



Audit in CBS Environment

**Certificate Course on Concurrent Audit of Banks organized by
Internal Audit Standards Board, ICAI**

Session By: CA. Kuntal Shah, Ahmedabad



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Session overview

- Banking Infrastructure
- Core Banking System [CBS]
- Controls in CBS
- Audit Processes with the use of Technologies
- Audit Checks & Strategies

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Banking Infrastructure

- Hardware
 - ☐ Network
 - ☐ PCs
 - ☐ ATMs
 - ☐ Cash Vending Machines
 - ☐ Cheque Collection Machines
- Softwares
 - ☐ Basic Softwares / Operating Systems
 - ☐ Special Purpose and Approved utility Software
 - ☐ Firewall & Intrusion Detection Systems
 - ☐ CBS
- Support
 - ☐ Whether Outsourced?
 - ☐ Monitoring of Intrusions / Unauthorised installations

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What is CBS?

- “CORE” stands for "centralized online real-time environment" In nutshell it means all the bank's branches, Service Outlets (Automated or Manual), Back offices access applications from centralized datacenters.
- The core banking system is the set of basic software components that manage the services provided by a bank to its customers through its branches (branch network). The bank's customers can make their transactions from any branch, ATM, Service Outlets, Internet, Phone at their disposal.

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What is CBS?

- The CBS is based on Service Oriented Architecture (SOA). It helps banks to reduce risk that can result from manual data entry and out-of-date information. It also helps banks to improve Service Delivery quality and time to its customer.
- The software is installed at different branches of bank and then interconnected by means of communication lines like telephones, satellite, internet etc.

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What is CBS?

- Technology Research Company Gartner defines a core banking system as a back-end system that processes daily banking transactions, and posts updates to accounts and other financial records. Core banking systems typically include deposit, loan and credit-processing capabilities, with interfaces to general ledger systems and reporting tools. Strategic spending on these systems is based on a combination of service-oriented architecture and supporting technologies that create extensible, agile architectures.

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What is CBS?

- Advantages:
 - Multi-channel (internet, phone) Support
 - Multi currency Support
 - Multiple Lingual Support
 - High Scalability

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What is CBS?

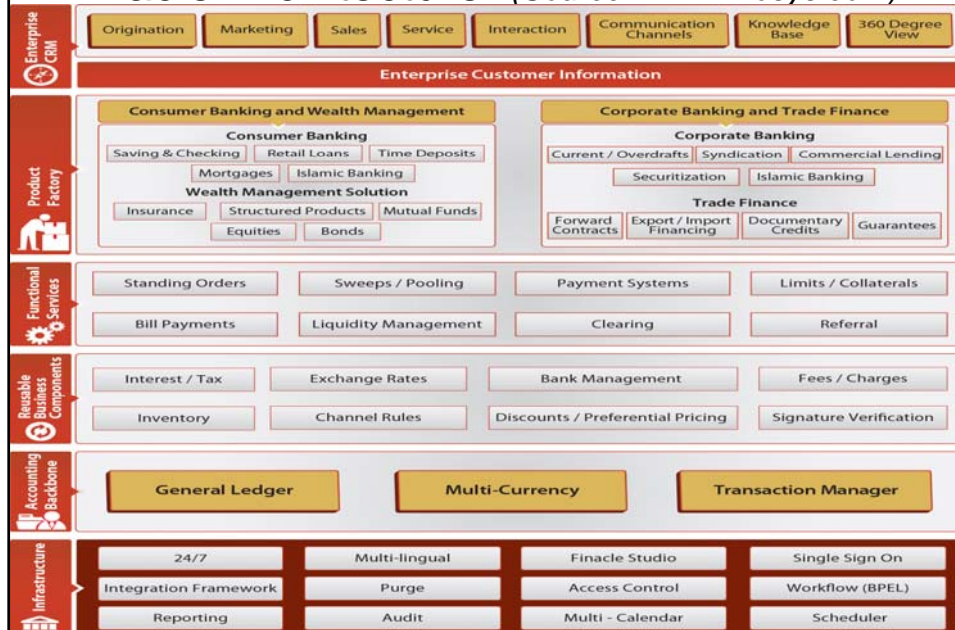
List of Few Core Banking Systems in India & World over:

Package	Provider
Finacle	Infosys
FLEXCUBE	Oracle Financial Services Software, (By iflex)
TCS BaNCS	Tata Consultancy Services (TCS)
Alnova Financial Solutions	Accenture / Alnova
SAP Banking Services	SAP AG

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Finacle Architecture (Source: www.infosys.com)



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Controls in CBS

- Internal Controls have been embedded in CBS at Data Entry Level (through Validations) and at Processing Level also. Apart from this the Bank prescribes certain Manual Controls to be adhered to by Bank Officials. Hence, it is combination of both Manual and Automated controls which makes a safe system.
- As an auditor our duty is to identify the areas, controls which are not consistent with the Legal Framework / Bank's Policy.

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Controls in CBS

- Various types of Controls are embedded at Various Levels in CBS. To name a few
 - Application Controls
 - IT Administrative Controls & Security

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Controls in CBS – Application Control

- Authorization of a transaction as per Delegation Authority
- Data Input (Validation) Controls
- Accessibility in Software Areas as per Employee Grade / Powers
- Product Level Controls
 - Prefixed Financial Parameters (Like Interest Rate, Penal Interest Rates)
 - Fixed Tenure (Pre-defined terms Fixed Deposits / Service Types (Principal and Interest Repayment Type and Periodicity)
 - Tax and Regulatory compliances
- Controlled Error Handling through Warning, Exception and Error

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Controls in CBS – IT Admin. Control & Security

- Controls are associated with processing activity
- It allows user to use the Software as per Access Rights Table
- Confirmation / Prior Authorisation for any outside Software Installations.
- To ensure encryption of Data
- To ensure no changes are effected in IT Hardware
- Logical Access Controls
 - Access to System / Menu as per the Category and Type of Branch / SOL
 - Single Sign-on for all the applications
 - Maker & Checker Control
- Security policies for all IT Assets (incl. Hardware, Softwares, Databases etc.)

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Audit Processes & Use of Technologies

■ Posers:

1. Why Audit processes require a drastic change as compared to Traditional Approach?
2. What are the changes in Banking Industries which makes Traditional Audit Approach a toothless weapon?
3. Under such a scenario what should be the Auditors' Approach?
4. Which Techniques / Technologies to be used?
5. After What and Why analysis a Question comes to our mind is "but How to go Ahead?"

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Audit Processes & Use of Technologies

■ Why Audit processes require a drastic change as compared to Traditional Approach?

□ Traditional Audit Approach:

- Verification of Documents Physically
- Availability of Hard Copies for each transaction
- Number of Transactions for Audit

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Audit Processes & Use of Technologies

■ What are the changes in Banking Industries which makes Traditional Audit Approach a toothless weapon?

- Number of Transactions have risen sharply
- Complexities and variety of Transactions are increasing at a rapid speed.
- Increased Compliance requirements

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Audit Processes & Use of Technologies

□ Use of CBS:

- Processing is completely automized. Hence, a manual error in Master Data updation has a huge effect on all the transactions of the same kind.
- Processing is not visible
- Lack of discipline in Access Control
- Lack of Training for New software environment
- Audit Trail may not be visible for all the type of transactions

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Audit Processes & Use of Technologies

■ Under such a scenario what should be the Auditors' Approach?

- ☐ Substantive and Compliance Testing
- ☐ Verification of Transactions as well as Controls
- ☐ Verification of System Generated Reports
- ☐ Generation of special purpose reports based on Exception Logic through the use of SQL
- ☐ Collection of Data from CBS to verify Number and Nature of Transactions processed during a period.

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Audit Processes & Use of Technologies

■ Substantive Testing

- ☐ Accuracy and propriety of the Transactions and Balances.
- ☐ To check Monetary Errors

■ Compliance Testing

- ☐ Testing of Transactions for Compliance with Rules & Regulations
- ☐ Presence and Effectiveness of Internal Control

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Audit Processes & Use of Technologies

■ Which Techniques / Technologies to be used?

- ☐ CAAT – Computer Assisted Audit Techniques
- ☐ General Audit Softwares / Spreadsheets
- ☐ Query Languages like SQL

CAAT – Computer Assisted Audit Techniques

- ☐ Requires expertise and in-depth knowledge of System and Software
- ☐ Requires permission to Access the Database to apply the procedures.
- ☐ Cost & Time Constraints (if any)
- ☐ Audit Scope

General Audit Softwares / Spreadsheets

- Spreadsheet software can be used for number crunching activity and for activities like sample selection, sorting, cross reference checking etc.
 - The work in this software is always on data fed into the system. Based on the verification the quality of both Data and processes can be determined.
 - Detailed checking of data from various possibilities can also help in identifying grey areas or the areas susceptible to fraud.

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Query Languages

- Query Languages like SQL can be used to carve out data as per criteria from Database Servers.
 - However, it requires expertise and in-depth knowledge of System and Software
 - Requires permission to Access the Database to apply the procedures.
- If the Auditors are not having direct access to Database Server, a request to Data center officials can be placed for requirement of Data and Parameters. Based on the parameters and Field requirements, Data Center can generate the reports which can be shared with Auditors for their further processing.

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Audit Processes & Use of Technologies

■ After What and Why analysis a Question comes to our mind is “but How to go Ahead?”

- Data Collection should to be divided in following Parts
 - Data Collection for confirmation of Number and Nature of Transactions occurred during the period
 - Data collection as per Exceptional / Specific queries (designed based on Compliance Requirement / Internal Controls)

Audit Processes & Use of Technologies

■ General Data Collection:

- Physical Copy of Papers or related details / data should be verified and crosschecked from the details so extracted.
- The data serve the purpose of Audit Evidence and nature of Audit Process carried out.
- The data so collected should be part of working paper.
- In the next session we will go through the process of Data extraction through CBS.

Audit Processes & Use of Technologies

■ Exceptional Data / Query Results:

- Data collected as per specific query should be analyzed individually as per the reverse logic (i.e. Purpose for which the details / data have been extracted) [E.g. List of Credit Transactions to NRE Account are extracted for a period through specific query. The auditor should verify each and every transaction in order to ensure its conformity with FEMA Guidelines]
- Data collected alongwith Auditors' remarks should be stored as Audit Working Paper.

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Audit Processes & Use of Technologies

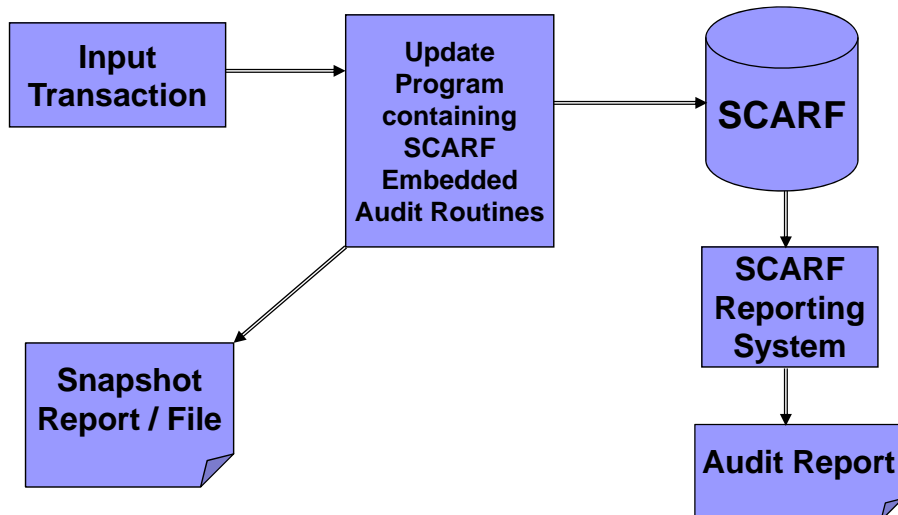
■ System Control Audit Review File (SCARF)

- For continuous reporting and immediate identification of errors or unusual transactions, an audit routine (software) is embedded in CBS.
- The embedded software will report the transactions based on the prescribed criteria and prescribed periodicity.
- Real Life Example: A Dashboard for Senior Management connected with CBS to give updated data.
- If auditor is of the opinion that any additional checks should be embedded, it should be brought to the notice to Data Center Executives and Senior Management alongwith reasoning and findings.

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SCARF - Diagram



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Checks & Strategies

- For effective Audit, Concurrent Auditors [CCA] must possess knowledge of bank's internal Processes and understanding of Core Banking System.
- Based on the experience CCA should develop various checks and should devise certain strategies to carry out audit effectively.
- Such approach helps auditors for quality reporting.

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Checks & Strategies

- In next few slides we will review and discuss few Checks and Strategies that can be developed.
- Checks & Strategies discussion is bifurcated in three major parts.
 - Check Point / Event / Transaction Type
 - What to Verify
 - Source from where the details will be available

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Few Checks & Strategies - 1

■ **Check Point:**

- Transactions processed in Account where Scanned Signature is not available

■ **What to verify:**

- Alternate source of Signature verification to be verified

■ **Source:**

- Tailormade report generated through SQL based on Criteria Debit Transactions with "Tran Date" is earlier than "Signature upload" date.

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Few Checks & Strategies - 2

■ **Check Point:**

- Debits to Account without Cheque

■ **What to verify:**

- Finacle maintains cheque series for each account. If Cheque No. other than the one assigned to Account is entered the system throws an error. However, it also allows user to process transactions where cheque is not available.
- The transactions should be closely monitored to verify whether all such transactions are genuine.

■ **Source:**

- Tailormade Report generated through SQL / Daily Transaction Report containing Cheque Details.

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Few Checks & Strategies - 3

■ Check Point:

- Transactions in Dormant Account

■ What to verify:

- Finacle does not allow any transactions in Dormant Account. If any transaction is carried out after lifting of Dormancy Flag the transactions should be closely verified.

■ Source:

- AFI Menu (Finacle) and Tailormade Report based on SQL for all the cases where Dormancy Flag is lifted. (*Report generated from CUMM Updation - Finacle*)

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Few Checks & Strategies - 4

■ Check Point:

- Credit to NRE & FCRA Account

■ What to verify:

- As per FEMA Guidelines NRE Account can only be credited after verifying source of Credit and compliance with the guidelines.
- In the same way as per FCRA provisions FCRA Account can be credited only after compliance with FCRA guidelines.

■ Source:

- FTR Report (Finacle) generated or Tailormade Report generated through SQL

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Few Checks & Strategies - 5

- **Check Point:**

- ☐ Value Dated Transactions

- **What to verify:**

- ☐ Value Dated Transactions affect the Interest computations. Hence, it needs to be checked whether the Value Dating is properly done or not.
- ☐ Moreover, whether both the legs of Transactions have been value dated or not needs to be verified.

- **Source:**

- ☐ Exception Report / Value Dated Transaction Report

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Few Checks & Strategies - 6

- **Check Point:**

- ☐ Manual **Debits** to Income Account, Interest Paid Accounts

- **What to verify:**

- ☐ Transactions for recognition of income are generally processed by System. However, where entries have been passed as Debit to Income Account or manual credit to Income Account, the transactions need to be thoroughly looked into.

- **Source:**

- ☐ Exception Report / Tailormade report through SQL

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Few Checks & Strategies - 7

■ **Check Point:**

- Manual **Credit** to Income / Interest Accounts

■ **What to verify:**

- Transactions for recognition of income are generally processed by System. However, whenever Transactions have been processed through manual mode, its arithmetic accuracy and Regulatory Aspect like TDS in case of Interest and Service Tax in case of other income should be verified.

■ **Source:**

- Exception Report / Tailormade report through SQL

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Few Checks & Strategies - 8

■ **Check Point:**

- Cancelled Inventories

■ **What to verify:**

- List of Inventories marked as cancelled or misprinted as per system should be checked physically to ensure that there is no misuse of inventory.

■ **Source:**

- IMI Menu (Finacle), ISRA Report (Finacle) for Locationwise Inventory, Tailormade SQL Report

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Few Checks & Strategies - 9

■ **Check Point:**

- DD / FD Printed more than once

■ **What to verify:**

- There may be the case where in the customer has lost original copy of DD / FDR. In addition to it, there may be a case wherein confirmation for having printed the DD / FDR is given to CBS but the DD / FDR is not printed properly.
- In such circumstances there will be two numbers against one entry. Auditor should ensure that DD / FDR stationery is not misused under the pretext of Lost / Misprinting.

■ **Source:**

- IMI Menu (Finacle), Tailormade Report through SQL

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Few Checks & Strategies - 10

■ **Check Point:**

- Accounts with Interest Code as "0" and Interest Collection Flag as "N"

■ **What to verify:**

- Accounts with Interest code as "0" or Collection Flag as "N" will not be charged for Credit Facilities.
- It should be verified whether the genuine accounts are only having these parameters.
- E.g. Interest is not charged in NPA Accounts.

■ **Source:**

- Advances Accounts Report in Backend MIS (with Account Parameters) / Tailormade report generated through SQL Script

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Few Checks & Strategies - 11

■ **Check Point:**

- Accounts where TDS Flag is set as "N"

■ **What to verify:**

- In such accounts system will not deduct tax at source. It needs to be ensured that only valid accounts (where approval of Income Tax Dept. is available).

■ **Source:**

- Backend MIS Report / Tailormade report generated through SQL

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Few Checks & Strategies - 12

■ **Check Point:**

- Accounts where TDS Exemption is marked at CUST ID Level

■ **What to verify:**

- Cases where TDS exemption is marked at CUST ID Level, the system will not deduct TDS for all the accounts opened under the said CUSTID.
- The option is generally used for Government Accounts, Banks & Financial Institutions who exempted from TDS Provisions.

■ **Source:**

- Backend MIS Report / Tailormade report generated through SQL

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Few Checks & Strategies - 13

■ Check Point:

- ☐ Debit against uncleared effects

■ What to verify:

- ☐ It means Cheque passed against Funds in Clearing (wherein the zones have not been released) and effective credit is not passed on in clients' Account.
- ☐ It amounts to granting / accommodation to client and calls for requisite approvals.

■ Source:

- ☐ Exception Report

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Few Checks & Strategies - 14

■ Check Point:

- ☐ Interest Rate Modifications

■ What to verify:

- ☐ Cases where Interest rates have been modified should be closely looked into.

■ Source:

- ☐ Backend MIS Report / Tailormade report generated through SQL

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Few Checks & Strategies - 15

■ **Check Point:**

- ☐ Loans / Advances granted during the month

■ **What to verify:**

- ☐ Credit documentation and Credit Appraisal for newly sanctioned loans need to be verified.

■ **Source:**

- ☐ ACS Menu (Finacle), Use of Auto Filter command on Backend MIS Report on Advances Report on Account Open / Sanction Date

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Thank You

CA. Kuntal P. Shah
Pradip R. Shah & Co.
e-mail: kuntal@pradiprshah.com