# FINANCE DEPARTMENT

## 3.5 Computerisation of Treasuries

***Highlights***

***Rajasthan State Government implemented the Treasury Computerisation System (TCS) in 1996-97 to overcome the weakness of the manual system and for providing financial information from treasuries to the Finance Department. Data Depository System (DDS) was developed in 2002-03 at the cost of Rs 2.15 crore with a view to make a repository of all employees of the State Government and making use of this data for various management purposes. Information Technology (IT) audit of treasuries was conducted to assess the benefits derived from the implementation and operation of TCS and DDS.***

**User Manual was not available in 10 out of 11 test checked treasuries. There was no documented Information System Security policy and password policy. There was no record of testing and acceptance.**

***(Paragraphs 3.5.7.1, 3.5.7.2 and 3.5.7.4)***

**Transmission of data between sub-treasuries and treasuries through floppies/tapes without appropriate security precautions made the data vulnerable and open to unauthorised manipulation(s).**

***(Paragraph 3.5.7.2)***

**Absence of Treasury Wide Area Network resulted in non-interlinking of sub-treasuries, treasuries and Directorate of Treasuries and Accounts. Function of Treasury Computerisation System was reduced merely to compilation of transactions and no information was retrievable from the system for macro level budget monitoring and financial management.**

***(Paragraph 3.5.7.6)***

**Some modules of the planned system were not implemented and some were partially implemented (June 2007) in the test checked treasuries.**

***(Paragraph 3.5.7.10)***

**Incomplete and inaccurate data in master file and non-validation of input data in Data Depository System resulted into presence of unreliable data.**

***(Paragraph 3.5.11)***

### *3.5.1 Introduction*

The Director of Treasuries and Accounts (DTA) under Finance Department (FD) of Government of Rajasthan is the monitoring/administrative authority for functioning in all the district treasuries.

The DTA exercised financial control through 38 treasuries, 100 independent sub-treasuries, 10 pension sub-treasuries, 104 revenue sub-treasuries and one Assistant Pay and Accounts Officer at Delhi. The Directorate is responsible for providing department-wise monthly revenue and expenditure details received from district treasuries to FD and Accountant General (AG) Office etc. The district treasuries are responsible for the safe and efficient handling of all cash transactions as per Rajasthan State Treasuries Rules.

### *3.5.2 Computerisation Process*

The State Government decided to undertake computerisation activities in 1995-96 to overcome the weakness of the manual system in getting financial information from treasuries for use in the FD by easy retrieval of data from computerised system, and preparation and compilation of information for Management Information System (MIS). Accordingly, Treasury Computerisation System (TCS) software development was assigned to National Informatics Centre (NIC) in 1996-97. The scope of computerisation was further enlarged in 2002-03 when DTA assigned the development of Data Depository System (DDS) to NIC for having a database of State Government employees. The objective was to exercise budgetary control of salary head and generation of MIS reports for human resources purposes. Both the computerisation projects were assigned to NIC at the cost of Rs 5.60 crore for TCS and Rs 2.15 crore for DDS.

The computerisation of treasuries under TCS project was planned to be completed in four phases. In the first phase (1996-97), 31 district treasuries and Jaipur (Rural) treasury were to be computerised. In the second phase (1997-98) six special treasuries and 26 independent sub-treasuries and in the third phase (1998-99) 60 independent sub-treasuries were to be computerised. In the fourth phase (1999-2000) interlinking of sub-treasuries, special treasuries and district treasuries was to be done.

Different modules under TCS are: (i) Compilation Module, (ii) Token Module, (iii) Bill Module, (iv) Personal Deposit Account Module, (v) Stamp Module, (vi) Pension Module for (a) civil/family pension (b) old age pension, and (vii) Long Term Advances Module.

### *3.5.3 Organisational set up*

The Directorate is headed by the DTA, who is assisted by five Joint Directors (JDs), Deputy Director (DD), Officer on Special Duty (OSD) (Analyst cum Programmer), 38 Treasury Officers (TOs), 214 Sub- Treasury Officers (STOs) and one Assistant Pay and Accounts Officer. TOs and STOs are assisted by accountants and junior accountants in performing duties.

### *3.5.4 Objectives of computerisation*

The main objective of TCS was preparation and submission of computerised monthly accounts to the AG and the FD. The areas covered in TCS were passing of bills, compilation of taxes and receipts, sale of judicial/non-judicial stamps, maintenance of Personal Deposit (PD) accounts, pension payment and maintenance of Long Term Advances (LTA). A repository of the data of the State Government employees was to be maintained under DDS.

### *3.5.5 Audit objectives*

Audit objectives were to assess implementation and operation of the TCS and DDS at the treasuries with respect to data integrity, compliance of financial rules, IT security, achievement of organisational goals and efficient use of resources.

### *3.5.6 Scope and methodology of Audit*

The records relating to TCS and DDS maintained at DTA and 11 treasuries[99] were scrutinized to evaluate the effectiveness of computerisation of treasuries with reference to the stated objectives. ORACLE database analysis was done using CAATs[100].

## Audit findings

### *3.5.7 General controls*

#### *3.5.7.1 Documentation*

**User Manual was not available in 10 out of 11 test checked treasuries indicating that trouble free operation and maintenance could not be ensured.**

Proper documentation helps in trouble free operation and maintenance of the system. DTA had Software Requirement Specifications (SRS), Software Design Document (SDD) and User Manual of Bill Section of TCS only. Documents relating to other modules of TCS and DDS were not available with DTA. User Manual was not available in 10 out of 11 test checked treasuries. Thus, lack of User Manual in 10 treasuries indicated that trouble free operation and maintenance could not be ensured.

#### *3.5.7.2 IT Security measures*

∗ The physical and system security measures were found to be inadequate in protecting the computer hardware and software from damage, theft and unauthorised access. During inspection, it was observed that no fire fighting equipment was placed in computer room or anywhere near to it in test checked treasuries except in Kota and Jodhpur (City) treasuries. Physical access to the site and individual Personal Computers was not being regulated.

99. Ajmer, Alwar, Jaipur (Secretariat), Jaipur (City), Jaipur (Pension), Jodhpur (City), Jodhpur (Rural), Kota, Sikar, Tonk and Udaipur.
100. Computer Aided Audit Techniques.

There was no documented Information System Security policy and password policy. Audit trails and user logs were not maintained by the system. It was noticed in audit that the entries in master data files were deleted without any documented authorisation in case of a termination of pension due to death, expiry of period or remarriage in case of women pensioners; but no audit trail of deleted records was available in the system.

* There was no prescribed time frame for affecting system and password change. Logs were not maintained to record the changes. Transmission of data between sub-treasuries and treasuries through floppies/tapes without appropriate security precautions made the data vulnerable and open to unauthorised manipulation(s). Treasuries did not have any formal system of incident reporting. Information Technology (IT) security in the test checked treasuries was thus inadequate.

#### *3.5.7.3 Training*

There was no training policy for training of personnel for IT. As per the project report, five to twelve persons from each treasury were to be imparted training for enabling them to handle the system. There were no records indicating formal training provided to the treasury staff. In reply, the TOs of test checked treasuries intimated that no formal training was imparted to the staff.

#### *3.5.7.4 Testing and acceptance of software*

**Committee constituted for testing and acceptance of the TCS software purpose did not submit any report, the software and subsequent changes were accepted by the TOs without any written acceptance.**

Testing and acceptance of application software is necessary for successful running of system. A committee constituted by DTA for testing and acceptance of the TCS software purpose did not submit any report. DTA intimated that the software and subsequent changes were accepted by the TOs without any written acceptance. Thus correct and complete processing of data was not ensured, due to deficiencies in system design, lack of application control and IT security, which could not be pointed out in testing, resulting into generation of erroneous outputs commented in succeeding paragraphs.

#### *3.5.7.5 Change Management and Version Control*

**There was no documented change management policy and no mechanism to authorise and test the amendments carried out in the software. Different versions were running in the same treasury (Kota).**

Changes in TCS modules were made on the request from District Treasury Officer concerned. There was no documented change management policy and no mechanism to authorise and test the amendments carried out in the software. Different versions were also found running in test checked treasuries and even in the same treasury (Kota). While version 2006 of TCS was in use in all other test checked treasuries, version 2007 was being used in Kota treasury. In absence of a defined policy over change management and version control, the Department could not ensure that only authorised version are installed in all the treasuries. For want of documentation the system is vulnerable to malicious changes in software and data. DTA intimated that proposals received from TOs were being discussed in the meetings and forwarded to the NIC for amendments. However, the amendments were authorised by the management, they were not implemented simultaneously in all treasuries.

#### *3.5.7.6 Absence of Treasury Wide Area Network*

**In the absence of a WAN the requisite reports were not readily available with the DTA which were compiled after calling information from the treasuries.**

As per project report of TCS, all sub-treasuries were to be connected with the treasuries through intranet and the treasuries in the State were to be interconnected with DTA and FD through NICNET for compilation of receipts and payments, reconciliation of accounts between treasury and bank and to retrieve and analyse data. It was however observed that Wide Area Network (WAN) connectivity was not established. Hence the function of TCS was reduced merely to compilation of transactions and no information was retrievable from the system for macro level budget monitoring and financial management of State Government.

#### *3.5.7.7 Backup policy*

A formal backup policy depicting periodicity, storage, testing and recovery process for backed up data was not prepared. DTA instructions (January 2004) regarding taking backups of data, stipulated that two copies of the backup data (on Tapes/CDs) should be taken daily, one for concerned TO and the other for off-site storage. Except Kota, other 10 test checked treasuries were not following the prescribed procedure. All the database files were maintained on a single hard disk server thereby increasing the possibility of data loss in the event of a failure.

#### *3.5.7.8 MIS reports not generated*

Various MIS reports viz. report of dead pensioners and pensioners whose pension had been stopped due to expiry of the sanctioned period under Rule 13 of Rajasthan Old Age Pension Rules, 1974, non-operational PD accounts under Rule 90 of Rajasthan Treasury Rules (RTR), 1999 and report of lapsed deposit under Rule 113 of RTR were not generated by the system.

#### *3.5.7.9 Internal review of system's working.*

System development and implementation review should be a part of the management activity. No review of TCS and DDS software had been done with the result that there was continuation of manual work, use of different versions of software in treasuries, deployment of untrained staff and non-achievement of objectives of computerisation.

#### *3.5.7.10 Delay in the development and implementation of the project.*

**Compilation, Bill and Token modules were functioning; other modules of the system were in different stages of completion/ implementation.**

DTA instructed all TOs (September 2001) to implement modules of TCS system made available by NIC. It was, however, observed that while Compilation, Bill and Token modules were functioning; other modules of the system were in different stages of completion/implementation. TOs of the test checked treasuries attributed non availability of hardware and infrastructure, lack of technical guidance, shortage of staff, inadequate training to the staff and deficiencies in software for non-implementation of the modules. Position of implementation of various modules is given in ***Appendix-3.5.***

## Application Controls

### *3.5.8 Input control*

Input controls ensure that the data received for processing is authentic, complete, accurate, properly authorised, entered accurately without duplication and has not been previously processed. Deficiencies in the input controls leading to inaccurate and incomplete data are discussed below:

#### *3.5.8.1 Civil Pension Module*

The Pension Payment Order (PPO) is issued by the Director of Pension and the first payment is to be compulsorily made through the treasuries when the information on the PPO is captured in the treasuries. Thereafter the PPOs are forwarded to the concerned banks which have its custody and make the pension payments further on. In Udaipur treasury out of 16,111 civil/family pensioners, master data of only 6,551 had been entered in master file. In Jodhpur (Rural) and Udaipur treasuries, PPO number and pensioner's name were not matching with the bank scroll. Detail of family pension in the master file was not entered correctly. This showed that the data in master files were not reliable and treasuries failed to exercise control over master files and standing data required to check the correctness of pension payments.

#### *3.5.8.2 Old Age Pension Module*

Data in respect of old age pensioners being paid through Money Orders (MOs) only were entered in master file in office of Assistant TO, Old Age Pension, Jaipur. Information of pensioners drawing pension in cash was not available in master file.

Data relating to details of sanction of pension, date of start of pension, date of termination of pension, date of birth, age, identification of pensioner which are important for the payment of pension were not made mandatory and were not available in master file.

#### *3.5.8.3 Voucher Module*

Scrutiny of TCS data of pension payment in Jaipur PPO Treasury revealed that 70 vouchers of value totaling Rs 11.08 crore were entered twice. This indicated lack of a control to prevent duplicate entry of input data.

### *3.5.9 Non-mapping of business rules*

All the relevant business rule are required to be identified and suitably incorporated in the application to avail the benefits of information technology and achieve objectives of computerisation. Data analysis revealed non-mapping of business rules in the following cases:

#### *3.5.9.1 Voucher Module*

As per Rules 137 (iv) and 231 of RTR, 1999 pay orders are valid only for a

time not exceeding 21 days after passing of bills. In case bills are not presented for payment within the currency period of the pay orders, these have to be revalidated by the TOs/DTA/FD.

During scrutiny of TCS data of test checked treasuries, it was noticed that no such provision existed in the software to flag time barred pay orders. No record of time barred revalidated bills was maintained in the treasury. In 2,454 cases involving Rs 4.90 crore during 2006-07, payments were made after 22 days to 172 days of passing the bills.

As per the instructions issued by the DTA in September 2006, the payment of cheque could be drawn within 30 days of its issue. The cheque would be treated cancelled if the payment is not drawn within 30 days and new bill would be passed to issue new cheque in lieu of cancelled cheque. It was seen that 315 cheques of Rs 83.28 lakh were encashed after 30 days during 2006-07. The system could not be used to point out such cases and generate an exception report for the use of managerial control

#### *3.5.9.2 Personal Deposit Module*

**Non-checking of available amount by the system resulted in minus balances in PD accounts.**

As per Rule 88 of RTR, 1999 balances should be worked out after each entry of receipt and payment from PD account but the system did not check available balance before passing a cheque. This resulted in minus balances in PD accounts during March 2007 and April 2007 in Sikar treasury.

While sanctioning amount for transfer in PD account, Government may ban withdrawal of entire amount or a part of it for a specific period. Such amount is called "Freezed" amount. There was no validation check in the software to check freezed amount before passing a bill from PD account. However, such case was not pointed out during audit but absence of such check may result into non-observance of financial management.

#### *3.5.9.3 Old Age Pension*

∗ There was no validation check in the software to stop the payment of pension after the prescribed period. During test check it was found that after the prescribed period payments had been made in 11 cases involving Rs 0.12 lakh by Sikar and Udaipur (ATO, Pension) treasuries.

∗ The system was not processing the payment of the pension for a part of the month. In such cases full payment was authorised by the system. During test check it was found that overpayment had been made by the TO, Tonk in six cases.

∗ The system was not used for first payments and cash payments of pension except Jodhpur (Rural) treasury. The same was being done manually.

∗ As per Rule 4 of Rajasthan Old Age Pension Rules, 1974 joint pension is payable only if both husband and wife has attained 65 years of age. Thus, to ascertain eligibility of joint pension, the age and date of birth of both pensioners should be entered in the master data. But there was no provision in

the system to enter the date of birth and age of spouse. Due to non-availability of data, Audit could not check the correctness of sanction of pension in such cases.

### *3.5.10 Utilisation of system*

The system was not fully utilised by the Department. All features of the system were not being used by the treasuries instead doing the work manually. Thus, the very purpose of computerisation was not achieved.

#### *3.5.10.1 Personal Deposit Account Module*

Despite provision of Interest Calculation Module in the system, this work was being done manually in all test checked treasuries except Tonk treasury. TO, Kota intimated that due to technical problem in software the module was not being used. Other TOs assigned no reasons for non-use.

#### *3.5.10.2 Civil Pension Module*

DTA instructed (November 2000) TOs to maintain computerised pension check register to check the payment of pension by the banks with the master data and point out discrepancy, if any, to concerned bank. Though, there was facility in the software to generate pension check register, the same was not being maintained at any test checked treasury resulting in overpayment to the tune of Rs 3.88 crore reported to banks for recovery after conducting special audit of pension payments by the treasuries concerned during 2005-07. Over-payment of Rs.12.22 lakh was also noticed when the pension payment scrolls of March-April 2007 were test checked in Kota, Tonk, Ajmer, Sikar, Jodhpur (Rural) and Udaipur treasuries.

#### *3.5.10.3 Old Age Pension Module*

Though there was provision in the system, the Money Order (MO) Return register was not being generated by the system as the data relating to acknowledgements and return of MO was not entered. Accordingly, reconciliation of figures of payments through MO was being done manually.

### *3.5.11 Data Depository System*

**Same GPF numbers were entered for more than one employee as well as different GPF numbers were entered against same employee. 1,016 irregular GPF Identification Numbers were noticed in the test checked treasuries.**

#### *3.5.11.1 Incomplete and inaccurate data in master file*

As per the project report, data structure of DDS was created with the General Provident Fund (GPF) Number of an employee as an unique Identification Number. Scrutiny of data revealed that same GPF numbers were entered for more than one employee as well as different GPF numbers were entered against same employee. 1,016 irregular GPF Identification Numbers were noticed in the test checked treasuries. Thus, the objectives of the project like use of data by the deduction collection agencies for collection of schedules in electronic form and budgetary control could not be achieved.

As per the provisions of Rule 56 of Rajasthan Service Rules Volume- I, the employee retires on the last day of the month in which he/she attains the superannuation age and last day of the previous month if the date of birth is first of the month. In 42,612 cases the date of retirement was in the middle of the month in which the employee would attain the superannuation age.

### *3.5.11.2 Non-validation of input data*

The State Government revised (June 2004) the age of retirement from 58 years to 60 years. The date of retirement in the database should have also been revised accordingly but the system was still accepting the date of retirement as 58 years instead of 60 years. There were 48,019 cases where the date of retirement was before attaining the age of 60 years and in 1,186 cases the date of retirement was even less than 58 years of age. In 162 cases the date of retirement was blank.

There was no validation of input data. There was no linking between Designation and Pay-scale; a clerk drawing Rs 3,050 may also be shown in the pay scale of Rs 18,400-Rs 22,400.

There was no check in the software for rejecting the duplicate bill number of the same Drawing and Disbursing Officer. In 5,618 cases involving Rs 65.20 crore duplicate bill numbers were entered during 2005-07 under different voucher numbers.

The objectives of personnel management and budgetary control were to be achieved through a depository of employee data, the data could not be used to fulfill it.

### *3.5.12 Conclusion*

Absence of any policy towards deployment in treasuries and inadequate training to the treasury personnel led to uncontrolled operations in the TCS. Implementation of untested software, lack of change management and version controls, poor documentation led to unsynchronized operations. Lack of appropriate input controls and non-mapping of business rules led to presence of inaccurate and incomplete data in the system making the data unreliable. Due to absence of the internal control, check on the inaccuracies and incompleteness in the data could not be ensured. The Department also did not have any backup policy to ensure the continuity of the operations. The Department could not derive full benefits from the application as it did not utilise all the available features in the application and continued with manual operation. Lack of the WAN restricted the utility of the system in centralised compilation of data and use of the system for any financial management. In the DDS, lack of input and validation checks made the data unreliable for meeting the objectives of personnel management and budgetary control through the DDS. Thus, the systems of TCS and DDS could not be used gainfully.

### *3.5.13 Recommendations*

- Compliance to various financial rules and regulations and other manual provisions should be ensured and provisions made in the software.

- Policies regarding staff, training, security, password, retention of data, backup, change management and documentation of system should be prepared, documented, implemented accordingly and users should be aware of them.

- Internal controls should be in place to ensure utilisation of system and correctness of data.

- Input controls and business rules should be built into the software.

- Backup Policy along with Disaster Recovery Plan and Business Continuity Plan should be prepared, tested periodically and users must be made aware of their role in case of disruption of operations.

- A WAN should be established and online system should be developed to ensure uniform and centralised processing of data to generate desired reports for financial management.

The above points were reported to Government in July 2007; their reply has not been received (September 2007).