



Expanding the outreach of the banks in India through core banking solution

Dr. Aditya Raj

Department of Commerce and Business Administration, Lalit Narayan Mithila University, Darbhanga, Bihar, India

Abstract

Core banking has a centralised branch computerisation model where the branches are connected to a central host, which incorporates branch automation modules and online multiple delivery channels like ATM, ABB, Debit Card, Tele-banking/mobile banking, internet banking, etc. under one roof. In core banking, there is a central database for the bank and transactions are done centrally, online. It offers integrated products and services to customers round the clock. The modern banking services are integrated with CBS and one single software for all the branches is operated on the bank's intranet infrastructure using a WAN. CBS facilitates data warehousing and data mining technologies for business intelligence. However, it attracts higher investment in the beginning but cost of implementation for further branches and delivery channels are relatively cheaper. CBS also facilitates business process re-engineering to streamline the existing processes. Core banking systems have given banks a convenient, centralized processing capability, which translates to banking services anytime and anywhere for customers. But, like all good things, core banking systems also come with their share of challenges and opportunities.

Keywords: Business process re-engineering, core banking system, information security system, information technology, network connectivity

Introduction

Core Banking Solution (CBS) is a back-end system that connects multiple branches of the same bank together to deliver operations like loan management, withdrawals, deposits, and payments in real-time. The term CORE stands for Centralized Online Real-time Environment, which implies that the customer can experience the bank as a single entity, regardless of their location with the aim to provide more independence for the customers in terms of using their accounts and conducting transactions from any location in the world.

Core Banking Systems aim to empower existing and probable customers to have greater freedom in their account transactions. Technological evolutions make transactions safer, faster, and less cumbersome. The fact that these transactions can be executed remotely from any part of the world has made core banking systems a significant aspect of banking these days.

Core banking always considerably reduces operational costs, ensuring lesser manpower requirements for execution. It also enables greater accountability of the customers. Software application-based platforms make core banking systems user-friendly and more efficient. The benefits of core banking systems are multi-faceted - keeping pace with the fast-evolving market, simplifying banking processes and making it more convenient for the customers, and expanding the outreach of the banks to remote places.

Thus, core banking, in simple terms, is a highly efficient "customer accounting" and transaction processing engine for high volumes of back-office transactions. The main purpose of a core banking system is thus to give banks the ability to process large transaction volumes quickly and efficiently. Core banking also handles transactions such as interest and fee calculation, pre-processing for statement printing, end-of-day processing, and consolidation of daily individual transactions as "accounting entries," which are posted into the bank's general ledger system according to its chart of

accounts structure for the daily trial balance sheet preparation. The CBS process is convenient for both customers and banks.

Need for CORE Banking

Nowadays, the use of Information Technology (IT) is a must for the survival & growth of any organization, and the banking industry is no exception. By using ICT in any industry, banks can minimize the operation cost, also, banks can offer products & services to customers at competitive rates. Following are some of the prominent reasons that necessitate Core Banking in the country:

- Ensure anytime, anywhere banking through ATMs.
- To expand presence in rural & remote areas.
- To have fast payment processing through Internet. Banking and mobile banking.
- To improve & simplify banking processes so that bank staff can focus on sales & marketing stuff.
- To increase the efficiency of banking transactions.
- To meet the dynamically changing market & customer needs.
- To offer convenience to customers as well as banks.
- To offer the provision of banking services round the clock
- To provide anywhere banking by eliminating branch banking.

Technological Requirement for Core Banking Solution (CBS)

In the core banking solution, all servers are centrally located at a place called "The Central Data Centre." All branches are connected to this data center through a leased line or network connectivity with security and redundancy. Most servers, like the Application server and Database server, are placed behind the firewall and protected from unauthorized access. Multiple servers performing the same function are clustered to manage load and build redundancy. All servers

are not in the same local area network (LAN). They are segregated using the concept of a virtual local area network (VLAN), which has its own built-in security. A perfect CBS system has to meet the following technological requirements:

- Central Database Server that stores the data of the bank.
- Application architecture/Central Application Server that runs the CORE banking solution (CBS) centrally accessed by branches.
- Necessary infrastructure to provide for internet banking and Automated Teller Machine (ATMs).
- Authentication techniques.
- Information Security system.

Application Architecture Requirements for Core Banking Solution (CBS)

A computer-based application may be built as a huge software, may be structured to run on a client-server environment, or even have three or multi-tiered architecture. A computer application typically separates its three main tasks-

1. Interactions with the user,
2. Processing of transactions as per the business rules; and
3. The storage of business data.

These three tasks can be viewed as three layers, which may run on the same system (possibly a large, proprietary computer system), or may be separated into multiple computers (across the Internet), leading to three-tier or multi-tier architecture.

Presentation Layer

This layer is responsible for managing front-end devices, which include browsers on personal computers, Personal Digital Assistants (PDAs), Mobile phones, Internet kiosks, Web TV etc. The presentation layer takes care of user interface-related issues like display details, colour, layout, image etc. It also has important responsibilities in user authentication and session management activity.

Application Layer

It contains the business logic (for processing of a transactions) and necessary interfaces to the data layer. It processes requests from the presentation layer, connects to the data layer, receives and processes the information and passes results back to the presentation layer. It ensures that all business rules are incorporated into the software. The issues of scalability, reliability, and performance of the services greatly depend upon the application layer architecture.

Data Layer

The data layer uses a database package to store, retrieve and update application data. The database may be maintained on one or multiple servers. A database package also supports back-up and recovery of data, as well as logging of all transactions.

System and Network logging

"Logging" basically means recording activities. All computers are automatically programmed to create a record of activities. Operating systems, database packages, and even business applications produce a 'log' of various tasks performed by them. Most operating systems keep a log of

all user actions. Log files are the primary record of suspicious behavior. Log files alert the administrator of database system to carry out further investigation in case of suspicious. Activity and help in determining the extent of the intrusion. Log files can also provide evidence in case of legal proceedings.

The administrator has to select the types of information to be logged, the mechanisms for logging, locations for logging, and locations where the log files are stored. The information required to be logged should include login/logout information, location and time of failed attempts, changes in status, status of any resource, changes in system status such as shutdowns, initializations and restart, file accesses, change to file access control lists, mail logs, modem logs, network access logs, web server logs, etc. The log files must be protected and archived regularly and securely.

Challenges in Core Banking Solution

Undoubtedly, Core banking systems have been a blessing and a breath of fresh air for customers who were tired of transactions taking days to complete between branches of the same bank. With core banking systems. Technology has moved from a support system and business enabler to a driving force in the banking industry. Core banking systems have given banks a convenient, centralized processing capability, which translates to banking services anytime and anywhere for customers. But like all good things, core banking systems also come with their share of challenges and opportunities. Following is the list of some of the key challenges faced by Indian banks that require immediate attention and shape the market for a new future:

- A new core banking system implementation requires its seamless integration with the other components of banking architecture and channels like CRM and other middleware.
- Because of the lengthy pay-off period and enormous investments, banks might feel a pressing need to evaluate Return on investment (ROI) with the help of turnover ratios, process improvement approach, and effective strategic management.
- Core banking software implementation projects have longer time spans and hence are usually prone to project extensions.
- To create an IT architecture that is robust, reliable, and scalable.
- To meet the regulatory standards, cybersecurity protocols, and privacy laws are necessary for a core banking solution to succeed.
- With everyone on the core banking movement, the range of offerings banks can provide their CBS platforms is a deciding factor.
- Successful Core banking software implementation calls for efficient business process re-engineering and abundant resources.
- Nobody likes change like any other organizational change, core banking software implementation faces a difficult change management process.

Therefore, modern banks need a flexible, customer-centric core banking environment equipped with multi-currency and multi-lingual features since the industry is getting increasingly globalized. For instance, Canara Bank recently enabled CBS at as many as 1150 branches, which is one of

the banking industry's largest implementations in the banking industry and includes agricultural loans, loan processing, foreign exchange, and service branch functionality. This has helped the bank move in line with the changing market scenario.

Summing-up

The objective of computerisation in India is not to replace men with machine. Rather, the objective is to make the life more meaningful for both employees and customers. The banking industry- an industry which is the largest processor of information and data, reliance on technology is inevitable. Needless to say, absorption and effective utilisation of the new technology will involve a change in structure, organisation and systems as well as attitudes of those working in the banking industry.

The computerisation efforts in the banking industry started in the early eighties. Bank office functions and batch processes involving voluminous data were the first activities wherein computers found their applications. The development in the communication network have changed the whole concept of information generation and its use for banking services. The implementation of the core banking system in the country revolutionised the banking sector and brought it to par with the global world. It has become an essential part of the banking industry in India, and it has helped banks to streamline their operations, reduce costs, and provide better customer service. The implementation of the Tata Consultancy Service (TCS) BaNCs system at the State Bank of India (SBI) represents the largest core systems project ever undertaken.

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