# Institute Of Chartered Accountants of India

SIRC of ICAI - Tuticonrin Branch

Seminar as on 25/02/2008

**BANK AUDIT**

**APPROACHES IN**

**CBS ENVIRONMENT**

By

**P.SELVAMOORTHY**

(FCA, DISA, CISA, CISSP, CEH, AFCEH, ISO27001LA, PGDCC & IS)

*Introduction:*

Audit objective does not change but only audit methodology to be changed.

It must be clearly understood that while computerisation of any process does not change the scope and objectives of audit, it certainly changes the methodology of the audit. In other words the auditing methodology and tools used must be modified to suit the IT environment. For example if one of the audit objective is to check whether an account was in excess of the sanction limit or drawing power during the particular period, the manual method would be review to all the accounts and list out the those accounts which has been in excess for all the specific period, in computerised environment the audit procedure to be performed should include generation of exceptional report of all accounts in excess of the Drawing Power / Sanctioned limits during the specific period.

*Methodology to be adopted:*

1. Understand the CBS environment.
2. Review the risk assessment and risk management mechanism
3. Review the computer controls
4. Top-Down approach(Summary form – Drilling down to granular level)
5. Exception based approach
6. Substantive procedures
7. Sampling
8. CAAT – Computer Assisted Audit Techniques
9. Review of credit information system software and analytical reports that can be generated from such software.
10. Confirm audit findings and draft audit report

***Understand the Computer Data Process Environment:***

- Get the list of computerised applications with details of related hardware, software, patches and manual interface platforms.
- Quickly review system manuals, user guides, navigate through various screens and menus of software
- Inquiry reports / reporting options for the audit questionnaire, *Long Form Audit* Report, Tax and audit questionnaire
- Review of various audit reports like concurrent audit reports, System audit reports and migration audit reports etc.,

***Technical Aspects of CBS Software:***

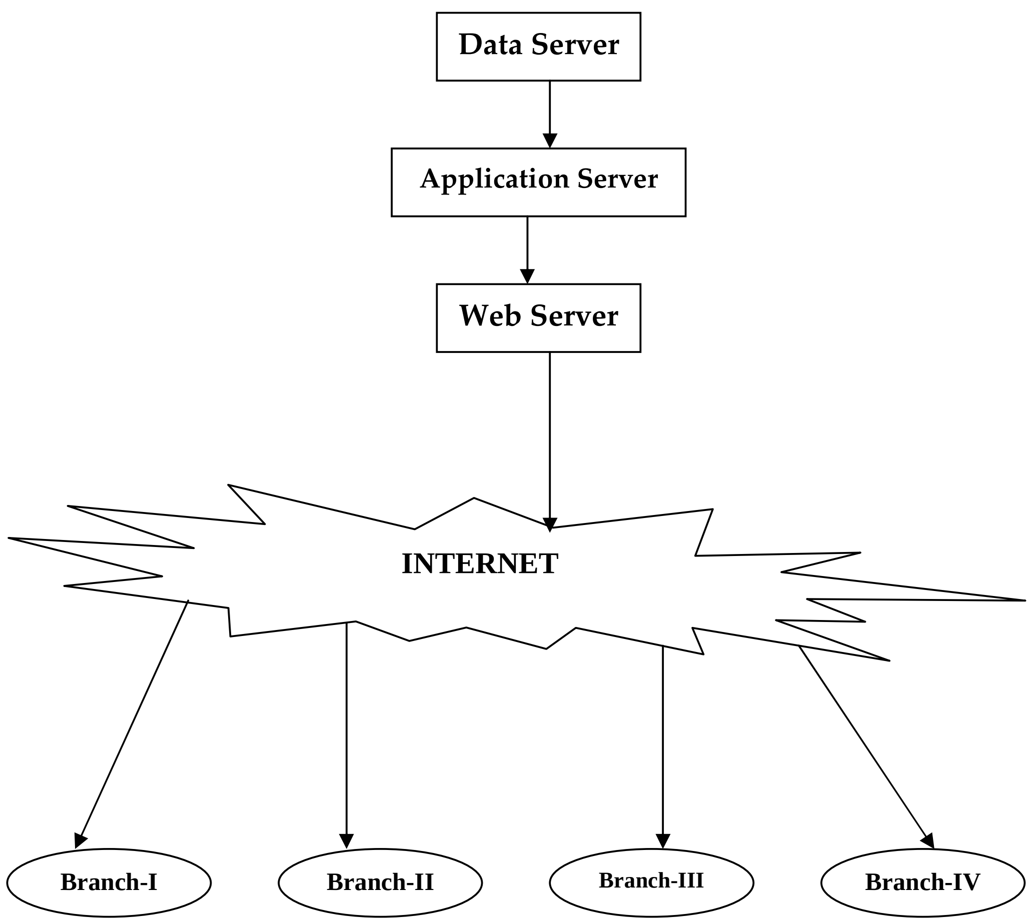


**Diagram – 1**

*Functional aspects of CBS:*

- Application Software Installation
    - Change Management
    - Release Management
    - Patch Management

- GL a/c Head and Scheme code Creation / Maintenance

| **Group a/c** | **GL Head** | **Scheme** | **Parameters** |
|---|---|---|---|
| Deposits | FD | CTD (36 months) | Interest rate, |
| Deposits | FD | CTD (72 months) | Interest type, |
| Advances | Term Loan | Housing Loan | rounding off |
| Advances | Term Loan | Vehicle Loan | method etc., |

- Customer A/C Creation /Maintenance
    - Opening of various deposit accounts of customer
    - Opening of various loan accounts of customer

- Transaction maintenance for individual transactions

- Batch transaction maintenance

  Based loading of batch transactions, entries are automatically generated by system. Examples are as follows,
    - Clearing transactions details
    - ATM day end file
    - Extension centre day end file

- System Generated Entries
  - As per standing instructions
  - Revenue charges like Interest and Service Charges etc.,
  - Automatic opening of deposit accounts

    (Excess over minimum balance in operation accounts are automatically transferred)
  - Automatic renewal of deposits accounts
  - Automatic TOD regularisations
  - Automatic closure of deposit accounts

- Validations / Exception settings

| | |
|---|---|
| - Error type condition | - Preventive Controls |
| -Warning type condition | - Operations continues |
| - Exception type condition | - override power |
| - Logging | |

Condition example – transactions amount likely to result in balance limit)

***Review of Risk Assessment and Risk Management Mechanism:***

A. *Manual Interface – Frauds*

One of the important areas to tackle with relates to the manual interface of a computerised environment. In theses interfaces, since the controls exercised are discretionary in nature and system forced controls to automatically control the situations are not available, extreme care is required for prevention of frauds.

B. *Data*

- Direct modification of master
- Lack of audit trails / logs
- Unauthorised transactions
- Unauthorised entries / corrections / deletions
- Transactions without vouchers
- Changing data using others passwords
- Wilful and wrong inputs
- Hiding the erroneous outputs

C. *Some of the vulnerable areas*

- Limit changes
- Interest rate changes
- Product changes
- Accrued interest changes
- Payment of stolen drafts
- Payment of stopped cheques
- Duplicate drafts / FDs issued
- Opening of new accounts
- Nominal accounts
- Inter office accounts
- Pension accounts
- Dormant accounts
- Clearing account
- Interest provision accounts

D. *Attitudes – Precautions*

- Taking care of the following personalities / attitudes through training programs and proactive will go a long way in arresting of computer frauds and computer crimes.
- Attitude of "easy to get away and cannot get caught"
- Attitude of "stealing a little from big company won't hurt"
- Attitude of "everybody else is stealing why not me"
- Attitude of "employer has abused me – I want to get even"
- Attitude of "bearing a company / computer system is a challenge"
- Attitude of "it will not happen to me/us" syndrome
- Attitude of "computer security is not a priority"
- Attitude of "three cheers of password"
- Attitude of "computer will take care of everything – no checking required"
- Lack of transparency of computer operations
- Lack of input controls – output verification
- Lack of evidence
- Lack of access control – authorisation control – audit trails
- Lack of dual checks in sensitive and high value transactions
- Lack of documents disaster recovers plan / contingency plan
- Lack of business continuity plan
- Lack of controls – tempted to steal
- No check no programmers due to lack of transparency
- Long serving – trusted operators – supervisors – managers
- Employee vengeance and reasons there of
- Bad relationship with vendor leading to vendor related issues
- Missing EDP audit

E. *Impact on Audit Assurance*

| No | Aspect / Item | Impact |
|---|---|---|
| 1. | Internal Control | ▪ Many Internal control shifted to computer system<br>▪ Frequent changes in computer system; the entire framework of control changes requiring in depth examination of controls during every audit cycle<br>▪ Inadequate testing / documents of testing for changes made to software<br>▪ Different user ID's for different systems and absence of single sign on |
| 2. | History of changes are not recoded | ▪ Some system do not maintain history and produce a different set results for the same period when the reports is run later<br>▪ Many of the records are stored in electronic media and so far a trusted system are not evolved |
| 3. | Audit trails | ▪ Very few systems have audit trail capability<br>▪ Evidence of audit verification cannot be recorded in the system |
| 4. | Audit Evidence | ▪ Most audit evidence is in electronic form<br>▪ Not evolved a trusted system for maintenance of electronic evidence |
| 5. | Verifications and Confirmations | ▪ No passbook system for SB accounts<br>▪ Customer verify their accounts online<br>▪ Consequently essential to look at customer complaints which are in electronic form<br>▪ Confirm of balances is almost ineffective due to volumes and cut off problems |

| | | |
|---|---|---|
| 6. | Non financial information having significance in financial Statements | Lack of control over key non financial information such as<br>▪ Security values / Description<br>▪ Date on which account opened<br>▪ Date of sanction / 1st repayment<br>▪ Date of NPA<br>▪ Details of Insurance |

***Review of the Computer Controls:***

Audit approach

- Obtain a note from the bank of each computer system and its integration with GL
- Especially design audit checks to check integrity between source and GL. For instance in case of offline internet banking balances as per internet banking system and the banks core banking system
- Check consistency of data when transferred from one system to another
- For instance, if the bank maintains a separate software for banking operation and NPA identification and management, the data related to say credit summations to be considered in NPA software needs to reviewed
  - Does it take total credit summations or
  - Only credit summations for receipts
- Controls on data transfer between separate stand alone software
- For instance if NPA statement come out of different system not integrated to core banking system, there is a need verify data input controls
- Ask for an independent internal audit confirmation of data migration

- Use random sampling method to check data between old and new system
- List of software changes and management note on testing process adopted
- Review customer and business partners complaints immediately after change
- Check transactions and masters during cut-off period

***Top Down Approach:***

Analytical review of financial statements to be followed by various summary statements in drilling down manner.

***Exception Based Approach:***

- Provides ability to list transactions and cases not matching pre-defined conditions
- This was not possible in manual systems
- This tool enables "what could go wrong?" approach for audit
- Exception reports – one of the best tools which IT has enabled for audit
- Practical applications
  - Auditors can develop conditions / exceptions to list all possible
  - What could go wrong items?
  - Instances

*<u>Exception listing can be obtained for</u>*

- Account without any interest charge / credit
- Listing overdrawn accounts (can check panel interest)

- List of matured deposits not renewed (can check for interest credit)
- Listing overdue bills at the year end (check for overdue interest)
- List of outstanding bills at the year end with accrual details

_Advances_

- List of cases where loan documents have expired
- List of cases where security insurance has expired
- List of cases where asset valuation reports pending beyond prescribed time limit
- List of term loans having moratorium period
- List of term loans where the repayment period as per the sanction has been ended but account shows balance

***Substantive Procedures:***

- Audit tests during finalization to be designed to focus more on substantive procedures and analysis based on the results of exception tests
- Use of technology for improvised substantive checks
    - Use of excel is a sample and effective tool for audit
    - MS Excel can be used for carrying out various analyses. In order to do this, request the branch management to provide the statements of the accounts chosen analysis in a Text (.txt) format or Standard Data Format (.sdf). These files can be opened using excel and various analysis carried out. You may meet with some resistance on this issue and the branch management may inform you that they do not have any tools to convert the data into text format. However in most branches there is a provision to furnish the statement of account to borrower or depositor in a floppy and using this tool the branch should be able to provide data in text format.

- With the power of technology, it is quite feasible to select accounts with large transactions to re-compute the whole interest computations to across check with the branch workings i.e. SQL can be used.
- Structured Query Language is a computer language for communication with databases. The communicating parties are typically a "front end" which sends SQL statements across the connection to be "back end" that hold the data. We can use SQL to obtain various reports listing by querying the database. It is not necessary for us to know programming but we need to be clear about conditions, the data to be analysed and output format. The systems manager in the branch should be able to write a SQL provided we clearly specify the parameter.

***Sampling:***

- Use of sampling, now a reality for audits by using general audit software
- Practical applications
  - Random sampling can help to select sample for accounts opening verification for savings bank accounts
  - Sampling can help select accounts where wide variation exists between interest on average balances and actual interest application
  - Selection of CC accounts where average balances is much higher than the quarter end / year end balances

***Computer Aided Audit Techniques (CAAT)***:

- CAAT helps in analysing data carrying out 100% audit / analysis of transactions
- CAAT tools – ACL, IDEA, CAATalyzee etc.,

- Some possible uses:
  - Identify trends, pinpoints exceptions, and highlight potential areas of concern
  - Locate errors and potential frauds by comparing and analyzing files according to the criteria you define
  - Recalculate and verity balances
  - Identify control issues and ensure compliance with standard

***Credit Information System***:

Most banks have credit information system (CIS), which is invariability independent of the main software used by the bank. This information system has inbuilt menu to generate a range of analytical reports specifically for audit purposes. The reports help greatly in assessing compliances with NPA norms.

A sample list of the reports generated by CIS is,

- Cash credit accounts irregular for more than 90 days or last credit before 90 days
- Agricultural cash credit accounts irregular for two harvesting season or no credit for two harvesting period
- Term loan accounts where interest and / or principal are overdue for 90 days
- Substandard assets where security is less than 50% of outstanding
- Overdraft irregular for 90 days or no credit for 90 days
- Cash credit accounts where renewal is due for more than 90 days
- Cash credit accounts where stock statement date is more than 90 days
- Substandard and doubtful assets and security less than 10% of outstanding
- Doubtful assets in SSI/SBF/C&I segments where primary security > 10% of outstanding

- State government guarantee invoked and date of invocation is less than 01.11.04
- Accounts guaranteed by other bank guarantee
- Cash credit accounts where interest not serviced

***Confirm Audit Findings And Draft Audit Reports:***

- Obtain certain printouts and make them part of working papers
- List of commands / options used for audit can be documented using special software

********  ********

**THANK YOU . . . . . . . .**

To contact me, write to psmoorthyfca@rediffmail.com