

CHAPTER 4

ACCOUNTING SYSTEM ANALYSIS AND DESIGN

System in general

It is a set of two or more interrelated components to achieve a goal. Systems are almost always composed of smaller subsystems, each performs a specific function important to and supportive of the larger system for which it is a part. Accounting as an information system identifies, collects, processes and communicates economic information about an entity to a wide variety of people.

Accounting Information System (AIS), a collection of resources such as people and equipment designed to transform financial data into information, has five components:

1. **The people:** who operate the system and perform various function
2. **The procedures:** both manual and automated involved in collecting, processing and storing data about organizations activities.
3. **The data:** about the organizations transactions.
4. **The software:** used to process the organizations data
5. **The information technology infrastructure:** including computers, peripheral devices, and network communication devices.

The five components together enable AIS to fulfill three important functions in any organization.

- a. Collecting and storing data as an input for processing.
- b. Transferring data in to useful information (processing).
- c. Providing for users through company management (output).

System development life cycle (SDLC):

An information system is designed and developed to meet organizational needs. The whole design and development operation is done in several different steps. The various activities under all such steps are carried out in fixed sequence and time. Thus, the total time required for system development beginning from initial investigation to implementation is said to be *the life cycle of system development*. The various activities of SDLC are carried out in sequence but in real application they may overlap. The basic phases of system development are:

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a. Information Gathering & Feasibility Analysis:

Collect detail information about the organization and to check its feasibility. There are various methods for information gathering like asking questions, questionnaire, Interview and on-site observations.

b. System Analysis:

System analysis is to find the problematic area. It is the approaches like "Where the problem is?" it includes learning about the existing system. It is a process of knowing the need of the organizations as well as operation of, the organization. So, it is a process of.

c. System Design:

System design is an actual plan of the system solution. In system design processes following activities has to be performed.

d. Coding:

This phase of system development life cycle performs system coding and decides method of coding to develop application. Various methods can be used to code software like function oriented software design and object oriented design. System analyst has to decide which coding method has to be adopted.

e. System integration and Implementation:

System integration phase integrates different module developed individually to build one application. System implementation is transferring system from development site to client site. Thus it is a process of putting the whole system into action.

f. System Testing:

System testing is a process of detecting errors and correcting .it in newly designed system.

g. System Maintenance:

System maintenance is the process to remove the defects and problems in the working of System. The system maintenance may be adaptive. It is also used to make the system modernized by making some positive changes to it.

Though systems will significantly differ from company to company depending on the size of organizations, the nature of operations and the information needs of the users, there are certain common principles of all systems. These common principles are:

1. *Cost effectiveness balance:*
2. *Flexibility to meet future needs:*
3. *Adaption to organizational structure:*
4. *Adaption internal control:*

Special Journals and Subsidiary ledgers

Special Journals

An actual accounting system employs many different types of journals. The purpose of each journal is to record, in chronological order, *the dual effect of a transaction in debit/credit form*. The majority of transactions are recorded in special journals. For most external transactions, special journals are used to capture the dual effect of the transaction in debit/credit form. These journals capture the dual effect of repetitive types of transactions. For example, cash receipts are recorded in a cash receipts journal, cash disbursements in a cash disbursements journal, credit sales in a sales journal, and the purchase of merchandise on account in a purchases journal.

Subsidiary Ledgers

The general ledger contains what are referred to as control accounts. In addition to the general ledger, a subsidiary ledger contains a group of subsidiary accounts associated with a particular general ledger control account. For example, there will be a subsidiary ledger for accounts receivable that keeps track of the increases and decreases in the account receivable balance for each of the company's customers purchasing goods or services on credit.

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CHAPTER 5

CASH

Cash includes money on deposit in banks and other items that a bank will accept for immediate deposit. Money on deposit in banks includes checking and saving accounts. Other items such as ordinary checks received from customers, money orders, coins and currency and petty cash also are included as cash. Banks do not accept postage stamps, travel advances to employees, notes receivable or post-dated checks as cash.

Since cash is the asset most likely to be used improperly by employees, exposed for embezzlement and many business transactions either directly or indirectly affect it, it is therefore necessary to have effective control of cash.

Characteristics of cash

The following are some of the characteristics of cash:

- a) Cash is used as medium of exchange
- b) Cash is the most liquid asset
- c) Cash is mostly affected by business transactions
- d) Cash is used to measure the value of other assets
- e) Cash is mostly exposed to embezzlements

MANAGEMENT OF CASH

Cash management refers to planning, controlling and accounting for cash transactions and cash balances. Efficient management of cash is essential to the survival and success of every business organization. Managing cash requires planning wisely so that there will not be excess cash held on hand at any point in time; or there is no shortage of cash at any point in time to meet the business's needs.

INTERNAL CONTROL OF CASH

The need to safeguard cash is crucial in most businesses because cash is mostly exposed to embezzlement. Firms address this problem through the internal control system. An internal control system is a set of policies and procedures designed to protect assets, provide accurate accounting records and evaluate performances.

A sound internal control system for cash increases the likely hood that the reported values for cash are accurate.

Internal control for cash should include the following procedures:

- a) The individuals who receive cash should not also disburse (pay) cash
- b) The individuals who handle cash should not access accounting records
- c) Cash receipts are immediately recorded and deposited and are not used directly to make payments.
- d) Disbursements are made by serially numbered checks, only upon proper authorization by someone other than the person writing the check
- e) Bank accounts are reconciled monthly.

The following are the most common elements of cash control and managements: bank account system, petty cash fund, voucher system, change fund, and cash short and over.

1. Control of Cash Through Bank Accounts

Bank accounts are one of the most important means of controlling cash that provide several advantages such as:

- Cash is physically protected by the bank,
- A separate record of cash is maintained by the bank,
- And customers may remit payments directly to the bank.

If a company uses a bank account, monthly statements are received from the bank showing beginning and ending balances and transactions occurring during the month including checks paid, deposits received, and service charges. These monthly statements (reports) received from the bank are called **bank statements**. Bank statements generally are accompanied by checks paid and charged to the accounts during the month, debit and credited memos, which inform the company about changes in the cash accounts. For a bank, the depositor's cash balance is a liability, the amount the bank owes to the firm. Therefore, a debit memo describes the amount and nature of decrease in the company's cash accounts. A credit memo indicates an increase in the cash balance of the depositor that it has with the bank.

Reconciliation of Bank and Book Cash Balances

Monthly reconciling of the bank balance with the depositor's cash accounts balance is essential cash control procedure. To reconcile a bank statement means to verify that the bank balance and the accounting records of the depositor are consistent. The balance shown in a monthly bank statement seldom equals the balance appearing in the depositor's accounting records. Certain transactions recorded by the depositor may not have been recorded by the bank and vice versa. The most common examples that cause disparity between the two balances are:

a). Outstanding checks:

Checks issued and recorded by the company, but not yet presented to the bank for payment.

b) Deposits in transit:

Cash receipts recorded by the depositor, but not reached the bank to be included in the bank statement for the current month.

c) Service charges:

Banks often charge a fee for handling checking accounts. The amount of this charge is deducted by the bank from bank balance and debit memo is issued for the depositor.

d) Charges for depositing NSF- checks:

NSF stands for "Not Sufficient Funds." When checks are deposited in an account, the bank generally gives the depositor immediate credit. On occasion, one of these checks may prove to be uncollectible because the maker of the check does not have sufficient funds in his or her account. In such a case, the bank will reduce the depositor's account by the amount of this uncollectible item and return the check to the depositor marked "NSF".

e) Notes collected by bank:

If the bank collects a note receivable on behalf of the depositor, it credits the depositor's account and issues a credit memorandum for the depositor. When the depositor prepares bank reconciliation, the balances shown in the bank statement and in the accounting records both are adjusted for any unrecorded transactions. Additional adjustments may be required to correct any errors discovered in the bank statements or in the accounting records.

Steps in Preparing Bank Reconciliation

Bank reconciliation is a schedule prepared by the depositor to bring the balance shown in the bank statement and the balance shown in the depositor's accounting into agreement.

The steps to prepare bank reconciliation are:

- The deposits listed on the bank statement are compared with the deposits shown in the accounting records. Any deposits not yet recorded by the bank are deposits in transit and should be added to the balance shown in the bank statements.

- b) The paid and received checks from the bank are compared with the check stubs. Any checks issued but not yet paid by the bank are outstanding checks and should be deducted from the balance reported in the bank statements.
- c) Any credit memorandums issued by the bank that have not been recorded by the depositor, are added to the balance per depositor's record.
- d) Any debit memorandums issued by the bank that have not been recorded by the depositor are deducted from the balance per depositor's record.
- e) Any errors in the bank statement or depositor's accounting records are adjusted.
- f) The equality of adjusted balance of statement and adjusted balance of the depositor's record is compared.
- g) Journal entries are prepared to record any items delayed by the depositor.

Illustration of Bank Reconciliation

January bank statement sent by Awash Bank to RAM Company shows Br. 5,000.17. Assume also that on January 31, 2016, the Cash account of RAM Co. shows a balance of Br. 4,262.83.

The accountant of RAM Company has identified the following items:

1. A deposit of Br. 410.90 made after banking hours on Jan. 31 does not appear on the bank statement.
2. Two checks issued in January have not yet been 2. paid by the bank:

Check No. 301	Br. 110.25
Check No. 342	607.50
3. A credit memorandum was included in the bank statement, which was for proceeds from collection of a non-interest bearing note receivable from MAN Company Br. 524.74.
4. Three debit memorandums accompanied the bank statement: Fee charged by bank for handling collection of notes receivable Br.5; a check of Br. 50.25 received from a customer, RON company, and deposited by RAM company was charged back as NSF; and service charge by bank for the month of January amounts to Br. 12.00.
5. Check No. 305 was issued by RAM Company for payment of telephone expense in the amount of Br. 85 but was erroneously recorded in the cash payments journal as Br. 58.

The January 31 bank reconciliation for RAM Company is shown below:

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January 31, 2016

Adjusted cash balance	Br. 4,693.32
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2000

To record collection of Note Receivable collected by bank

Utilities Exp.	27.00
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To record bank service charges, NSF check and error in recording check No. 305

Petty cash fund, which is part of the total cash balance, is used to handle many types of small payments such as employee transportation costs, purchase of office supplies, purchase of postage stamps, and delivery charges. Many businesses find it convenient to make minor expenditures instead of writing checks. The petty cash amount varies from Br. 50 or less to more than Br. 1,000, which will cover small expenditures for a period of two or three weeks.

To establish a petty cash fund a check is issued to a bank. This check is cashed and the money is kept on hand in a petty cash box. One employee is designated as *custodian* of the fund. The issuance of the check for establishment is recorded by debiting petty cash account and crediting cash.

During the period, the custodian makes small payments from the petty cash fund and obtains a receipt or prepares a petty cash voucher. This petty cash voucher explains the nature and amount of every expenditure and is kept with the fund. When the fund runs low or at the end of the

company's fiscal period, a check is issued to reimburse the fund for the expenditures made during the period. The issuance of this check is recorded by debiting the appropriate expense accounts and crediting cash or vouchers payable.

Example: On June 5, 1991 LM Co. established petty cash fund of Br. 520 and placed it in the custody of the main secretary. The entry to record the establishment:

1991
June 5 petty cash-----520
 Cash in bank-----520

If the company uses the voucher system, the establishment of the petty cash fund will be in two ways:

Petty cash-----520
Voucher payable-----520

The cash withdrawal from the bank is recorder:

Voucher payable-----520
Cash in bank -----520

Assume the petty cash fund of LM Co. shows the following composition of June 15, 1991.

- Urgent supplies -----Br. 150
- Miscellaneous expenses----- 110
- Urgent merchandise-----220
- Amount of cash in the fund is determined to be Br. 477.5

The entry to replenish the fund is:

Supplies expense	150	
Miscellaneous expense	110	
Purchase	220	
Cash in bank		477.5
Cash short and over		2.5

To replenish of the petty cash fund

3. Voucher System

One method to control cash disbursements is a voucher system. A **voucher** is a special form, which contains relevant data about a liability and its payment. In a voucher system, a voucher is prepared for each expenditure and approved by the designated officials. Each approved voucher represents liability and recorded in a voucher register, which is similar to purchases journal.

4. Change Fund

Some businesses that receive cash directly from customers should maintain a fund of currency and coins in order to make change. This fund, which is part of the total cash balance, is called change fund. Example: LM Co. established change fund of Br. 800 on June 1, 1990 and placed it in the hand of cashier. The next day, cash in the hand of the cashier was Br. 19, 910.50 and deposit ticket was prepared for the appropriate amount. The entries to record the above transaction will be:

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1990		
June 1	cash on hand-----	800
	Cash in bank-----	800

To record the change fund established

2	cash in bank-----	19,110.50
	Sales -----	19,110.50

To record daily cash sales

5. Cash Short and Over

In handling cash receipts from daily sales, a few errors in making changes will occur. These errors may cause a cash shortage or overage at the end of the day. The account cash short and over is debited if there is shortage and credited if there is overage. At the end of the period if the account had a debit balance, it appears in the Income statement as miscellaneous expense; if it has a credit balance, and it is shown as miscellaneous revenue.

For example, assume that the total cash sales recorded during the day amounts to Br. 12,420. However, the cash receipts in the cash register drawer (actual cash count) total Br. 12,415.

The following entry would be made to adjust the accounting records for the shortage in the cash receipts:

Cash Short and Over	5.00
Cash	5.00

To record a Br. 5.00 (Br. 12,420 - 12,415) shortage in cash receipts for the day.

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