of computerization at Indian banks throughout the 1970s and 1980s. During this period, account information was typically maintained at the local branches with either

semiautomated or manual ledger card processing. During the 1990s, the Indian economy began a period of rapid growth as the country's low labor costs, intellectual capital, and improving telecommunications technology allowed India to offer its commercial services on a global basis.

This growth was also aided by the government's decision to allow the creation of private-sector banks (they had been nationalized in the 1960s). The private-sector banks, such as ICICI Bank and HDFC Bank, altered the banking landscape in India. They implemented modern centralized core banking systems and electronic delivery channels that allowed them to introduce new products and provide greater convenience to customers. As a result, the private-sector banks attracted middle and upper-class customers at the expense of the public-sector banks. Additionally, foreign banks such as Standard Chartered Bank and Citigroup used their advanced automation capabilities to gain market share in the corporate and high-net-worth markets.

Core Systems Modernization of SBI

SBI had undertaken a massive computerization effort in the 1990s to automate all of its branches, implementing a highly customized version of Kindle Banking Systems' Bankmaster core banking system (now owned by Misys). However, because of the bank's historic use of local processing and the lack of reliable telecommunications in some areas, it deployed a distributed system with operations located at each branch. Although the computerization improved the efficiency and accuracy of the branches, the local implementation restricted customers' use to their local branches and inhibited the introduction of new banking products and centralization of operations functions. The local implementation prevented the bank from easily gaining a single view of corporate accounts, and management lacked readily available information needed for decision making and strategic planning. The advantages in products and efficiency of the private-sector banks became increasing evident in the late 1990s as SBI (and India's other public-sector banks) lost existing customers and could not attract the rapidly growing middle market in India. In fact, this technology-savvy market segment viewed the public-sector banks as technology laggards that could not meet their banking needs. As a result, the Indian government sought to have the public-sector banks modernize their core banking systems. In response to the competitive threats and entreaties from the government, SBI engaged KPMG Peat Marwick (KPMG) in 2000 to develop a technology strategy and a modernization road map for the bank. In 2002, bank management approved the KPMG-recommended strategy for a new IT environment that included the implementation of a new centralized core banking system. This effort would encompass the largest 3,300 branches of the bank that were located in city and suburban areas. The State Bank of India's objectives for its project to modernize core systems included: The delivery of new product capabilities to all customers, including those in rural areas

- Processes unification across the bank to operational efficiencies and customer service
- Provision of a single customer view of all accounts
- The ability to merge the affiliate banks into SBI
- Support for all SBI existing products
- Reduced customer wait times in branches
- Reversal of the customer attrition trend

Challenges for the Bank

The bank faced several extraordinary challenges in implementing a centralized core processing system. These challenges included finding a new core system that could process approximately 75 million accounts daily, a number greater than any bank in the world was processing on a centralized basis. Moreover, the bank lacked experience in implementing centralized systems, and its large employee base took great pride in executing complex transactions on local in-branch systems. This practice led some people to doubt that the employees would effectively use the new system. Another challenge was meeting SBI's unique product requirements that would require the bank to make extensive modifications to a new core banking system. The products include gold deposits (by weight), savings accounts with overdraft privileges, and an extraordinary number of passbook savings accounts.

Critical Success Factors

Large-scale core systems implementations are typically the most costly and risky IT projects undertaken by banks. Failures of core systems projects are not uncommon at large banks and result in both financial impact and lost business opportunities. Further, failed projects lead other banks to delay needed core systems replacements because they measure the risk of failure against the potential benefits of a new system. Several critical factors contributed to the success of the SBI core implementation effort:

- **Senior management commitment.** The project was driven by the chairman of SBI, who met every month with the information technology (IT) and the business sector heads. The chairman monitored the overall status and ensured that sufficient resources were allocated to the project. TCS senior managers were thoroughly committed to the project as well and periodically met with the SBI chairman to review the project status.

- **Staffing and empowerment of project team.** The core banking team consisted of the bank's managing director of IT acting as team head and 75 business and IT people selected by the bank. TCS also staffed the project with approximately 300 IT professionals trained on the BaNCS system. Importantly, the SBI business people were viewed not just as contributors to a key project but as future bank leaders. This team reported to the SBI chairman and was empowered with all decision-making authority.

- **Ownership by business heads.** The regional business line heads were responsible for the success of conversion of their respective branches and reported the status to the chairman. Thus, the business heads' objectives were aligned with those of the project team.

- **Focus on training.** SBI used its network of 58 training centers across India to train employees on the new system. TCS personnel first educated approximately 100 SBI professional trainers, who then trained 100,000 SBI employees at the centers; the remaining employees trained at their respective job sites.

Source:

1. *James A O'Brian, George M Marakas, and Ramesh Behl; "Management Information System" Ninth Edition, Tata McGraw Hill Education Private Limited. New Delhi.*
2. *Robert Hunt; Case Study: State Bank of India, World's Largest Centralized Core Processing Implementation. Tower Group Inc. work.*

(i). The massive 14,600 branch and affiliate banking network connected with 10,000 and more ATM's the SBI made a difference in the modern banking history by bringing about Financial and Banking Inclusion in India. It provided banking services to tens of millions of Indians who otherwise would have lacked access to financial services.

What are the benefits the SBI as well as the whole financial community in India would have got as a result of this phenomenal change?

(10 Marks)

(ii) Should the Sri Lanka State Banking giants follow the same footprints as in SBI? What would be the fate of Sri Lankan state banks in the future if they continue to do business the way they running it now?

(15 Marks)

(iii) Had SBI not embarked on the automation of its core banking functions being the largest bank in India what would have been the fate of the bank by now? How the net income of the bank would have affected as a result?

(15 Marks)
(Total 40 marks)

2. The business today is overloaded with information technology applications and tools to enable the enterprise as well as client connect each other. It is hard to find a middle scale or small scale companies which are not IT savvy at least to a certain extent.

(i) What are the possible ethical crisis situations you foresee in doing business today with the use of IT as its backbone?

(10 Marks)

(ii) What role does Information Technology play in unethical business practices?

(10 Marks)

(Total 20 marks)

3. Implementation of an ERP should be a collective decision covering all business units of an organization. Unplanned ERP implementation could bring companies down.

(i) Briefly explain the main components of an ERP System.

(10 Marks)

(ii) Why do ERP's fail and how would you overcome some of the spectacular failures of ERP implementations?

(10 Marks)

(Total 20 marks)

4. Conceptually, the applications of information systems that are implemented in today's business world are categorized in several different ways. For example several types of information systems can be classified as either operations or management information systems. Information systems are categorized this way to spotlight the major roles each plays in the operations and the management of a business. Name and briefly describe 4 information systems as categorized above highlighting the major role it plays.

(20 Marks)

5. The success of a business would be dependent on how should a business professional think about competitive strategies. Companies should use information systems to apply competitive strategies to improve the effectiveness of the organization. **The competitive strategies** of the organization should be changed to suite the **competitive forces** in other words. Discuss the above statement using the conceptual framework proposed by Michael Porter- the Classic Model of Competition.

(20 Marks)

6. "Depending on the data structure the database is designed, it is divided into five fundamental database structures". Briefly explain these five fundamental database structures.

(20 Marks)

7. "For the last five decades the use of Information systems in business was changed rapidly and the way it impacted the business was substantial". Supply the statement by explaining roles of Information Systems in Business and management evolved during the past five decades.

(20 Marks)

8. Write short notes only on 4 of the followings topics

i) Virtual Companies
ii) Knowledge management systems
iii) Supply chain management
iv) Information system resources
v) Becoming an agile company

(Each 5 Marks)
(Total 20 marks)

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