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2.1 Introduction

The two primary accounting methods of the *cash* and the accruals basis (the difference being primarily one of timing) are used to calculate US public debt as well as taxable income for U.S. federal income taxes and possibly other income taxes. According to the Internal Revenue Code, a taxpayer may compute taxable income by:

1. the cash receipts and disbursements method;
2. an accrual method;
3. any other method permitted by the chapter; or
4. Any combination of the foregoing methods permitted under regulations prescribed by the Secretary.

As a general rule, a taxpayer must compute taxable income using the same accounting method he/she use to compute income in keeping his/her books. Also, the taxpayer must maintain a consistent method of accounting from year to year. Should he/she change from the cash basis to the accrual basis (or vice versa), he/she must notify and secure the consent of the Secretary.

2.1.1 Accrual accounting

In general, an accrual accounting system recognizes economic events when they occur rather than when money is actually exchanged. Revenues are generally recognized when goods and services are delivered, and expenses are recorded for the time periods in which assets are used and liabilities are incurred in generating revenue. As such, accrual methods are often favored in situations where transactions of goods and services are not necessarily
completed within one time period. In the U.S., accrual accounting is the most common system used by large enterprises in the private sector; in fact, publicly-traded corporations as well as other entities are required by law to generate financial statements based upon the accrual methods set forth as Generally Accepted Accounting Principles (GAAP).

Accrual basis taxpayers include items when they are earned and claim deductions when expenses are incurred. An accrual basis taxpayer looks to the "all-events test" and "earlier of test" to determine when income is earned. Under the all events test, an accrual basis taxpayer generally must include income "for the taxable year when all the events have occurred that fix the right to receive income and the amount of the income can be determined with reasonable accuracy. Under the "earlier-of-test", an accrual basis taxpayer receives income when (1) the required performance occurs, (2) payment therefore is due, or (3) payment therefore is made, whichever happens earliest. Under the earlier of test outlined in Revenue Ruling 74-607, an accrual basis taxpayer may be treated, as a cash basis taxpayer, when payment is received before the required performance and before the payment is actually due. An accrual basis taxpayer generally can claim a deduction "in the taxable year in which all the events have occurred that establish the fact of the liability, the amount of the liability can be determined with reasonable accuracy, and economic performance has occurred with respect to the liability."

Similar definition of accrual basis accounting is true for financial accounting purposes, except that revenue can't be recognized until it's earned even if a cash payment has already been received.
2.1.2 Cash Accounting

Unlike accrual accounting, cash-based accounting primarily records the inflow and outflow of cash, regardless of when revenues are earned or liabilities are incurred. As such, future liabilities, for example, are not accounted for until a cash payment is actually made. In the context of government spending, a future liability such as payment of a retirement pension is not reflected in the official financial budgets and statement until pension comes due and payment is made.

Cash basis taxpayers include income when it is received, and claim deductions when expenses are paid. A cash basis taxpayer can look to the doctrine of constructive receipt and the doctrine of cash equivalence to help determine when income is received. Most individuals start as cash basis taxpayers. There are three types of taxpayers that cannot use the cash basis: (1) C corporations; (2) partnerships with at least one C corporation partner; and (3) tax shelters.

Similar definition of cash basis accounting is true for financial accounting purposes.

2.1.3 History of Cash and Accrual Methods

Originally, federal law required all taxpayers to use the cash basis accounting. However, many businesses used the accrual basis, as most generally accepted accounting principles (“GAAP”) were based thereon, and objected to the new law. Less than a year after the 1913 Revenue Act, the IRS allowed use of the accrual basis for deductions, then for income, and in 1916, Congress formally adopted the accrual basis accounting into U.S. tax law.
2.2 Importance of Cash and Accrual accounting

Accrual accounting facilities better planning, financial management and decision making in government as well as a robust and accepted by of measuring the economy, efficiency and effectiveness of public policies. Further, one of the objectives of financial reporting is to allow accurate comparison to be made between different organizations. By using the accruals basis for public financial statements, there is increased comparability of public sector and private sector organizations, whilst retaining the comparability of an individual organization on a period by period basis.

Cash accounting makes little or no reference to the liabilities that an organization will be required to meet in the future, nor does it recognize the benefits that will be obtained from purchased assets over a period of time. Financial statements prepared on a cash basis therefore give limited information of use to financial managers and decision makers. In practice, most countries still using cash accounting do produce periodical balance sheet information.

At the beginning of the transition process, there is a risk that financial statements prepared on an accruals basis are less readily understood than those prepared under the cash basis. To mitigate this risk it is important that the reader has a solid grounding in the principles of ‘assets’, ‘liabilities’, ‘income’ and ‘expenditure’. This enables the legislature to effectively hold the executive to account and the executive to defend its position robustly.

Accrual accounting can, however, be presented in a format such that non-accountants can understand the key messages. When this is achieved, for
example by the highlighting of key performance indicators, the benefits to
decision makers of the accruals-based accounts is realized.

In contrast, the move to accrual accounting does involve significant on-
going costs and risks. For a more detailed discussion of the impact of the
introduction of accrual accounting please see the FEE paper from 2003 “The
Adoption of Accrual Accounting and Budgeting by Governments”. This is

2.3 Countries which are well advanced

A number of countries have implemented accrual accounting over the
past decade or so, and this system is now embedded in the public sector. Those
countries who, across the levels of government scored highly included
Denmark, Finland, Latvia, Estonia and the United Kingdom (note this list is
illustrative, not exhaustive).

2.4 Countries which are moving to accrual accounting

Perhaps the most interesting results come form a group of countries
that fall between full accruals and full cash accounting.

- In Austria, according to the questionnaire fixed assets are recognized at
  historical cost but depreciation is not charged on depreciable assets.
The exception to this is for agencies where assets are re-valued to fair
  value and depreciated. Stocks and provisions are not recognized as
  assets, but income and expenditure is recognized on an accruals basis.

- The Czech Republic is an example of a country which uses the accrual
  basis for fixed assets and stocks, but not for the recording of tax
  revenues. Nor does it recognize grants or provisions on an accruals
  basis. Without performing a detailed analysis on the state of
accounting in the country it is difficult to be specific, but this profile is
typical of a country in transition from cash basis to an accruals basis.

- In Lithuania there is similar situation to that in the Czech Republic.
  Again, fixed assets and stocks are accounted for on the balance sheet
  but tax revenues and grants are on a cash basis. In addition, whilst
  income and expenditure are accounted for on a receivable / payable
  basis the results of the questionnaire indicate that no year-end accruals
  are made, nor are provisions recognized.

These three circumstances, and the countries in similar positions, are
examples of modified accrual accounting. This tends to represent a transitional
period of accounting between full cash and full accruals. The experience of
those who have undertaken this transition shows that it can take a number of
years for accrual accounting to become fully embedded.

2.5 Countries which are using cash accounting

A number of European countries use the cash basis for accounting for
the public sector. In Italy the law does permit the use of accrual accounting but
budgeting and financial statements are still prepared on a cash basis. In
Germany, the federal government operates purely on cash basis and there are
no plans to impalement accrual accounting at the moment (although as can be
seen later in this paper the pure cash basis is only applicable at the federal
level). Hungary also uses a pure cash basis, in this case for all levels of
government, with only limited balance sheet information prepared
periodically.

Under this system the financial statements will be of the ‘receipts and
payments’ format and record cash movements only. These are the most
understandable form of accounts for someone who is not a finance expert, however it is debatable whether such accounts are the most useful for decision makers or that they are effective in holding those decision makers to account. 

2.6 Basis of Accounting in Pharmaceutical Industry

The financial statements are prepared under the historical cost convention on accrual basis in accordance with the Companies (Accounting Standards) Rules, 2006 issued under sub section (3C) of section 211 of the Companies Act, 1956.

This Act applies to non-profit companies, which have a license under section 25. Such companies have to maintain accounts on accrual basis, just as other for-profit companies.

2.7 Accrual accounting concepts

Accrual Accounting Concepts

<table>
<thead>
<tr>
<th>Timing Issue</th>
<th>The Basics of Adjusting Entries</th>
<th>The Adjusted Trial balance and Financial Statements</th>
<th>Closing the Books</th>
<th>Quality of Earnings</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Revenue recognition principle</td>
<td>- Types of adjusting entries</td>
<td>- Preparing the adjusted trial balance</td>
<td>- Preparing closing entries</td>
<td>- Earnings management</td>
</tr>
<tr>
<td>- Matching principle</td>
<td>- Adjusting entries for deferrals</td>
<td>- Preparing financial statements</td>
<td>- Preparing a post-closing trial balance</td>
<td>- Sarbanes-Oxley</td>
</tr>
<tr>
<td>- Accrual versus cash basis of accounting</td>
<td>- Adjusting entries for accruals</td>
<td>- Summary of basic relationships</td>
<td>- Summary of the accounting cycle</td>
<td></td>
</tr>
</tbody>
</table>
2.7.1 Timing issues

Most business need immediate feedback about how well they are doing. For example, management usually wants monthly reports on financial results, most large corporations are required to present quarterly and annual financial statements to stockholders, and the Internal Revenue Service requires all business to file annual tax returns. Accounting divides the economic life of a business into artificial time periods. As indicated in Chapter 2, this is the time period assumption. Accounting time periods are generally a month, a quarter, or a year.

Many business transactions after more than one of these arbitrary time periods. For example, a new building purchased by Citigroup or a new airplane purchased by Delta Air Lines will be sent for many years. It doesn’t make sense to expense the full cost of the building or the airplane at the time of purchase because each will be used for many subsequent periods. Instead, we determine the impact of each transaction on specific accounting periods.

Determining the amount of revenues and expenses to report in a given accounting period can be difficult. Proper reporting requires an understanding of the nature of the company’s business. Two principles are used as guidelines; the revenue recognition principle and the matching principle.

2.7.1.1 The revenue recognition principle

The revenue recognition principle requires that companies recognize revenue in the account period in which it is earned. In a service company, revenue is considered to be earned at the time the service is performed. To illustrate, assume Conrad Dry Cleaners cleans clothing on June 30, but customers do not claim and pay for their clothes until the first week of July.
Under the revenue recognition principle, Conrad earns revenue in June when it performs the service, not in July when it receives the cash. At June 30 Conrad would report a receivable on its balance sheet and revenue in its income statement for the service performed. The journal entries for June and July would be as follows:

### 2.7.1.2 The matching principle

In recognizing expenses, a simple rule is as followed: “Let the expenses follow the revenues.” Thus, expense recognition is tied to revenue recognition. Applied to the preceding example, this means that the salary expense Conrad incurred in performing the cleaning service on June 30 should be reported in the same period in which it recognizes the service revenue. The critical issue in expense recognition is determining when the expense makes its contribution to revenue. This may or may not be the same period in which the expense is paid. If Conrad does not pay the salary incurred on June 30 until July, it would report salaries payable on its June 30 balance sheet.

This practice of expense recognition is referred to as the matching principle because it dictates that efforts (expenses) be matched with accomplishments (revenues). Illustration 4.1 shows these relationships.

<table>
<thead>
<tr>
<th></th>
<th>Accounts Receivable</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>June</td>
<td>Service Revenue</td>
<td>XXX</td>
</tr>
<tr>
<td>July</td>
<td>Cash</td>
<td>XXX</td>
</tr>
<tr>
<td></td>
<td>Accounts Receivable</td>
<td>XXX</td>
</tr>
</tbody>
</table>
2.7.1.3 Accrual versus cash basis of accounting

Accrual-basis accounting means that transactions that change a company's financial statements are recorded in the periods in which the events occur, even if cash was not exchanged. For example, using the accrual basis means that companies recognize revenues when earned (the revenue recognition principle), even if cash was not received. Likewise, under the accrual basis, companies recognize expenses when incurred (the matching principle), even if cash was not paid.

An alternative to the accrual basis is the cash basis. Under cash-basis accounting, companies record revenue only when cash is received. They record expense only when cash is paid. The cash basis of accounting is prohibited under generally accepted accounting principles. Why? Because it does not record revenue when earned, thus violating the revenue recognition principle. Similarly, it doesn't record expenses when incurred, which violates matching principle.
Illustration 4.2 compares accrual-based numbers and cash-based numbers. Suppose the Fresh colors paints a large building in 2009. In 2009 it incurs and pays total expenses (salaries and paint costs) of Rs.50,000. It bills the customer Rs.80,000, but does not receive payment until 2010. On an accrual basis, Fresh Colors reports Rs.80,000 of revenue during 2009 because that is when it is earned.

<table>
<thead>
<tr>
<th>Activity</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Purchased</td>
<td>Received paid</td>
</tr>
<tr>
<td></td>
<td>paint, paid</td>
<td>employee</td>
</tr>
<tr>
<td>Accrual basis</td>
<td>Revenue</td>
<td>Rs80,000</td>
</tr>
<tr>
<td></td>
<td>Expense</td>
<td>50,000</td>
</tr>
<tr>
<td></td>
<td>Net Income</td>
<td>Rs30,000</td>
</tr>
<tr>
<td>Cash Basis</td>
<td>Revenue</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Expense</td>
<td>50,000</td>
</tr>
<tr>
<td></td>
<td>Net Income</td>
<td>Rs(50,000)</td>
</tr>
</tbody>
</table>

The company matches expenses of Rs 50,000 to the Rs 80,000 of revenue. Thus, 2009 net income is Rs 30,000 (Rs80,000 - Rs50,000). The Rs 30,000 of net income reported for 2009 indicates the profitability of Fresh color’s effort during that period.

If instead, Fresh Paint were to use cash-basis accounting, it would report Rs50,000 of expenses in 2009 and Rs80,000 of revenues during 2010. As shown in Illustration 4.2, it would report a loss of Rs 50,000 in 2009 and would report net income of Rs 80,000 in 2010. Clearly, the cash-basis measures are misleading because the financial performance of the company would be misstated for both 2009 and 2010⁹.

2.7.2 The basic of adjusting entries

In order for revenues to be recorded in the period in which they are earned, and for expenses to be recognized in the period in which they re
incurred, companies make adjusting entries. Adjusting entries ensure that the revenue recognition and matching principles are followed.

Adjusting entries are necessary because the trial balance – the first pulling together of the transaction data – may not contain up-to-date and complete data. This is true for several reasons:

1. Some events are not recorded daily because it is not efficient to do so. Examples are the use of supplies and the earning of wages by employees.

2. Some costs are not recorded during the accounting period because these costs expire with the passage of time rather than as a result of recurring daily transactions. Examples are charges related to the use of buildings and equipment, rent, and insurance.

3. Some items may be unrecorded. An example is a utility service bill that will not be received until the next accounting period.

Adjusting entries are required every time a company prepares financial statements. The company analyzes each account in the trial balance to determine whether it is complete and up-to-date for financial statement purposes. Every adjusting entry will include one income statement account and one balance sheet account.

2.7.2.1 Type of adjusting entries

Adjusting entries are classified as either deferrals or accruals. As Illustration 4.3 shows, each of these classes has two subcategories.

Illustration 4.3 Categories of adjusting entries

Deferrals:
1. Prepaid expenses: Expenses paid in cash and recorded as assets before they are used or consumed.

2. Unearned revenues: Cash received and recorded as liabilities before revenue is earned.

Accruals:

1. Accrued revenues: Revenues earned but not yet received in cash or recorded.

2. Accrued expenses: Expenses incurred but not yet paid in cash or recorded.

Subsequent sections give examples of each type of adjustment. Each example is based on the October 31 trial balance of Sierra Corporation, from Chapter three, reproduced in Illustration 4.4 Note that Retained Earnings, with a zero balance, has been added to this trial balance. We will explain its use later.

Illustration 4.4 Trial Balances

<table>
<thead>
<tr>
<th>Sierra Corporation</th>
<th>Trial Balance</th>
<th>October 31, 2010</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Debit (Rs)</td>
<td>Credit (Rs)</td>
</tr>
<tr>
<td>Cash</td>
<td>15,200</td>
<td></td>
</tr>
<tr>
<td>Advertising Supplies</td>
<td>2,500</td>
<td></td>
</tr>
<tr>
<td>Prepaid Insurance</td>
<td>600</td>
<td></td>
</tr>
<tr>
<td>Office Equipment</td>
<td>5,000</td>
<td></td>
</tr>
<tr>
<td>Notes Payable</td>
<td></td>
<td>5,000</td>
</tr>
<tr>
<td>Accounts Payable</td>
<td></td>
<td>2,500</td>
</tr>
<tr>
<td>Unearned Service Revenue</td>
<td>1,200</td>
<td></td>
</tr>
<tr>
<td>Common stock</td>
<td></td>
<td>10,000</td>
</tr>
<tr>
<td>Retained Earning</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>Dividends</td>
<td>500</td>
<td></td>
</tr>
<tr>
<td>Service Revenue</td>
<td></td>
<td>10,000</td>
</tr>
<tr>
<td>Salaries Expenses</td>
<td>4,000</td>
<td></td>
</tr>
<tr>
<td>Rent Expense</td>
<td>900</td>
<td></td>
</tr>
<tr>
<td></td>
<td>28,700</td>
<td>28,700</td>
</tr>
</tbody>
</table>
We assume that the Sierra Corporation uses an accounting period of one month. Thus, monthly adjusting entries made. The entries are dated October 31.

2.7.2.1 Adjusting entries for deferrals

To defer means to postpone or delay. Deferrals are costs or revenues that are recognized at a date later than the point when cash was originally exchanged. Companies make adjusting entries for deferrals to record the portion of the deferred item that was incurred as an expense or earned as revenue during the current accounting period. The two types of deferrals are prepaid expenses and unearned revenues.

2.7.2.1.1 Prepaid expenses

Companies record payments of expenses that will benefit more than one accounting period as assets called prepaid expenses or prepayments. When expenses are prepaid, an asset account is increased (debited) to show the service or benefit that the company will receive in the future. Examples of common prepayments are insurance, supplies, advertising, and rent. In addition, companies make prepayments when they purchase buildings and equipment.

Prepaid expenses are costs that expire either with the passage of time (e.g. rent and insurance) or through use (e.g. supplies). The expiration of these costs does not require daily entries, which would be impractical and unnecessary. Accordingly companies postpone the recognition of such cost expirations until they prepare financial statements. At each statement date, they make adjusting entries to record the expenses applicable to the current accounting period and to show the remaining amounts in the asset accounts.
Prior to adjustment, assets are overstated and expenses are understated. Therefore, as shown in Illustration 4.5, an adjusting entry for prepaid expenses results in an increase (a debit) or an expense account and a decrease (a credit) to an asset account.

**Illustration 4.5 Adjusting entries for prepaid expenses**

<table>
<thead>
<tr>
<th>Prepaid Entries</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Asset</strong></td>
</tr>
<tr>
<td>Balance Unadjusted</td>
</tr>
</tbody>
</table>

Let’s look in more detail at some specific type of prepaid expenses, beginning with supplies.

**Supplies:**

The purchase of supplies, such as paper and envelopes, results in an increase (a debit) to an asset account. During the accounting period, the company uses supplies. Rather than record supplies expense as the supplies reused, companies recognize supplies expense at the end of the accounting period. At the end of the account period the company counts the remaining supplies. The difference between the unadjusted balance in the Supplies (asset) account and the actual cost of supplies on hand represents the supplies used (an expense) for that period.

Recall from Chapter 3 that Sierra Corporation purchased advertising supplies costing Rs2,500 on October 5. Sierra recorded the payment by increasing (debiting) the asset Advertising Supplies. This account shows balance of Rs2,500 in the October 31 trial balance. An inventory count at the close of business on supplies used is Rs1,500 (Rs2,500-Rs1,000). This use of
supplies decreases an asset, Advertising Supplies. It also decreases stockholders’ equity by increasing an accounting equation in the following way.

\[
\text{Assets} = \text{Liabilities} + \text{Stockholders' Equity}
\]

\[-\text{Rs1500} -\text{Rs1500}\]

Thus, Sierra makes the following adjusting entry:

<table>
<thead>
<tr>
<th>October 31</th>
<th>Advertising Supplies</th>
<th>1,500</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advertising Supplies Expense</td>
<td>To record supplies used</td>
<td>1,500</td>
</tr>
</tbody>
</table>

After the adjusting entry is posted, the accounts, in T account form, appear as in Illustration 4.6.

Illustration 4.6 Supplies Accounts after adjustment

<table>
<thead>
<tr>
<th>Advertising Supplies</th>
<th>Advertising Supplies Expense</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oct.5 2500</td>
<td>Oct.31 Adj. 1,500</td>
</tr>
<tr>
<td>Oct.31 Bal 1,000</td>
<td>Oct. 31 Bal. 1,500</td>
</tr>
</tbody>
</table>

The asset account advertising supplies now shows a balance of Rs 1,000, which is equal to the cost of supplies on hand at the statement date. In addition, Advertising Supplies Expense shows a balance of Rs1500, which equals the cost of supplies used in October. If Sierra does not make the adjusting entry, October expenses will be understated and net income overstated by Rs1500. Moreover, both assets and stockholders’ equity will be overstated by Rs1500 on the October 31 balance sheet.

**Accounting across the Organization**

The method of accounting of advertising costs affects sales and marketing executives. In the past, companies sometimes recorded as assets the costs of media advertising for burgers, bleaches, athletic shoes, and such products and expensed those costs in subsequent periods as sales took place. The reasoning behind this treatment was that long ad campaigns provided
benefits over multiple accounting periods. Today the accounting profession no longer allows this treatment because it was decided that the benefits were too difficult to measure.

Instead, companies now must expense advertising costs when the advertising takes place. The issue is important because the outlays for advertising can be substantial. Recent big spenders: Coca-Cola spent Rs2.8 billion, PepsiCo. Inc. Rs1.9 billion, Nike, Inc. Rs1.9 billion, and Limited Brands Rs519 million.

Why might the new accounting method cause companies sometimes to spend less on advertising?

**Insurance:**

Companies purchase insurance to protect themselves from losses due to fire, theft, and unforeseen events. Insurance must be paid in advance, often for more than one year. The cost of insurance (premiums) paid in advance is recorded as an increase (debit) in the asset account Prepaid Insurance. At the financial statement date companies increase (debit) Insurance Expense and decrease (credit) Prepaid Insurance for the cost of insurance that has expired during the period.

On October 4 Sierra Corporation paid Rs600 for a one-year fire insurance policy. Converge began on October 1. Sierra recorded the payment by increasing (debiting) Prepaid Insurance. This account shows a balance of Rs600 in the October 31 trial balance. Insurance of Rs50 (Rs600 ÷ 12) expires each month. The expiration of Prepaid Insurance decreases an asset, prepaid Insurance. It also decreases stockholder’s equity by increasing an expense account, Insurance expense. The expiration of prepaid insurance affects the
following equation in October (and in each of the next 11 months) in the following way.

\[
\text{Assets} = \text{Liabilities} + \text{Stockholders' Equity} \quad -\text{Rs50} \quad -\text{Rs50}
\]

Thus, the following adjusting entry is made.

<table>
<thead>
<tr>
<th>October 31</th>
<th>Prepaid Insurance (To record Insurance Expired)</th>
<th>50</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Insurance Expense</td>
<td>50</td>
</tr>
</tbody>
</table>

After Sierra posts the adjusting entry, the accounts appears as in Illustration 4.7

Illustration 4.7 Insurance Accounts after adjustment.

<table>
<thead>
<tr>
<th></th>
<th>Prepaid Insurance</th>
<th>Insurance expenses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oct.4</td>
<td>600</td>
<td>Oct.31 Adj. 50</td>
</tr>
<tr>
<td>Oct.31 Bal. 550</td>
<td></td>
<td>Oct.31 Adj. 50</td>
</tr>
</tbody>
</table>

The asset Prepaid Insurance shows a balance of Rs550, which represents the unexpired cost for the remaining 11 months of converge. At the same time the balance in Insurance Expense equals the insurance cost that expired in October. If Sierra does not make this adjustment, October expenses are understated by Rs50 and net income is overstated by Rs50. Moreover, as the accounting equation shows, both assets and stockholders’ equity will be overstated by Rs50 on the October 31 balance sheet.

Depreciation:

A company typically owns a variety of assets that have long lives, such as buildings, equipment, and motor vehicles. The period of service is referred to as the useful life of the asset. Because a building is expected to provide service for many years, it is recorded as an asset, rather than an expense, sets at cost, as required by the cost principle. To follow the matching principle,
companies allocate a portion of this cost as an expense during each period of the asset’s useful life. Depreciation is the process of allocating the cost of an asset to expense over its useful life.

**Need for adjustment:**

The acquisition of long-lived assets is essentially a long-term prepayment for the use of an asset. An adjusting entry for depreciation is needed to recognize the cost that has been used (an expense) during the period and to report the unused cost (an asset) at the end of the period. One very important point to understand: Depreciation is an allocation concept, not a valuation concept. That is, depreciation allocates an asset’s cost to the periods in which it is used. Depreciation does not attempt to report the actual change in the value of the asset.

For Sierra Corporation, assume that depreciation on the office equipment is Rs480 a year, or Rs40 per month. Rather than decrease (credit) the asset account directly, Sierra instead credits Accumulated Depreciation. Accumulated Depreciation is called a contra asset account. Such an account is offset against an asset account of the balance sheet. Thus, the Accumulated Depreciation – Office Equipment account offsets the asset office Equipment. This account keeps track of the total amount of depreciation expense taken over the life of the asset. To keep the accounting equation in balance, Sierra decreases stockholders’ equity by increasing an expense account. Depreciation Expense. Depreciation affects the accounting equation in the following way.

\[ \text{Assets} = \text{Liabilities} + \text{Stockholders’ Equity} \]

- Rs40
- Rs40

Sierra recognizes depreciation of October by this adjusting entry.
October 31  
<table>
<thead>
<tr>
<th>Depreciation Expenses</th>
<th>40</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accumulated Depreciation – Office Equipment (To record monthly depreciation)</td>
<td>40</td>
</tr>
</tbody>
</table>

After the company posts the adjusting entry, the accounts appear as in Illustration 4.8

Illustration 4.8 Accounts after adjustment for depreciation

<table>
<thead>
<tr>
<th>Office Equipment</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Oct.2</td>
<td>5,000</td>
</tr>
<tr>
<td>Oct. 31. Bal. 5,000</td>
<td></td>
</tr>
<tr>
<td>Accumulated Depreciation – Office Equipment</td>
<td>Depreciation Expense</td>
</tr>
<tr>
<td>Oct. 31 Adj. 40</td>
<td>Oct. 31 Adj. 40</td>
</tr>
<tr>
<td>Oct 31 Bal. 40</td>
<td>Oct. 31 Bal. 40</td>
</tr>
</tbody>
</table>

The Balance in the Accumulated Depreciation account will increase Rs40 each month, and the balance in Office Equipment remains Rs5000.

**Statement presentation:**

As noted above, Accumulated Depreciation – Office Equipment is a contra asset account. It is offset against Office Equipment on the balance sheet. The normal balance of a contra asset account is a credit. A theoretical alternative to using a contra asset account would be to decrease (credit) the asset account by the amount of depreciation each period. But using the contra account is preferable for a simple reason: it discloses both the original cost of the equipment and the total cost that has expired to date. Thus, in the balance sheet, Sierra deducts Accumulated Depreciation – Office Equipment from the related asset accounts shown in Illustration 4.9

Illustration 4.9 Balance sheet presentation of accumulated depreciation:

<table>
<thead>
<tr>
<th>Office equipment</th>
<th>Rs 5,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less: Accumulated depreciation – office equipment</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>Rs 4,960</td>
</tr>
</tbody>
</table>
Book value is the difference between the cost of any depreciable asset and its related accumulated depreciation. In Illustration 4.9, the book value of the equipment at the balance sheet date is Rs.4960. The book value and the market value of the asset are generally two different values. As noted earlier, the purpose of depreciation is not valuation, but a means of cost allocation.

Depreciation expense identifies the portion of an asset's cost that expired during the period (in this case, in October). The accounting equation shows that without this adjusting entry, total assets, total stockholders' equity, and net income are overstated by Rs40 and depreciation expense is understated by Rs40. Illustration 4.10 summaries the accounting for prepaid expenses.

Illustration 4.10: Accounting for prepaid expenses

<table>
<thead>
<tr>
<th>Examples</th>
<th>Reason for Adjustment</th>
<th>Accounts Before Adjustment</th>
<th>Adjusting Entry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insurance, supplies,</td>
<td>Prepaid expenses recorded in asset accounts</td>
<td>Assets</td>
<td>Dr. Expenses</td>
</tr>
<tr>
<td>advertising, rent,</td>
<td>have been used.</td>
<td>Overstated Expenses</td>
<td>Cr. Assets</td>
</tr>
<tr>
<td>depreciation</td>
<td></td>
<td>Understated</td>
<td></td>
</tr>
</tbody>
</table>

2.7.2.1.2 Unearned revenue

Companies record cash received before revenue is earned by increasing (crediting) a liability account called unearned revenues. Items like rent, magazine subscriptions, and customer deposits for future services may result in unearned revenues. Airlines such as United, American, and Delta, for instance, treat receipts from the sale of tickets as unearned revenue until the flight service is provided.

Unearned revenue is the opposite of prepared expenses. In deed unearned revenue on the books of one company is likely to be prepayment on the books...
of the company that has made the advance payment. For example, if identical accounting periods are assumed, a landlord will have unearned rent revenue when a tenant has repaid rent.

When a company receives payment for services to be provided in a future accounting period, it increases (credits) an unearned revenue (a liability) account to recognize the liability that exists. The company subsequently earns revenues by providing services. During the accounting period it is not practical to make daily entries as the company earns the revenue. Instead, we delay recognition of earned revenue until the adjustment process. Then the company makes an adjusting entry to record the revenue earned during the period and to show the liability that remains at the end of the accounting period. Typically, prior to adjustment, liabilities are overstated and revenues are understated. Therefore, as shown in illustration 4.11, the adjusting entry for unearned revenues results in a decrease (a debit) to a liability account and an increase (a credit) to a revenue account.

Illustration 4.11 Adjusting entries to unearned revenues.

<table>
<thead>
<tr>
<th>Liability</th>
<th>Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>Debit Adjusting Entry(-)</td>
<td>Unadjusted Balance</td>
</tr>
</tbody>
</table>

Sierra Corporation received Rs1200 on October 2 from R. Konx for advertising services expected to be completed by December 31. Sierra credited the payment to Unearned Service Revenue, and this liability account shows a balance of Rs 1,200 in the October 31 trial balance. From an evaluation of the
work Sierra performed for Knox during October, the company determines that it has earned Rs 400 in October. The liability (Unearned Service Revenue) is therefore decreased, and stockholders’ equity (Service Revenue) is increased. The accounting equation is affected in the following way.

The liability Unearned Service Revenue now shows a balance of Rs 800. That amount represents the remaining advertising services expected to be performed in the future. At the same time, Service Revenue shows total revenue earned in October of Rs10,400. Without this adjustment, revenues and net income are understated by Rs400 in the income statement. Moreover, liabilities are overstated and stockholder’s equity is understated by Rs 400 on the October 31 balance sheet.

Accounting across the Organization

Those of you who are making majors (and even most of you who are) not known that gift cards are among the hottest marketing tools in merchandising today. Customers purchase gift cards and give them to someone for later use. In a recent year gift-card sales topped Rs95 billion.

Although these programs are popular with making executives, they create accounting questions, Should revenue be recorded at the time the gift card is sold, or when it is exercised? How should expired gift cards be accounted for? In its 2007 balance sheet Best Buy reported unearned revenue related to gift cards of Rs496 million.

Suppose the Robert Jones purchases an Rs100 gift card at Best Buy on December 24, 2009, and give it to his wife, Mary Jones, on December 25, 2009. On January 3, 2010, Mary uses the card to purchase Rs100 worth of CDs. When do you think Best Buy should recognize revenue and why?
2.7.2.1.2 Adjusting entries for accruals

The second category of adjusting entries is accruals. Prior to an accrual adjustment, the revenue account (and the related asset account) or the expense account (and the related liability account) are understated. Thus, the adjusting entry for accruals will increase both a balance sheet and an income statement account.

2.7.2.1.2.1 Accrued revenue

Revenues earned but not yet recorded at the statement date are accrued revenues. Accrued revenues may accumulate (accrue) with the passing of time, as in the case of interest revenue. These are unrecorded because the earning of interest does not involve daily transactions. Companies do not record interest revenue on a daily basis because it is often impractical to do so. Accrued revenues also may result from services that have been performed but not yet billed nor collected, as in the case of commissions and fees. These may be unrecorded because only a portion of the total service has been provided and the clients won’t be billed until the service has been completed.

An adjusting entry records the receivable that exists at the balance sheet date and the revenue earned during the period. Prior to adjustment both assets and revenues are understated. As shown in Illustration 4.14, an adjusting entry for accrued revenues results in an increase (a debit) to an asset account and an increase (a credit) to a revenue account.
In October Sierra Corporation earned Rs 200 for advertising services that were not billed to clients before October 31. Because these services are not billed, they are not recorded. The accrual of unrecorded service revenue increases an asset account, Accounts Receivable. It also increases stockholder’s equity by increasing a revenue account, Service Revenue. The accrual of unrecorded service revenue affects the accounting equation in the following way.

\[
\text{Assets} = \text{Liabilities} + \text{Stockholders’ Equity}
\]
\[
+\text{Rs200} +\text{Rs200}
\]

Thus, Sierra makes the following adjusting entry.

<table>
<thead>
<tr>
<th>October 31</th>
<th>Accounts Receivable</th>
<th>200</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Service Receivable</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(To record revenue earned)</td>
<td>200</td>
</tr>
</tbody>
</table>

After the company posts the adjusting entry, the accounts appear as in Illustration 4.15

Illustration 4.15 Receivable and revenue accounts after accrual adjustments

<table>
<thead>
<tr>
<th>Accounts Receivable</th>
<th>Service Receivable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oct.31 Adj. 200</td>
<td>Oct. 3 10000</td>
</tr>
<tr>
<td>Oct.31</td>
<td>Oct.31 400</td>
</tr>
<tr>
<td>Oct.31</td>
<td>Oct.31 Adj.200</td>
</tr>
</tbody>
</table>

The asset Accounts Receivable shows that clients owe Sierra Rs200 at the balance sheet date. The balance of Rs10600 in Service Revenue represents the total revenue Sierra earned during the month (Rs10000+Rs400+Rs200).
Without the adjusting entry, assets and stockholders' equity on the balance sheet and revenues and net income on the income statement are understated.

On November 10, Sierra received cash of Rs200 for the service performed in October and makes the following entry.

<table>
<thead>
<tr>
<th>Nov. 10</th>
<th>Cash</th>
<th>200</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Accounts Receivable</td>
<td>(To record cash collected on a/c.)</td>
</tr>
</tbody>
</table>

The company records the collection of the receivables by a debit (increase to Cash) and a credit (decrease) to Accounts receivable.

Illustration 4.16: summarizes the accounting for accrued revenues

<table>
<thead>
<tr>
<th>Accounting for Accrued Revenues</th>
</tr>
</thead>
<tbody>
<tr>
<td>Examples</td>
</tr>
<tr>
<td>Interest, rent service</td>
</tr>
</tbody>
</table>

2.7.2.1.2.2 Accrued expenses

Expenses incurred but not yet paid or recorded at the statement date are called accrued expenses. Interest, taxes, and salaries are common examples of accrued expenses.

Companies make adjustments for accrued expenses to record the obligations that exist at the balance sheet date and to recognize the expenses that apply to the current accounting period. Prior to adjustment, both liabilities and expenses are understated. Therefore, an adjusting entry for accrued expenses results in an increase (a debit) to an expense account and an increase (a credit) to a liability account.
Illustration 4.17 Adjusting entries for accrued expenses

Accrued Revenues

<table>
<thead>
<tr>
<th>Debit</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adjusting Entry(+)</td>
<td>Adjusting Entry(+)</td>
</tr>
</tbody>
</table>

Let’s look in more detail at some specific types of accrued expenses, beginning with accrued interest.

**Accrued Interest**

Sierra Corporation signed a three-month note payable in the amount of Rs5000 on October 1. The note requires Sierra to pay interest at an annual rate of 12%.

The amount of the interest recorded is determined by three factors:

1. the face value of the note,
2. the interest rate, which is always expressed as an annual rate, and
3. The length of time the note is outstanding. For Sierra, the total interest due on the Rs5,000 note at its maturity date three months in the future is Rs 150(Rs5,000 x 12% x 3/12), or Rs50 for one month. Illustration 4.18 shows the formula for commuting interest and its application to Sierra Corporation for the month of October.

<table>
<thead>
<tr>
<th>Face Value of Note X</th>
<th>Annual Interest Rate X</th>
<th>Time in Terms of One year =</th>
<th>Interest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rs5,000 X</td>
<td>12% X</td>
<td>1/12</td>
<td>Rs50</td>
</tr>
</tbody>
</table>

The accrual of interest at October 31 increases a liability account, Interest Payable. It also decreases stockholder’s equity by increasing an
expense account, Interest Expense. The accrual of interest at October 31 affects the accounting equation in the following ways.

\[
\text{Assets} = \text{Liabilities} + \text{Stockholders' Equity} + Rs50 + Rs50
\]

Thus, Sierra makes an accrued expense adjusting entry at October 31 as follows:

<table>
<thead>
<tr>
<th>Oct. 31</th>
<th>Interest Expenses</th>
<th>50</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Interest Payable</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>(To record interest on notes payable)</td>
<td></td>
</tr>
</tbody>
</table>

After the company posts this adjusting entry, the accounts appear as in Illustration 4.19.

<table>
<thead>
<tr>
<th>Interest Expense</th>
<th>Interest Payable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oct.31 Adj.50</td>
<td>Oct.31 Adj.50</td>
</tr>
<tr>
<td>Oct.31 Bal. 50</td>
<td>Oct.31 Bal. 50</td>
</tr>
</tbody>
</table>

Interest Expense shows that interest charges for the month of October. Interest payable shows the amount of interest the company owes at the statement date. Sierra will not pay the interest until the note comes due at the end of three months. Companies use the Interest Payable account, instead of crediting Notes Payable, to disclose the two different types of obligations – interest and principal – in the accounts and statements. Without this adjusting entry, liabilities and interest expense are understated, and net income and stockholder’s equity are overstated.

**Accrued Salaries:**

Companies pay for some types of expenses, such as employee salaries and commissions, after the services have been performed. Sierra Corporation last paid salaries on October 26; the next payment of salaries will not occur.
until November 9. As the calendar in Illustration 4.20 shows, three working days remain in October (October 29-31).

At October 31 the salaries for these three days represent an accrued expense and a related liability to Sierra. The employees receive total salaries of Rs2000 for a five-day work week or Rs400 per day. Thus, accrued salaries at October 31 are Rs1200 (Rs400 x 3). This accrual increases a liability, Salaries Payable. It also decreases stockholders’ equity by increasing an expense account, Salaries Expense. The accrual of salaries affects the accounting equation in the following ways.

\[
\text{Assets} = \text{Liabilities} + \text{Stockholders' Equity} \\
\text{+Rs1200} \quad \text{-Rs1200}
\]

Thus, Sierra makes an accrued expense adjusting entry at October 31 as follows:

<table>
<thead>
<tr>
<th>Oct. 31</th>
<th>Salaries Expenses</th>
<th>1200</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Salaries Payable</td>
<td>1200</td>
</tr>
<tr>
<td>(To record accrued salaries)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

After the company posts this adjusting entry, the accounts appear as in Illustration 4.21.

Illustration 4.21: Salary account after adjustment

<table>
<thead>
<tr>
<th>Salaries Expenses</th>
<th>Salaries Payable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oct.26 4000</td>
<td>Oct.31 Adj. 1200</td>
</tr>
<tr>
<td>Oct.31 Adj. 1200</td>
<td></td>
</tr>
<tr>
<td>Oct.31 Bal. 5200</td>
<td>Oct.31 Bal. 1200</td>
</tr>
</tbody>
</table>

After this adjustment, the balance of Salaries Expenses of Rs5200 (13 days x Rs400) is the actual salary expenses for October. The balance is Salaries Payable of Rs1200 is the amount of the liability of salaries Sierra owes as of October 31. Without the Rs1200 adjustment for salaries, Sierra’s expenses are understated Rs1200 and its liabilities are understated Rs1200.
Sierra Corporation pays salaries every two weeks. Consequently, the next payday in November 9, when the company will again pay total salaries of Rs4000. The payment consists of Rs1200 of salaries payable at October 31 plus Rs2800 of salaries expenses for November (7 working days, as shown in the November calendar X Rs400). Therefore, Sierra makes the following gentry on November 9.

<table>
<thead>
<tr>
<th>Nov. 9</th>
<th>Salaries Payable</th>
<th>1200</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Salaries Expenses</td>
<td>2800</td>
</tr>
<tr>
<td></td>
<td>Cash</td>
<td>4000</td>
</tr>
</tbody>
</table>

(To record November 9 payroll)

This entry eliminates the liability of Salaries Payable that Sierra recorded in the October 31, adjusting entry, and it records the proper amount of Salaries Expenses for the period between November 1 and November 9.

Illustration 4.22 summarizes the accounting for accrued expenses.

Illustration 4.22: Accounting for accrued expenses

<table>
<thead>
<tr>
<th>Examples</th>
<th>Reason for Adjustment</th>
<th>Accounts before adjustment</th>
<th>Adjusting Entry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interest, rent salaries</td>
<td>Expenses have been incurred but not yet paid in cash or recorded</td>
<td>Expenses understated, Liabilities understated</td>
<td>Dr. Expenses Cr. Liabilities</td>
</tr>
</tbody>
</table>

2.8 Balance sheet

2.8.1 Cash basis balance sheet

Cash-basis and accrual-basis accounting use different criteria for determining when to recognize and record revenue and expenses in your financial records. On a cash-basis revenues are recognized when cash is received and deposited. Expenses are recorded in the accounting period when
bills are paid. In accrual-basis accounting, income is realized in the accounting period in which it is earned (e.g., once contracted services are provided, grant provisions are met, etc.), regardless of when the cash from these fees and donations is received. Expenses are recorded as they are owed (e.g. when supplies are ordered, the printer finishes your brochure, employees actually perform the work, etc.), instead of when they are paid.

To illustrate, let us take a simple example. At the end of a Ram Co-Ltd, fiscal year, it has recorded the following deposits and expenditures (left hand statement) from its chequebook. A balance sheet has also been prepared to show the camps, assets, liabilities and fund balance. Example of Cash-Basis Balance Sheet.

<table>
<thead>
<tr>
<th>Income Statement</th>
<th>Balance sheet</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Income</strong></td>
<td><strong>Assets</strong></td>
</tr>
<tr>
<td>Grants</td>
<td>Cash</td>
</tr>
<tr>
<td>Contributions</td>
<td>Property, Plant and Equipment</td>
</tr>
<tr>
<td>Fees from Campers</td>
<td>Less:</td>
</tr>
<tr>
<td><strong>Total Income</strong></td>
<td>Accumulated Depreciation</td>
</tr>
<tr>
<td><strong>Loss</strong></td>
<td>Net fixed assets</td>
</tr>
<tr>
<td><strong>Total Expenses</strong></td>
<td>Total assets</td>
</tr>
<tr>
<td>Salaries</td>
<td>Liabilities</td>
</tr>
<tr>
<td>Food and Supplies</td>
<td>Loan from President</td>
</tr>
<tr>
<td>Insurance</td>
<td>Fund balance</td>
</tr>
<tr>
<td>Utilities</td>
<td><strong>Liabilities &amp; fund balance</strong></td>
</tr>
<tr>
<td>Telephone</td>
<td>Rs5,000</td>
</tr>
<tr>
<td>Printing and Postage</td>
<td>Rs15,127</td>
</tr>
<tr>
<td><strong>Total Expenses</strong></td>
<td>Rs20,127</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ram Co-Ltd</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Income Statement</strong> April 1 – March 31, 20xx</td>
</tr>
<tr>
<td><strong>Income</strong></td>
</tr>
<tr>
<td>Grants Rs3,000</td>
</tr>
<tr>
<td>Contributions 4,500</td>
</tr>
<tr>
<td>Fees from Campers 25,000</td>
</tr>
<tr>
<td><strong>Total Income</strong> Rs32,500</td>
</tr>
<tr>
<td><strong>Loss</strong> Rs 3950</td>
</tr>
<tr>
<td><strong>Expenses</strong></td>
</tr>
<tr>
<td>Salaries Rs20,000</td>
</tr>
<tr>
<td>Food and Supplies 6,000</td>
</tr>
<tr>
<td>Insurance 4,200</td>
</tr>
<tr>
<td>Utilities 2,000</td>
</tr>
<tr>
<td>Telephone 750</td>
</tr>
<tr>
<td>Printing and Postage 3,500</td>
</tr>
<tr>
<td><strong>Total Expenses</strong> Rs36,450</td>
</tr>
<tr>
<td><strong>Balance sheet</strong></td>
</tr>
<tr>
<td>Cash Rs 127</td>
</tr>
<tr>
<td>Property, Plant and Equipment 120,000</td>
</tr>
<tr>
<td>Less:</td>
</tr>
<tr>
<td>Accumulated Depreciation &lt;100,000&gt;</td>
</tr>
<tr>
<td>Net fixed assets 20,000</td>
</tr>
<tr>
<td><strong>Total assets</strong> Rs20,127</td>
</tr>
<tr>
<td>Liabilities</td>
</tr>
<tr>
<td>Loan from President Rs5,000</td>
</tr>
<tr>
<td>Fund balance Rs15,127</td>
</tr>
<tr>
<td><strong>Liabilities &amp; fund balance</strong> Rs20,127</td>
</tr>
</tbody>
</table>
Since the information was taken from activity in the chequebook, we know these statements were produced on a cash basis. However, some pertinent information has not been recorded. For example,

- A foundation has given the camp a grant of Rs10000 to provide scholarships for low-income children. The children did attend the camp, but the foundation has not yet sent in the check.
- Because cash is tight, the camp has not paid the final installment to their printer for these years, brochure. They owe her Rs1500.
- The insurance premium was paid in December, and covers the period December through November. So, it is good for another three months.

To take these three factors into consideration on the financial statements, revenues and expenses need to be recorded on an accrual basis. Several line items need to be added to the balance sheet in order to update the financial statements. These are:

**Accounts Receivable**

Reports revenues which have been earned, but not yet received. For example, a payment from a government grant which has been vouchered, but not yet received is an account receivable. In this case, the camp has a grant receivable of Rs10000, since the children have already attended the camp and the camp has therefore "earned" the scholarship money from the foundation.

Impact:
Increase grant income by Rs10000 to Rs13000 increase grants receivable to Rs10000.
Accounts Payable

Reports expenses which are owed to others, the money owed to the printer for completing the brochure is a Rs1500 account payable.

Impact:
Increase printing expenses by Rs1500 to Rs5000.
Increase account payable to Rs1500.

Prepaid Expenses

Reports expenses which have already been paid, but are for a future period. In this example, three months of insurance is considered a prepaid, rather than a current, expense.

Impact:
Decrease insurance expense by Rs1050 ([Rs4200/12 months] x 3 months) to Rs3150 Increase prepaid expense to Rs1050.

Reported on an accrual basis, using the categories described above, the camp's financial statements now look as follows:

2.7.3 Accrual Basis Balance-sheet

Example of Accrual-Basis Balance Sheet

Ram Co-Ltd
April 1 - March 31, 20xx

<table>
<thead>
<tr>
<th>Income Statement</th>
<th>Balance sheet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grants 13000</td>
<td>Cash 127</td>
</tr>
<tr>
<td>Contributions 4,500</td>
<td>Accounts Receivable 10,000</td>
</tr>
<tr>
<td>Fees from Campers 25,000</td>
<td>Prepaid expenses 1,050</td>
</tr>
<tr>
<td>Expenses</td>
<td>Amount</td>
</tr>
<tr>
<td>----------</td>
<td>--------</td>
</tr>
<tr>
<td>Salaries</td>
<td>20,000</td>
</tr>
<tr>
<td>Food and Supplies</td>
<td>6,000</td>
</tr>
<tr>
<td>Insurance</td>
<td>3,150</td>
</tr>
<tr>
<td>Utilities</td>
<td>2,000</td>
</tr>
<tr>
<td>Telephone</td>
<td>750</td>
</tr>
<tr>
<td>Printing and Postage</td>
<td>5,000</td>
</tr>
<tr>
<td><strong>Total Expenses</strong></td>
<td><strong>36,900</strong></td>
</tr>
<tr>
<td>Net profit</td>
<td>5,600</td>
</tr>
</tbody>
</table>

| Net fixed assets | 20,000 |
| Total assets | 31,177 |
| Liabilities  | |
| Accounts Payable | 1,500 |
| Loan from President | 5,000 |
| Fund balance | 24,677 |
| **Liabilities & fund balance** | **31,177** |

This example illustrates how preparing financial statements on an accrual basis, using these categories, will give a much more accurate and complete picture of an organization’s financial condition. However, cash-basis accounting is easier to use on a day-to-day basis since there are fewer transactions to track. For this reason, many nonprofits, especially those with smaller budgets, choose to keep their books on a modified cash-basis. This means they do one or more of the following:

- Keep the books on a cash basis and prepare reports on an accrual basis. One way to accomplish this is by making accrual adjustments for receivables, payables, etc. on a worksheet and incorporating this information into the financial statements, without formally entering it into the books.

- Record small transactions (e.g., under Rs100) on a cash basis, but larger transactions and withheld payroll taxes are recorded on an accrual basis.
• Record income on a cash basis and expenses on an accrual basis. This is the most conservative method for recording income and expenses, since you only report cash which has actually been received, but you include expenses whether or not they have been paid.

Many organizations do not have the resources or need to keep their books on an accrual basis. Factors to consider when deciding which basis your organization should use include:

• The extent to which your organization has payables, receivables, etc. on an ongoing basis. If you have few unpaid bills or outstanding grants or fees throughout the year, cash-basis accounting will give essentially the same financial picture of your organization as accrual-basis, and will be easier to use.

• The expertise and time constraints of your bookkeeping staff.

• The cash flow position of your organization. If cash flow is an ongoing concern you will want to keep close track of accounts payable and receivable.

• The size of your organizations, budget. Many small or new nonprofits do not have many payables or receivables, nor do they have the ability to keep track of accruals on an ongoing basis. These organizations will use cash-basis accounting. On the other hand, as their budgets grow, and with them the number of financial transactions, it may become more important to keep track of all activity. They will then switch to using a modified cash or accrual system.
No matter which system you use throughout the year, financial reports must be prepared on an accrual basis according to generally accepted accounting principles.  

2.9 Financial management: Cash vs. Accrual accounting

Selecting a record-keeping system is an important decision for agricultural producers. The system should help with decision making in a risky environment and calculate taxable income. Most producers keep their records with the cash receipts and disbursements method or with an accrual method. 

Either method should be acceptable for calculating taxable income (except for corporate taxpayers who have revenues exceeding Rs25, 000,000). However, it is not acceptable to keep books throughout the year using one method of accounting and then convert at year-end to another method, solely because the second method might compute taxable income more favorably.

The main difference between accrual basis and cash basis accounting is the time at which income and expenses are recognized and recorded. The cash basis method generally recognizes income when cash is received and expenses when cash is paid. The accrual method recognizes income when it is earned (the creation of assets such as accounts receivable) and expenses when they are incurred (the creation of liabilities such as accounts payable).

Accrual accounting is more accurate in terms of net income because it matches income with the expenses incurred to procedure it. It is also more realistic for measuring business performance. A business can be going broke and still generate a positive cash basis income for several years by building accounts payable (accruing but not paying expenses), selling assets, and not replacing capital assets as they wear out.
However, most small businessmen & NGOs and farmers use cash basis accounting because:

1. They do not understand the accounting principles that an accrual system requires;
2. given the cost of hiring accountants to keep their records, accrual accounting is more expensive; and
3. Cash basis accounting is more flexible for tax planning.

Getting the Best of Both Systems

There is a process by which cash basis income and expense data can be adjusted to approximate accrual income. This can be very beneficial to producers. The process has been recommended by the Farm Financial Standards Task Force (FFSTF) which is made up of 50 farm financial experts from across the U.S. The only requirements for using this process are accurate records of cash receipts and cash disbursements for the period being analyzed, and complete balance sheets (including accrual items) as of the beginning and end of the period.

The process yields an “accrual adjusted” or approximate accrual, income statement. It differs from accrual income in that inventories may be valued at their current market value rather than their cost, and work in process (e.g., growing crops) is valued by direct costs only (not including indirect labor and allocated overhead).

The process for adjusting cash basis income to approximate accrual income is outlined in Table 1. “Beginning” and “Ending” refer to information from the balance sheets as of the beginning and end of the accounting period.
Table 1: Adjusting cash basis records to approximate accrual basis records.

| Cash Receipt | - Beginning inventories + Ending inventories - Beginning Accounts receivable - Ending Accounts receivable | Gross Revenue |
| Cash disbursements | -Beginning accounts payable +Ending Accounts payable - Beginning accrued expenses - Ending prepaid expenses +Beginning unused supplies (fuel, chemicals, etc.) -Ending unused supplies +Beginning investment in growing crops -Ending investment in growing crops | Operating expenses |
| Depreciation Expenses | No adjustment made (See No.1) | Depreciation expenses |
| Cash net income (Pre-tax) | -Beginning income taxes and S.S. taxes +Ending income taxes and S.S. taxes payable -Beginning current portion of deferred tax liability +Ending current portion of deferred tax liability (See Note 2) | Accrual adjusted net income (pre-tax) |
| Cash income taxes and social security (S.S.) taxes | -Beginning income taxes and S.S. taxes +Ending income taxes and S.S. taxes payable -Beginning current portion of deferred tax liability +Ending current portion of deferred tax liability (See Note 2) | Accrual adjusted net income and S.S. taxes |
| Cash net income (after-tax) | | Accrual adjusted net income (after-tax) |

Note:
1. Depreciation is a non-cash expense; technically it would not be reflected on cash basis income statement. Instead the statement would show the cash payments for property, facilities and equipment rather than allocating the cost of the asset over its useful life. However, because the Internal Revenue Code requires capital...
assets to be depreciated, even for cash basis taxpayers, the common practice is to record depreciation expense for both cash basis and accrual basis income accounting.

2. It is possible to have an income tax and social security tax receivable (refund due) or a deferred tax asset. In these instances the signs (+/−) of the period would be reversed when making the accrual adjustments.

In order to track the logic behind the cash-to-accrual adjustment process, consider the following example of a cash-to-accrual adjustment on grain sales.

Table – 2

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash receipts from grain sales this year</td>
<td>Rs1,50,000</td>
</tr>
<tr>
<td>Less: Beginning grain inventory (Produced in prior year)</td>
<td>-Rs40,000</td>
</tr>
<tr>
<td>Plus: Ending grain inventory (current year production not sold yet)</td>
<td>+Rs28,000</td>
</tr>
<tr>
<td>Equals: Accrual grain revenue (approximate value of current year production)</td>
<td>Rs138,000</td>
</tr>
</tbody>
</table>

Consider a second example of an expenses adjustment for accrued interest.

Table – 3

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash disbursements for interest paid this year</td>
<td>Rs36,000</td>
</tr>
<tr>
<td>Less: Beginning accrued interest (interest owned but not paid in prior year)</td>
<td>-Rs9,000</td>
</tr>
<tr>
<td>Plus: Ending accrued interest (interest owned but not paid in current year)</td>
<td>+Rs7,000</td>
</tr>
<tr>
<td>Equals: Accrual interest expense (approximate cost of borrowed funds in current year)</td>
<td>Rs34,000</td>
</tr>
</tbody>
</table>

The same logic applies to the cash-to-accrual adjustments for other accrual items. The rule to remember when making the adjustment is that an increase (beginning to ending) in an accrual type asset item will cause net income to increase, while an increase in an accrual-type liability item will cause net income to decrease.

Review the example income statements for Ram Co-Ltd (Table 4) to see the differences between statements based on accrual adjusted information and statements based on cash accounting.
Table 4: Income Statements: Cash basis and accrual-adjusted basis

<table>
<thead>
<tr>
<th>Ram Co-Ltd (Cash) Year ending December 31</th>
<th>Ram Co-Ltd (Accrual) Year ending December 31</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Receipts</strong></td>
<td><strong>Revenues</strong></td>
</tr>
<tr>
<td>Cash grain sales</td>
<td>Rs150,000</td>
</tr>
<tr>
<td>Government subsidy</td>
<td>Rs25,000</td>
</tr>
<tr>
<td><strong>Total cash receipts</strong></td>
<td>Rs175,000</td>
</tr>
<tr>
<td><strong>Expenses</strong></td>
<td><strong>Gross revenues</strong></td>
</tr>
<tr>
<td>Cash operating exp</td>
<td>Rs85,000</td>
</tr>
<tr>
<td>Interest paid</td>
<td>Rs37,000</td>
</tr>
<tr>
<td><strong>Total cash expenses</strong></td>
<td>Rs122,000</td>
</tr>
<tr>
<td>Depreciation</td>
<td>Rs27,000</td>
</tr>
<tr>
<td><strong>Total expenses</strong></td>
<td>Rs149,000</td>
</tr>
<tr>
<td>Net farm income from operation (cash basis)</td>
<td>Rs26,000</td>
</tr>
<tr>
<td>Gain/loss on sale of farm capital assets</td>
<td>Rs0</td>
</tr>
<tr>
<td><strong>Total operating exp</strong></td>
<td>Rs95,000</td>
</tr>
<tr>
<td>Net farm income before tax (cash basis)</td>
<td>Rs26,000</td>
</tr>
<tr>
<td>Income taxes &amp; S.S. taxes paid</td>
<td>Rs8,000</td>
</tr>
<tr>
<td><strong>Net farm income before tax (accrual basis)</strong></td>
<td><strong>Accrual interest exp</strong></td>
</tr>
<tr>
<td><strong>Total expenses</strong></td>
<td>Rs130,000</td>
</tr>
</tbody>
</table>

*Remember, because the IRS requires capital assets (machinery, equipment, building, etc.) are to be depreciated over the useful life of the assets, the common practice, even with cash basis accounting, is to record a depreciation charge.

Net farm income from operations | Rs70,000
Income taxes & S.S. taxes paid | Rs8,000
Change in income taxes and S.S. Taxes payable | Rs3,000
Changes in current portion of deferred taxes | Rs13,000
Accrual income taxes & SS taxes | Rs24,000
Net farm income after tax (cash basis) | Rs46,000

Net farm income after tax (accrual basis) | Rs46,000
Comparing Cash basis to Accrual-Adjusted Basis

Ram Co-Ltd appears to be moderately profitable on a cash basis. However, after adjusting the cash basis income statement to approximate an accrual basis income statement of the same period, net income after tax increased from Rs 18,000 to Rs 46,000. Because of the accrual adjustments, gross revenues were greater by Rs 25,000 (from Rs175000 to Rs 200,000) while total expenses were less by Rs 19,000 (from Rs149,000 to Rs 130,000). However, because of the accrued and deferred income taxes, the expense for income taxes is increased by Rs 16,000 (from Rs 8,000 to Rs 24,000).

After making the accrual adjustments to the income statements, Ram Co-Ltd was shown to be more profitable than had been portrayed by a the cash basis method of accounting. The more critical situation would occur if the accrual-adjusted net income showed the business to be less profitable than the producer may have been led to believe by relying solely on cash basis income statements.

At this illustration shows, computing income on a cash basis can misrepresent true profitability for an accounting period when there is a time lag between the exchange of goods and services and the related cash receipt or cash disbursement. Such distortion can be substantially reduced by also considering the net changes in certain balance sheet accounts.

A quick way to convert the cash basis net income of Rs18,000 to the accrual-adjusted income of Rs46,000 is simply to add or subtract the various net changes in inventories, accounts receivable, accounts payable, and other non-cash transactions that affect the true profitability of the operation. The net
changes affecting the true net income of Ram Co-Ltd are shown in Table No.5 below:

<table>
<thead>
<tr>
<th></th>
<th>Beginning Year</th>
<th>End Year</th>
<th>Net Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inventories</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grain</td>
<td>60,000</td>
<td>80,000</td>
<td>+20,000</td>
</tr>
<tr>
<td>Supplies</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Purchased</td>
<td>8,000</td>
<td>10,000</td>
<td>+2,000</td>
</tr>
<tr>
<td>Investment in Growing Crops</td>
<td>16,000</td>
<td>20,000</td>
<td>+4,000</td>
</tr>
<tr>
<td>Accounts receivable</td>
<td>22,000</td>
<td>27,000</td>
<td>+5,000</td>
</tr>
<tr>
<td>Prepaid expenses</td>
<td>4,000</td>
<td>3,000</td>
<td>-1,000</td>
</tr>
<tr>
<td>Accounts payable</td>
<td>17,000</td>
<td>5,000</td>
<td>12,000</td>
</tr>
<tr>
<td>Accrued interest</td>
<td>23,000</td>
<td>21,000</td>
<td>2,000</td>
</tr>
<tr>
<td>Income taxes and SS taxes payable</td>
<td>6,000</td>
<td>9,000</td>
<td>+3,000</td>
</tr>
<tr>
<td>Current portion of Deferred tax Liability</td>
<td>21,000</td>
<td>34,000</td>
<td>+13,000</td>
</tr>
</tbody>
</table>

Table 6 presents a standard, simplified format for converting a cash basis income statement to an accrual adjusted income statement using the net changes in the balance sheet accounts. This abbreviated format is useful if the objective the analysis is only to determine the approximate level of profitability after matching revenues with the expenses incurred to create the revenues.

In summary, agricultural producers can enjoy both the simplicity of cash basis accounting and the correctness of accrual accounting by:

a) Maintaining complete cash basis income (receipts) and expenses (disbursements) records throughout the year.

b) Preparing a complete balance sheet (including accrual items) at the beginning and end of each year; and

c) Then making the simple conversion of the resulting cash basis net income to determine the accrual-adjusted net income.11
2.10 Accrual accounting in Public sector

Accrual accounting is the accepted method of accounting worldwide for the private sector. Increasingly, the public sector is also moving towards accrual accounting as it helps governments to obtain a better picture of the performance of their policies. The European Commission has recently completed a project to introduce its own financial statements from 2005 onwards.

Accrual accounting is formalized in International Standards. For the public sector the IFAC IPSASB produces International Public Sector Accounting Standards (IPSAS). These are broadly based on the corresponding International Accounting Standards but are modified to clarify aspects which particularly affect the public sector. It is not mandatory for public sector
bodies to adopt IPSAS. However, it is becoming increasingly likely that countries which are moving to accrual accounting will either adopting the accruals based IPSAS in full or use them as the basis for developing their own standards which take into account the particular circumstances in their country.

The accrual basis of accounting requires the non-cash effects of transactions and other events to be reflected, as far as is possible, in the financial statements for the accounting period in which they occur, and not, for example, in the period in which any cash involved is received or paid.

RAB adapts commercial practice to the needs of government. With the introduction of Central Government Accounts for 2003-04, scheduled to be followed by Whole of Government Accounts for 2005-06, the principles of resource accounting will spread out across the public sector, reducing the extent of the variation between parts of the public sector seen currently.

The benefits accounting for the purposes of financial reporting by businesses to the outside users of financial statements are that performance is measured in terms of revenues earned and resources consumed in a period, rather than cash received and paid; it provides a fuller picture of an entity’s position than a simple cash statement; assets and liabilities have to be accounted for; and the owners’ interest (and changes in it) becomes clear.

Further benefits become evident when managers begin to use the accruals basis for their internal management information: costing can be based on resources consumed rather than those purchased; assets may be better managed because they are recorded; and better investment decisions may be

65
made because the present period can be seen more easily in the context of the past and the future.

These benefits become evident when managers begin to use the accruals basis for their internal management information: costing can be based on resources consumed rather than those purchased; assets may be better managed because they are recorded; and better investment decisions may be made because the present period can be seen more easily in the context of the past and the future.

These benefits are very similar to those enjoyed by the public sectors, which are summarized below. However, whilst there are considerable benefits in accruals accounting, it is important to recognize the there are also some complications. For example, accruals accounting is more complex and requires more resources, both financial and people, to achieve. Accruals accounting skills were not previously required in government and in most departments they are still being developed.

The benefits of accruals accounting for public services can be summarized as:

- **Completeness**: accruals-based accounts are more complete than cash accounts. The need to include transactions in the period in which they occur reduces the potential for manipulation of accounts and improves comparability between periods and organizations.

- **Better planning, management and decision-making**: accurate and objective financial and management information is essential for good management, decision-making and better resource planning and allocation.
• **Ability to Change behaviors**: better management is possible with accruals accounting, but it is not automatic. Achieving some changes may also require policy changes or financial incentives.

• **Performance management**: good performance management needs effective performance measures. Performance measures, or indicators, have to be calculated on the basis of comprehensive and consistent financial and operational data. Accruals accounting is therefore an essential component of better performance management.

• **Assessing financial resilience**: one of the purposes of published financial statements is to enable the user to predict future cash flows and assess resilience or risk. Financial statements cannot foretell the future with complete accuracy but the aim can at least be to give a fair and balanced picture of the past and some signposts to future performance.

• **Completeness**

  In the NHS in England and Wales, the introduction of a new financial reporting standard (FRS 12) has been a catalyst in ensuring that liabilities in respect of clinical negligence are brought to account completely and accurately. Senior NHS managers hope that greater visibility and more integrated management of these liabilities will lead to better control of a major cost.

  The government has identified a number of benefits from the creation of the National Asset Register, which enables more informed decisions to be made about the holding, acquisition and disposal of assets, including the opportunity to identify surplus assets. In 1999-2000 alone,
assets to the value of £1.3 bn. were disposed of. RAB underpins the Register because it requires departments to manage and account of the costs incurred in holding assets.

- **Better Planning, Management and Decision-making**

  The design of Croydon Primary care Trust’s accommodation option appraisal demonstrates how a combination of accrual-based financial information and a number of non-financial factors can be combined within a single decision process.

  When the market reforms were introduced into the health sector in the early 1990s, a behavioral study took place in East Anglia to explore what might happen in practice when the structures changed. This study did not reply only on accrual-based information, but the financial perspective was nevertheless important in the exercise and the full range of lessons would not have been able without it. The Regional Health Authority found the experience very beneficial in guiding its planning. Despite the benefits of this exercise, this form of simulation prior to the introduction of major structural change remains the exception rather than the rule.

- **Ability to change behaviors:**

  Asset management plans in local government have had similar impacts to be National Asset Register. They are of particular interest because of the relationship between the accrual-based data that is the cornerstone of the asset information, the government initiatives that have provided the requirement and the incentives for action, and the performance information that is being produced.
The British Waterways case study demonstrates how its asset information, based on its accruals accounting data, has enabled it both to generate income, form telecommunications networks, and to help other public bodies to respond effectively to the Foot and Mouth outbreak in 2001-02.

- **Performance management**

  The Environment Agency established environmental performance indicators, and a monitoring and measurement system, based on financial accrual-based data. Not only did it achieve better environmental outcomes, but also significant cost savings as compared with previous levels of use.

  In the case of East Cambridge shire District Council, the introduction of performance indicators, and a relatively poor result, spurred the council to introduce new performance management processes. The new processes are helping it to improve performance and provide a link with the accruals-based revenue budget.

- **Assessing financial resilience**

  In the Metropolitan Police Service, accounts were cash-based and moved to accruals only in 2000. Therefore the Service did not account in full for its assets or liabilities and had no reserves. This has caused the new Metropolitan Police Authority great difficulty in its early years and it has had to work with the Service to start to overcome the problems.

  The London Borough of Brent, and its auditors, worked together over a number of years to resolve an extremely difficult situation where there was such uncertainty over the key financial data, and such a problem
with its timeliness, that managers and members were no longer in a position to monitor the financial resilience of their organization.

The final example is one in which the organization, Kent County Council, was not in immediate difficulty but wishes to avoid a situation in which a problem could arise in the future. A consensus was established between members and offers to provide for an increase in balances over several years.  

2.11 Accrual accounting in government in five years

Accrual accounting in Government in five years time The Comptroller and Auditor General of India (CAG) plans to move from cash to accrual basis accounting in government within a five year frame. A National Round Table Conference on Accrual Basis Accounting was held in CAG office on May 5, 2009. The Conference, convened by Government Accounting Standards Advisory Board (GASAB) of CAG of India. Deliberated the issue of migration from cash to accrual basis accounting and laid down the roadmap for migration process.

The accrual based a financial statements are expected to provide more appropriate presentation of financial performance and position of the government. The Union and States would have a common format of financial statements that would include a Balance Sheet, a Statement of financial performance and a Cash flow statement. The framework for the accrual accounting shall be Indian Government Financial Reporting Standards (IGFRS) issued by GASAB. IGFRS are harmonized with International Public Sector Accounting Standards (IPSAS), the international standards for governments.
Department of Posts in Government of India and select ed departments of Andhra Pradesh, Madhya Pradesh, Haryana and West Bengal have embarked on accelerated pilot studies on accrual basis accounting. These pilot studies would be precursor to a national rollout which is aimed for within accounting. These pilot studies would be precursor to a national rollout which is aimed for within a five years time frame. The pilot studies would be conducted by teams from the State Accountant General offices with international and national consultants with the support of state governments. The World Bank is funding these pilot studies.

Principal Secretaries form State Governments, official from department of Posts, Accountant General of various states, and World Bank officials participated in the National Round Table Conference.

2.12 Accrual accounting in local bodies in India

There is a misconception among some functionaries of local bodies with respect to the accrual accounting system. The misconceptions vis-à-vis the facts are given below.

<table>
<thead>
<tr>
<th>Myths</th>
<th>Reality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash accounting is time-tested and the change to accrual system is unwarranted</td>
<td>Cash basis of accounting fails to meet several financial reporting objectives. It is because the timing of cash receipts and cash payments may not coincide with earning of revenues or incurring of expenses. Furthermore, measures of performance based on cash basis of accounting are susceptible to manipulation through a variation in the timings of cash receipts or payments.</td>
</tr>
<tr>
<td>Accrual accounting system favors Chartered Accountants</td>
<td>Local bodies are subjected to audit by the State Local Fund Auditors and/or Technical Guidance and Supervision of CAG. Chartered Accountants only help in accounting issues.</td>
</tr>
<tr>
<td>The system requires huge</td>
<td>Local bodies do not require high end</td>
</tr>
<tr>
<td>investment in computers and expensive accounting software.</td>
<td>computer systems. Depending upon the body's size and volume of work, computer costs will range between Rs.100,000 and Rs. 200,000. More than 90% of local bodies will require an outlay of less than Rs.3,00,000 on computer hardware and less than Rs.50,000 on packaged software.</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Accrual accounting will lead to staff redundancy.</td>
<td>In most bodies, the accounts section is understaffed. The staff requirement will remain more or less the same.</td>
</tr>
<tr>
<td>Double entry accrual accounting system means double workload.</td>
<td>In the existing cash accounting system too, municipal bodies maintain a second set of records for cross checking, though these records are disjointed. In the double entry accrual accounting system, the second set of records becomes a meaningful part of the accounting system. Even in manual form, the double entry accounting system does not double the workload. Its computerized form reduces and simplifies the workload.</td>
</tr>
<tr>
<td>The adoption of accrual accounting implies that a local body is in a position to borrow form the market.</td>
<td>Borrowing from the market depends on a local body's overall financial position and the bank ability of its projects. Mere accounting reforms cannot help it to borrow from the market. Accounting reforms help it to translate its financial results into a language or format with which the market is conversant and comfortable. Accounting reforms only lend reliability and credibility to the financial statements submitted by a local body for borrowing.</td>
</tr>
<tr>
<td>Accrual accounting implies a better financial position of a local body.</td>
<td>Accounting reforms are not a magic wand, and may not improve a local body's financial position. Accrual accounting can improve the financial position of local bodies by making available qualitative data to take appropriate financial decision.</td>
</tr>
</tbody>
</table>
2.13 Accrual accounting in Swedish

Accrual accounting was implemented in Swedish central government in 1993. It was one of many management reforms that were started in the late 1980s and were fully implemented in the 1990s. Flexibility and performance are key words for these reforms.

Considerable flexibility in the use of resources was introduced in the late 1980s. This means that a government agency can decide itself how much it will spend on salaries, premises, traveling etc. Previously there were detailed regulations for these matters. The reform also made the agencies fully responsible for setting salaries and renting premises, e.g. today, in spite of the fact that there is a government-owned real-estate company, an agency can go out on the open market and rent premises from any landlord.

Flexibility in spending over fiscal years was also introduced in the late 1980s. This means that the agencies can carry over unused appropriations to the following year and it also makes it possible to spend a portion of the following year’s budget in advance.

As regards performance, we have seen a shift in focus from resources used to performance. Thus, the outcome of the agencies’ activities – the result – is more important than the resources put into the activities. The result can be both in terms of output, such as products and services, and in terms of effects for individuals and society.

The flexibility and the focus on performance are linked to an increase in accountability for financial and operating results and the annual report is a very important tool in this respect. From 1993 all government agencies have had to submit annual financial and performance statements on an accrual
basis. A new accounting model makes it possible to monitor performance such as total costs of government programs and activities. It also facilitates the analysis of more specific information such as cost per product etc.

From 1993-94 a consolidated whole of central government annual report has also been produced. Hitherto this report has mainly included financial information. However, it should be mentioned that the submission of a consolidated whole of government annual report was not the aim of the reform, but rather a possibility provided by the reform.

Other management reforms in the early 1990s are related to cash management and the allocation of interest expense. The launching of a system of internal loans to finance investments in fixed assets has had the effect that interest expense is allocated to the agencies and that a more correct cost allocation is achieved (a type of capital charge). The use of interest-bearing accounts with credit facilities for both appropriations and other government funds promotes good cash management.

The most recent financial management reform is the new budget process from 1996. It includes the setting of a ceiling on total centrally-finances expenditure for each one of the following three years.

The many reforms in the field of financial management have contributed to improving transparency and financial control. But one important issue has still to be resolved. It is the link between the budget and the accounting. Hitherto the state budget has been presented partly on a cash basis and partly on a modified accrual basis, while the general accounting has primarily been on an accrual basis. Also the coverage of the budget is narrower (the budget has not included activities financed by donations, fees,
charges etc.) and it is presented in format very different from the accounting format. This problem is currently being dealt with. In December 200 the Swedish Ministry of Finance published a White Book containing proposals for the adoption of an accrual-based budget.

The main reason for implementing accrual accounting in Sweden was to facilitate the implementation of management by results.

Accrual accounting focuses on revenue, cost, assets, liabilities and equity – instead of cash flows only. The capitalization of assets, such as computers and machines, makes it possible to calculate depreciations and account for them in each period during which the machine is used. Consequently complete cost accounting is made possible, especially in combination with the implementation of the system for interest allocation.

With complete cost accounting it is possible to distribute cost to various products or activities. This is sometimes referred to as management accounting. In this way the consumption of resources – not the payments – is weighed against the performance of an entity or agency. The measurement of the results of an agency's different programs and activities forms the basis for implementing management by results.

Therefore the implementation of a new accounting model was a precondition for implementing management by results.

Accrual accounting greatly improves information on assets. The information can be used partly as a basis to allocate resources and costs, and partly to keep track of government property. In Sweden the former is regarded as very important, and consequently assets are valued at acquisition value. Of course, it is also important to keep track of government property. But that has
not been a great problem since, at the time accrual accounting was implemented, government agencies already had adequate assets registers for most types of assets.

In general terms accrual accounting is also a way to increase financial awareness. However, it must be said that accrual accounting cannot replace the follow-up of cash accounts, since it is still important to monitor the government cash situation.

Finally, the new accounting model also resulted in accounting methods similar to those applied in the private sector. There are many advantages with this, for instance when recruiting and training personnel. It also facilitates the use of standard accounting systems.

2.14 Accrual accounting in New Zealand and Australia

The adoption of accrual accounting in New Zealand took place amid broad economic reforms that, in the span of only a few years, transformed the country’s economy from being one of the most centrally controlled in the non-communist world to being very open. Those reforms began in the mid-1980s with the widespread privatization and corporation of government-owned commercial entities as well as a broad deregulation of New Zealand’s currency and financial markets. Shortly thereafter, the government sought to increase performance and accountability in its remaining public commercial entities by adopting modern management practices, such as giving stronger personnel authority of chief executives (entity heads) and also implementing performance-based executive evaluations.

Until 1989, New Zealand’s budgeting process was based upon a cash accounting system. With the passage of the Public Finance Act of 1989, New
Zealand redefined the government's budget process, making it output-based, and also required that all budgeting and reporting at the department level use accrual methods. An output-based budgeting process, generally speaking, emphasizes "the use of output (product) cost information as a managerial tool and more specifically as the basis for a purchaser/provider (quasi-market) model of budgeting." In other words, government agencies and departments are viewed as producing outputs (for instance, maintenance of armed forces, prison management, etc.) which Parliament then purchases, so to speak. As such, the departments must use accrual-based projections and reports so that Parliament can know the full cost of the outputs and compare costs with private suppliers if possible. In addition to requiring department reporting and budgeting based on accrual measures, the Public Finance Act also implemented accrual-based performance assessments.

New Zealand produced its first fully accrual-based combined financial statements in 1992, known as the Crown financial statements. These statements are independently audited and very much resemble the GAAP-compliant reports of large corporations. In 1994, the Fiscal responsibility Act expanded the accrual system even further and required that the government articulate its fiscal strategy and report progress towards its objectives on an accruals basis. Since that time, accrual accounting has been the principle system both for budgeting in Parliament and also for financial reporting by the Crown and it has continued to be utilized as a corporate-like performance measure for the government entities.

The accrual-based reforms in New Zealand are arguably the most comprehensive that any country has undertaken to date. While it is
indisputable that the reforms significantly affected the government management processes in New Zealand, it is difficult to ascertain the true fiscal and economic impact of the reforms. The GAO reports that, in general, most observers seem to agree that the accrual measures have provided better information for purposes of asset management and cost calculations. Additionally, many believe that the accrual measures have produced much greater fiscal discipline, especially in as much as legislators and other government officials can more easily ascertain the fiscal sustainability (or lack thereof) of the government programs.

Indeed, since implementing the reforms, New Zealand has in fact demonstrated strong fiscal restraint. In terms of budgeting, New Zealand has more or less tolerated increases to core budgets of each department at only a constant nominal level.

Remarkably, New Zealand’s gross financial liabilities has decreased from 65% of GDP in 1993 to 23% in 2005, while the OECD as a whole has increased from 66% to 76% in the same time period. The country has also reported budget surpluses in nearly every year since the early 1990s. As a result, New Zealand’s net debt has decreased significantly from approximately 52% of GDP in 19992 to near 10% in 2005. During the same time, New Zealand has enjoyed, for the most part, moderate to strong economic growth, averaging around 3.3% annual growth in real GDP over the last decade. To what extent any economic success can be attributed to New Zealand’s major reform and, more specifically, to its use of accrual accounting, is highly unclear.18
As was the case with New Zealand, Australia’s adoption of accrual accounting for the public sector occurred during a period of broad economic reforms, though Australia’s reforms were perhaps more modest than those of New Zealand. Although Australia’s economic growth had been more consistent than New Zealand’s, pressure arose by the early 1990s to increase government efficiency and improve fiscal performance. Comprehensive reforms to those ends were implemented through two initiatives: the financial management Improvement Program and the Program Management and Budgeting. Additionally, the Financial Management and Accountability Act of 1997 introduced the government management system with emphasis on performance assessments not unlike those implemented in New Zealand. As a result of these reforms, government agencies were required to begin budgeting, reporting, and accounting on an accrual basis. For the 1999-2000 budget, Australia produced comprehensive accrual-based financial statements and had fully implemented accrual output budgeting. Since then, Australia has continued to expand its accrual-based accounting and budgeting.

Like New Zealand, Australia has demonstrated strengthened fiscal discipline in recent years. Australia has produced a budget surplus in every year for close to a decade, and it has succeeded in reducing its net debt from a high of 25% of GDP in the mid 1990s to near debt elimination. Its gross financial liabilities have decreased from a high of 43% of GDP in 1995 to 15% in 2005, the second lowest percentage in the OECD. At the same time, Australia has enjoyed economic growth in real GDP averaging 3.6% annual over the past decade. Again, it is unclear to what extent accrual accounting reforms are responsible for the fiscal discipline and economic growth.\textsuperscript{19}
The literature concerning the introduction of accrual accounting in Australia has included a number of ‘official style’ publications that have largely endorsed the use of accrual accounting and recommended its implementation. These include, but are by no means limited to, the Joint Committee of Public Accounts (1995) – report no.338 Accrual Accounting, A cultural change; Barrett (1991), Carpenter (1991), Scullion (1992), the New South Wales Commission of Audit, (1988) and the Victorian Commission of Audit (1993). Each of this publication was produced by bodies or members of bodies that can be deemed to have a vested interest in the implementation of accrual accounting given their obvious links to the governments that have championed its implementation.

The academic literature is, however, less supportive. For example, Aiken (1994), Conn (1996), Jones and Puglisi, (1997), Robinson (1998) and Shand (1990) have all discussed whether or not the implementations have been worthwhile. For example, Robinson (1998) argued that accrual accounting was beneficial in terms of measuring intergenerational efficiency, but was limited in measuring the core efficiency of the public sector.

Another branch of the literature concerns some of the more technical elements of accrual accounting. For example, Ng and Shad (1999) discussed issues related to the use of net worth measurements for the public sector. Also of note are studies by Guthrie (1998), who sought to test the rhetoric of the ‘official-style’ publications concerning accrual account, and Potter (1999), who discussed the use of rhetoric to align the ‘needs’ of the public sector with the key traits of accrual accounting, such as its ability to better measure performance, position and efficiency.
In terms of the body of research that has attempted to provide a theoretically informed account of changes to the nature of public sector accounting in Australia, Rayan (1998, 1999), Ryan et al. (1999) Christensen (2002), Potter (1999) and Potter (2002) have all made contributions. Ryan (1998) explicated these accounting changes in terms of an ‘agenda setting explanation’ – which is to say that it was political and economic factors beginning in the 1970’s that created an environment in Australia that has favored the reporting of accrual financial performance information in the public sector. Potter (2002) discussed how the conceptual framework was used as a means of connecting the properties of accrual accounting practices with the reporting and accounting needs of the public sector. Potter (2002) argued that once the conceptual framework was accepted, it created something of a set of rules in terms of the types of language that could be used in discussing the attributes and purpose of public sector accounting and that this ensured the legitimacy of accrual accounting and its concepts of accountability and performance. Potter (2002) explained this practice as ‘institutional thinking’, which is to say that any thinking that was outside of the conceptual framework was deemed irrelevant and not considered by those involved in the standard setting process.

From the brief overview of the literature, it is apparent that the literature concerning accrual accounting includes official type publications such as governmental reviews, which have been more or less uniform in their support for accrual accounting. This literature has been critiqued by studies that have sought to examine both the rhetoric, as well as some of the more technical elements, of the claims made by the advocates of accrual accounting.
Finally, and of greater relevance to this paper, are a set of studies that have attempted to apply some sort of theoretical lens to the implementation of accrual accounting. These include Potter’s (2002) use of ‘institutional thinking’, Christensen’s (2002) use of Luders’ ‘governmental innovation model’ and Ryan’s (1998) ‘agenda setting explanation’. This paper aims to add to these theoretically informed explanations for the implementation of accrual accounting by applying the theoretical lens of Habermas’ theory of Legitimation.

2.15 Report on Pharmaceutical Industry in India

2.15.1 Revenue from Export

India accounts for less than two per cent of the world market of pharmaceuticals, with an estimated market value of US$10.4 billion in 2007 at consume prices, or around US$9 per capita.

India currently represents just US $ 6 billion of the $550 billion global pharmaceutical industry but its share is increasing at 10 percent a year, compared to 7 percent annual growth for the world market overall. Also, while the Indian sector represents just 8 percent of the global industry total by volume, putting it in fourth place worldwide, it accounts for 13 percent by value, and its drug exports have been growing 30 percent annually. Cipla, Nicholas Piramal, Ranbaxy, Zydus Cadila, Dr. Reddy’s are the few Indian pharmaceutical companies, which are known as the global level due to their quality products.

The Indian market for over-the-counter medicines OTCs) is worth about $ 940 million and is growing 20 percent a year, or double the rate of prescription medicines. The industry’s exports were worth more than $ 3.75
billion in 2004-05 and they have been growing at a compound annual rate of 22.7 percent over the last few years, according to the government’s draft National Pharmaceuticals Policy for 2006, published in January 2006. The Policy estimates that, by the year 2010, the industry has the potential to achieved $ 22.40 billion in formulations, with bulk drug production going up from $ 1.79 billion to $ 5.60 billion.

Indian exports are to more than 200 countries around the globe including highly regulate markets of US, Europe, Japan and Australia. More than 400 Bulk Drugs and about 60,000 Formulations (60 categories) are produced in India.

- India will emerge as a major global player in the field of pharmaceuticals exports and as provider of quality medicines at low costs. It shall also emerge as a major player in the generic drugs market in USA and Europe.
• India shall attain new heights in herbal drugs research in shaping Indian Systems of Medicine into a popular system of medicine of the future for holistic health care and ensuring health care for all – especially for the welfare of the poor^21.

2.15.2 Key players in Indian Pharmaceutical Industry

There are several national and international pharmaceutical companies that operate in India. Most of the country’s requirements for pharmaceutical products are met by these companies. Some of them are briefly described below:

• Ranbaxy Laboratories Limited is the biggest pharmaceutical manufacturing company in India. The company is ranked at the 8th position among the global generic pharmaceutical companies and has presence in 48 countries including world class manufacturing facilities in 10 countries and serves to customers from over 125 countries. Ranbaxy Laboratories 2008-2010 Q3 Net Profit Results showed a profit of Rs. 116.6 crore as compared to Rs.394.5 crore deficits, recorded during the corresponding period last fiscal.

• Dr. Reddy’s Laboratories manufactures and markets a wide range of pharmaceuticals both in India and abroad. The company has 60 active pharmaceutical ingredients to manufacture drugs, critical care products, diagnostic kits and biotechnology products. The company has 6 FDA plants that produce active pharma ingredients and 7 FDA inspected and ISO 9001 and ISO 14001 certified plants. Dr. Reddy’s Q1 FY 10 result shows the revenues of the company at Rs.18169 million which is up by 21%. During this quarter the company
introduced 24 new generic products, applied for 22 new generic product registrations and filed 4 DMFs.

- Cipla is an Indian pharmaceutical company renowned for the manufacture of low cost anti AIDS drugs. The company’s product range comprises of anthelmintics, oncology, anti-bacterial, cardiovascular drugs, antibiotics, nutritional supplements, anti-ulcer ants, anti-asthmatics and corticosteroids. Cipla also offers other services like quality control, engineering, project appraisal, plant supply, consulting, commissioning and know-how transfer, support. For the financial year 2008-09 the company registered an increase of 22% in sales and other income over the previous years.

- Nicholas Primal is the second largest pharmaceutical healthcare company in India. The brands manufactured by the company include Gardenal, Ismo, Stemetil, Rejoint, Supradyns, Phensedyl and Haemaccel. Nicholas Pirmal has entered into joint ventures and alliances with several international corporations like Cheissi, Italy; IVAX Corp; UK, F. Hoffmann-La Roche Ltd., Allergan Inc., USA etc.

- Glaxo Smith line (GSK) is a United Kingdom based pharma company; it is the world’s second largest pharmaceutical company. The company’s portfolio of pharma products consist of central nervous system, respiratory, oncology, vaccines, anti-invectives and gastro-intestinal/metabolic products among others. On November 2009, the FDA had announced that the H1N1 vaccine manufactured by GSK would join the list of the four vaccines approved.
• Zydus Cadila also known as Cadila Healthcare is an Indian pharmaceutical company located in Gujarat. The company’s 1QFY 2010 results show the net sales at Rs.880.3 Cr which is higher than the estimated Rs773cr. The net profit was Rs.124.8 cr. Which was increase of39%; the increase was on account of higher sales and improvement in the OPM.

**Future scenario**

With several companies slated to make investments in India, the future scenario of the pharmaceutical industry looks pretty promising. The country’s pharmaceutical industry has tremendous potential of growth considering all the projects that are in the pipeline. Some of the future initiatives are:

- According to a study of FICCI-Ernst and Young India will open a probable US $ 8 billion market for MNCs selling expensive drugs by 2015.
- The Minister of Commerce estimates that US$ 6.31 billion will be invested in the domestic pharmaceutical sector.
- Public spending on healthcare is likely to raise from 7 percent of GDP in 2007 to 13 per cent of GDP by 2015.
- Dr Reddy’s Laboratories has tied up with GlaxoSmithKline to develop and market generics and formulations in upcoming markets overseas
- Lupin, a Mumbai based pharmaceutical company is looking to tap opportunities of about US$ 200 million in the US oral contraceptives market.
• Due to the low cost of R&D, the Indian pharmaceutical off-shorting industry is designated to turn out to be a US$ 2.5 billion opportunity by 2012\(^2\). Hence, appropriate method of accounting only will ensure the correct measurement of their financial performance.

2.15.3 Challenges

1. Underdeveloped new molecule discovery program

The main weakness of the industry is an underdeveloped new molecule discovery program. Even after the increased investment, market leaders such as Ranbaxy and Dr. Reddy's Laboratories spent only 5-10 per cent of their revenues on R&D, lagging behind Western pharmaceuticals like Pfizer, whose research budget last year was greater than the combined revenue of the entire Indian pharmaceutical industry. This disparity is too great to be explained by cost differentials, and it comes when advances in genomics have made research equipment more expensive than ever.

The drug discovery process is further hindered by a dearth of qualified molecular biologists. Due to disconnect between curriculum and industry, pharmacy in India also lack the academic collaboration that is crucial to drug development in the West.

2. Hue & Cry against exploitation

In clinical testing persons from developing countries will be used to generate data about possible effects of a drug. A feeling of unrest among them or some section of society might develop that we are being used as guinea pigs. It might lead to demonstrations or legislations which will hamper the growth of industry.
3. Back lash against outsourcing

Similar to BPO there might be unrest in developed nations that outsourcing of clinical trials will lead to job loss culminating into legislation banning the whole procedure. The present investment limit for units to qualify as a small scale unit is Rs.30 million.

4. No brand value

India has a low beep on the radar screen of MNC drug companies as no potential clinical testing has been ever outsourced to India. So we have a low brand value in global arena.

5. Safety concerns

With recent high profile product withdrawals, there are also concerns that regulatory agencies will tighten up safety and efficacy testing requirements. A particular focus will be on the application of pharmacy co genomic techniques to improve safety profile, but the advent of such techniques in the long run will improve industry productivity as more pharmacy co genomic data is collated.

6. Generic competition

Generic substitution is a policy of healthcare cost containment. National reimbursement and insurance bodies are providing physicians and pharmacists with incentives for prescribing cheaper generic drugs. There is increased pressure on revenues for pharmaceutical companies, which have to concentrate on lifecycle management. The pharmaceutical industry will experience a significant reduction in the revenues associated with their blockbuster products as generic competition captures market share. As a result, given that R&D productivity is low and the cost of developing new
drugs at an all time high, the pharmaceutical industry faces considerable hurdles with respect to maintaining revenue and earnings growth in the future.

2.15.4 Opportunities

Both the Indian central and state government shave recognized R&D as an important driver in the growth of their pharmacy business and conferred tax deductions for expenses related to research and development. They have granted other concessions as well, such as reduced interest rates for export financing and a cut in the number of drugs under price control. Government support is not the only thing in Indian pharma’s favor, through; companies also have access to a highly-developed IT industry that can partner with them in new molecule discovery. Two major industries in pharmaceutical R&D are:

1. Primary Research Facility Mumbai

It gets technical and financial assistance form NIH, USA. It is established on 25 acres of land with an Investment of US$16.7 million and has a facility to house 7500 breeding stocks. The center has received US$ 4 mn grant from US and US$ 4 million from ICMR.

2. International Animal Research Facility Hyderabad

Government of Andhra Pradesh has allotted 100 acres of land at the Biotech Park in Genome Valley for International animal research facility. Department of Biotechnology has also provided US$ 4.4 million for the same. The facility will be of international standards with animal testing facilities, hi-tech equipment, a strong technical board and ethical committee.

Clinical Research – India, Most significant Emerging Geography

Indian clinical research industry is estimated at over US$ 100 million. It complies with ICH-GCP protocols. It is a growing body of trained and
experienced investigators. India is expected to capture about 10 percent of the
global clinical research market by 2010.

![India has the most US FDA approved manufacturing sites outside the US](image)

Big Pharma organizations are contributing patients from India for
multicentre global trails for FDA/EMEA submissions. Seven of the top 10
global CROs have a presence in India.

The above mentioned advantages are an asset and have strengthened
the Indian pharmaceutical industry, thus generating a great deal of
opportunities for the sector to flourish. The major opportunities that the
industry enjoys today are as under.  

2.16 Pharmaceutical R&D

Pharmaceutical R&D is a costly and risky business, but in recent years
the financial rewards from R&D have more than offset its costs and risks.

The average after-tax R&D cash outlay for each new drug that reached
the market in the 1980s was about $65 million (in 1990 dollars). The R&D
process took 12 years on average. The full after-tax cost of these outlays,
compounded to their value on the day of market approval, was roughly $194
million (1990 dollars).
The cost of bringing a new drug to market is very sensitive to changes in science and technology, shifts in the kinds of drugs under development and changes in the regulatory environment. All of these changes are occurring fast. Consequently, it is impossible to predict the cost of bringing a new drug to market today from estimated costs for drugs whose development began more than a decade ago.

Each new drug introduced to the US market between 1981 and 1983 returned, net of taxes, at least $36 million more to its investors than was needed to pay off the R&D investment. This surplus return amounts to about 4.3 percent of the price of each drug over its product life.

Pharmaceutical R&D Cost, Risk and Reward

Dollar returns on R&D are highly volatile over time. Changes in R&D costs, tax rates, and revenues from new drugs are the most important factors influencing net returns. Drugs approved for marketing in 1984-88 had much higher sales revenues (in constant dollars) in the early years after approval than did drugs approved in 1981-83. On the other hand, R&D costs may be increasing and generic competition could be much stiffer for these drugs after they lose patent protection.

Over a longer span of time, economic returns to the pharmaceutical industry as whole exceeded returns to corporations in other industries by about 2 to 3 percentage points per year from 1976 to 1987, after adjusting for differences in risk among industries. A risk-adjusted difference of this magnitude is sufficient to include substantial new investment in the pharmaceutical industry.
The rapid increase in revenues for new drugs throughout the 1980s sent signals that more investment would be rewarded handsomely. The pharmaceutical industry responded as expected, by increasing its investing in R&D. Industry wide investment in R&D accelerated in the 1980s, rising at a rate of 10 percent per year (in constant dollars).

The rapid increase in new drug revenues was made possible in part by expanding health insurance coverage for prescription drugs in the United States through most of the 1980s. Health insurance makes patients and their prescribing physicians relatively insensitive to the price of a drug. The number of people with prescription drug coverage increased, and the quality of coverage improved.

Almost all private health insurance plans covering prescription drugs are obligated to pay their share of the price of virtually any FDA-approved use of a prescription drug. FDA approval acts as a de facto coverage guideline for prescription drugs. Most health insurers have almost no power to influence prescribing behavior or to control the prices they pay for patented drugs.

Manufacturers of drugs that are therapeutically similar to one another compete for business primarily on quality factors, such as ease of use, side-effect profiles and therapeutic effect. With price-conscious buyers such as health maintenance organization (HMOs) and hospitals, however, they have engaged in more vigorous price competition.

If price competition among therapeutically similar compounds became more common, the directions of R&D would change and the total amount of R&D would probably decline. Whether a decrease in R&D would be good or bad for the public interest is hard to judge. It is impossible to know whether
today level of pharmaceutical R&D is unquestionably worth its costs to society.

The National Institutes of Health (NIH) and other Public Health Service laboratories have no mechanism to protect the public’s investment in drug discovery, development and evaluation. These agencies lack the expertise and sufficient legal authority to negotiate limits on prices to be changed for drugs discovered or developed with Federal funds.24

2.17 Pharmaceutical R&D in India

Research & Development is the key to the future of pharmaceutical industry. The pharmaceutical advances for considerable improvement in life expectancy and health all over the world are the result of a steadily increasing investment in research. There is considerable scope for collaborative R&D in India. India can offer several strengths to the international R&D community. These strengths relate to availability of excellent scientific talents who can develop combinatorial chemistry, new synthetic molecules and plant derived candidate drugs.

The R&D expenditure by the Indian pharmaceutical industry is around 1.9 percent of the industry’s turnover, which is a little low as compare to foreign research based pharmaceutical companies. However, now that India is entering into the Patent protection area, many companies are spending relatively more on R & D.

When it comes to clinical evaluation at the time of multi-center trials, India is providing a strong base considering the real availability of clinical materials in diverse therapeutic areas. According to a survey by the Pharmaceutical Outsourcing Management Association and Bio/
Pharmaceutical Outsourcing Report, pharmaceutical companies are utilizing substantially the services of Contract Research Organizations (CROs).

Indian Pharmaceutical Industry, with its rich scientific talents, provides cost-effective clinical trials research. It has an excellent record of development of improved, cost-beneficial chemical syntheses for various drug molecules. Some MNCs are already sourcing these services from their Indian affiliates.

**Research & Development**

The search for innovative drug molecules and better technologies by pharmaceutical MNCs is expected to offer a windfall for the smaller research-oriented Indian firms.

MNCs, whose drug pipelines are drying up and more blockbuster drugs going off-patent, are looking for alliances for drug co-development, buying or licensing out innovative molecules which can further be developed into finished drugs.

Moreover, in a bid to boost R&D in the pharmaceutical sector, the government will provide US$ 422.96 million for establishing six National Institutes of Pharmaceutical Education and Research over the next five years.

Biotechnology major, Biocon, will be investing US$ 20.11 million in the next fiscal in enhancing its R&D.

Piramal Life sciences, the drug research company of the Piramal Group, will invest US$ 43.4 million in the next two years for developing new medicines.

**2.18 Accounting for Research and Development**

The research and development cost is accounted in accordance with Accounting Standard – 26 ‘Intangible Asset’. All related revenue expenditure
incurred on original and planned investigation undertaken with the prospect of gaining new scientific or technical knowledge and understanding up to the time when it is possible to demonstrate probable future economic benefits, is recognized as research expenses and charged off to the profit and loss account, as incurred. All subsequent expenditure incurred for product development on the applicant of research findings or other knowledge upon demonstration of probability of future economic benefits, prior to the commencement of production, to the extent identifiable and possible to segregate are accumulated and carried forward as development expenditure under Capital Work in Progress, to be capitalized as an intangible asset on completion of the project. In case a project does not proceed as per expectations / plans, the same is abandoned and the amount classified as development expenditure under Capital Work in progress is charged off to the profit and loss account.

Revenue expenditure on Research and Development is recognized as expense in the year in which it is incurred.

Capital expenditure on Research and Development is shown as addition to Fixed Assets.

2.19 Previous research

By Leigh Goess

Accrual and cash basis accounting are two kinds of approaches to maintaining and recording financial transactions. Companies will choose one method to use as their approach to maintaining accounting records.

The largest difference between the two method sis the way a business chooses to document their incoming and outgoing cash. These variations in
rules primarily apply to the timeframe in which revenues and expenses are reported.

Principles of Accrual Accounting:

Accrual accounting is founded upon the philosophy transactions are recorded when the event occurs, which does not necessarily correlate with the time money actually changes hands. Revenues are recorded when they are merited, in other words, when the work obligation has been met and the money has been earned. Expenses are recorded at the time they are incurred, and this also may not happen in the same accounting period when the company pays the bill for the expenditure.

The philosophy which states revenue is recorded when it is earned is known as the revenue recognition principle; expenses documented as they are incurred are referred to as the matching principle. Accountants use a procedure called adjusting entries to ensure these principles are adhered to. Adjusting entries are a way to bring the ending trial balances in order. Being revenues and expenses are recorded at the time of occurrence, the dollar amounts may not exactly match up with the incoming and outgoing cash flows.

Adjusting entries are categorized as prepayments or accruals:

Prepayments – These are prepaid expenses and unearned revenues. Prepaid expenses are expenditures which have been paid for and recorded as assets, but have yet to be utilized. Unearned revenues is when money is received, but the company has yet to perform the service or deliver the product and meet their end of the obligation; in other words they still have a liability to meet even though money has been collected.
An example of a prepaid expense would be payment on an insurance policy, the money has been paid for this service, but the time hasn’t elapsed yet, meaning it hasn’t been “used” and is recorded as an asset until the time expires. A magazine subscription would be an example of unearned revenue. The company requires a subscriber to pay the subscription fee a year in advance, and they have received cash, but have not yet earned it. An event such as this would likely be recorded in an account called “unearned revenue” and each month a portion of it would become earned.

By J L Petriesan

In the simplest of terms, cash accounting is check-book accounting; an entry is made only when something has an effect on the cash balance: the collection of a receivable, the payment of an invoice, borrowing money, paying back to loan. The problem with it is it ignores many things, like how much is owed to you for sales you have made and not been paid for, the unpaid vendors, and so on.

There is yet another method, the so-called Modified Cash Basis, which typically recognizes some things, like receivables and payables and debt, but ignores many of the other things required to be a full-GAAP set of financial statements.

Which is the better method of accounting? Well, neither really. Both have their issues, positives and negatives.

Yeah, but which one do the accounts like? In the very long term, the dirty little secret is that Cash accounting = Accrual accounting. Eventually, everything turns to cash. Say you start a business with Rs 100. Twenty years later, you close it down, sell of everything and pay off everybody and end up
with $200. This end result is the same no matter what method you use in the interim. The difference is how each individual period during the life of a business is reported.

Accountants neither like nor dislike either one. If you look at a complete set of financial statements, you will find the following things. Typically in this order.

A Balance sheet, which is a listing of assets, liability and equity accounts where assets equal the sum of liabilities and equity.

An income statement, which is a listing of revenues and expenses, eventually resulting in a Net income or loss amount. This statement is done on an accrual basis.

A statement of Equity Accounts, which reconciles the beginning equity accounts with the ending amount, which includes income from the income statement (accrual basis).

A Statement of Cash Flows, which reconciles beginning cash to ending cash, this show, roughly, where the money came form and where it went. In the olden days, there were two formats for this: the direct and indiscreet method. The direct method itemized the collections of cash, be it from cash sales or collection of accounts receivable and the payment of invoices; the indirect method begins with the Net Income.

By Andrew Michaels

Almost all of us practice accounting in some way. It is the process of keeping track of the money that is coming in and the money that is going out. Even if we do not write in down in a book or a spreadsheet, most of us have some idea of our income and outgoings.
Businesses and organizations need to keep a formal record of the money they handle, for legal and tax purposes. Most of them adopt what is called accrual accounting, which can be a little difficult for non-accountants to understand. This article is an attempt to explain what it is and how it differs from cash accounting.

What is Cash Accounting?

As the name implies, cash accounting is a way of recording financial transactions as they actually happen.

To explain how it works we will use an example. Ram opens a clothes store on July 1st. He pays Rs. 100 rent for the month, Rs. 240 to fit out the store, and buys Rs. 250 of stock. So he’s spent Rs. 590 in total during July. During July he sells Rs. 500 of clothes. In cash accounting terms he’s made a loss of Rs. 90, because he’s spent money than he received.

Cash accounting is very easy to understand. However, it doesn’t give an entirely accurate picture of the financial reality. Although it looks like Ram lost money, he’s actually running a successful business. Accrual accounting helps to explain why.

What is Accrual Accounting?

The term accrual doesn’t mean a lot to people who are not involved in accounting. But the idea is simple enough – It’s about associating income and costs over the period of time they relate to rather than when the money actually changes hands.

In Ram’s example he paid Rs. 100 in rent for July, so it’s fair to say that was a cost that relates only to July. He also paid Rs. 420 for fitting out the store. The same fittings will be using in August, September and for months to
come. So it’s not really right to associate that cost only with July – it should be spread out over several months.

Let’s estimate that the shop fittings will last for one year. That means dividing the Rs.240 by 12 months, which is Rs.20 per month. Now we can say the Ram made Rs.130 profit in July, because her costs were Rs.100 rent, Rs.250 stock and Rs.20 for shop fitting. That’s Rs.370 costs in total.

This is accrual accounting.

However, Ram’s business is even more successful than we’ve made it look so far. That’s because at the end of July she has not sold all her stock. He bought it for Rs. 250, made sales worth Rs.500, but still has some stock left over. He can sell this in August, along with new stock he’s going to buy in.

At the end of July the stock that Ram still has in her stock is valued at Rs.50, based on the price he paid for it. This means that the stock he sold for Rs.500 only cost her Rs.200, not Rs.250.

So his profit for July was actually Rs. 180. That’s Rs.500 sales minus cost of Rs.100 rent Rs.200 stock and Rs.20 shop fitting.

The difference between Cash and Accrual Accounting.

The difference is that although Ram made Rs.180 profit, he does not have Rs.180 in cash. He’s actually down by the original Rs.100 loss we talked about earlier. But even though he owes Rs.100 at the end of July (maybe he borrowed from the bank, or him savings), he also own Rs.50 of stock and a shop with new fittings.

Accrual accounting might seem a tricky concept to understand but when you think about it for a while it should mean sense. All large
corporations and organizations use accrual accounting because it gives a more accurate picture of their financial situation.

What you have to remember is that, like Ram, a business can be profitable but can also be short of cash. But that is a whole different subject.

By Pennee Struckman

Accrual verses cash Accounting can be one of the more difficult accounting concepts for non-financial people to understand. For the small business owner, every transaction is on a cash basis. They understand revenues and expenses, but what is all this accrual stuff?

The foundation of accrual accounting the accurate recording of revenues earned and expenses incurred for the specific period. For example, paying the annual business insurance premium depletes cash in the month paid. This also applies to the upfront insurance premium payment and subsequent month billings. This insurance is going to cover the business for a 12 months period, but the cash outlay occurs in one month or over a nine-month period.

Accrual accounting uses a prepaid insurance account and journal entries to capture the payment and record the monthly portion. This prepaid account is a current asset, used to record the payments. The accountant then takes the annual amount of the premium and divides it by 12. Each month, a journal entry is made to record the current month portion of the business insurance premium as an expense, and reduce the prepaid business insurance account.

Accrual accounting records revenue as it is earned, and expenses and purchases when they are incurred. This is done using the Accounts Receivable
and the Accounts Payable accounts. When a customer is invoiced, this is revenue earned. The revenue flows into the monthly reporting to show how much revenue was earned to record profit for the month. Accrual Accounting does not consider the customer payment as when the revenue was earned.

When a bill is received for the business, and when payroll is generated, the associated expenses and liabilities are recorded on an accrual basis. This means that, regardless of when the expense is paid, the business expense is considered spent in the month of its recorded. The Accounts Payable Account is a current liability, as are the payroll taxes. The payroll taxes, both the employer and the employee portion, may be due weekly, monthly or quarterly. In accrual accounting, these are considered a business expense in the month they were incurred, and are classified as accrued expenses, or current liabilities.

Cash basis accounting ignores the concept of Prepaid and Accrued expense, as well as Accounts Receivable and Accounts Payable. This method recognized cash when it is received and cash when it is spent. It does not represent a true picture of the business net.

By Joe Coffee

There are two types of tax accounting methods to use when submitting business figures to the Internal Revenue Service. These two methods are the cash and accrual methods. Choosing which method you use is determined by the company.

The decision can be as simple as a personal preference or many factors can play into the selection. Larger companies tend to have many factors like sale procedure, how many salesmen, volume of sales, number of sales,
inventory, when the commission is paid, the percentage of operations are sales compared to production, accountant or business partner experiences, and the list goes on.

Accrual method of tax accounting records all sales and transactions at the time of the agreement. Even if the money does not exchange hands, according to the accounting record books, the sale is complete and accounted for.

This method takes discipline to make sure all payments are actually received. Since the books show the transaction as complete, a separate ledger must be kept to follow up with payment plans and collection. This can be especially difficult for small businesses that may not employ a secretary or accounting staff. Within fewer numbers of sales, accrual accounting just means more work of entering sales and payments in two separate books.

If a company sells expensive products, partial payments on long payment plans are generally used. When using accrual accounting this can reflect the cash flow drastically different. If 3 items are sold in one month for Rs30000 and next month 6 are sold for Rs 60,000, it looks like twice the income. However, accrual accounting does not take the payment plans into account. Payment plans could range from 2 payments in 6 months to 24 payments over 2 years. Usually longer plans are needed for larger purchases which will show more inaccurate.

Let's say a company just starts and has Rs30000 in sales the first month, but each sale has a long-term payment plan. Only looking at accrual accounting would be misleading because only Rs3000 was physically
obtained. When you look to pay bills for operating expenses, accrual accounting will not show how much liquid finances you have to use.

After the tax accounting selection for the accrual method has been made it is difficult to change methods. If a change is absolutely necessary, there is a way. The last 2 consecutive years must have used the accrual method and the Secretary of the Treasury must receive a written request. The business owner should use a certified public accountant to help make sure this procedure is done correctly.

By Jack Roviere

If you offer to mow your friend’s lawn, and he says he will pay you at the end of the month, when can you claim revenue? Is it when you have mowed the lawn, or is it when you have cash in hand?

Generally accepted accounting principles give us a broad base: revenues should be measured when 1) earned and 2) realized or realizable. This does not quite answer our question yet, but to begin, let us look at two viewpoints that attempt to answer these issues: cash basis accounting and accrual basis accounting.

Some may say, for example, that the lawn-mowing revenue is only meaningful when the cash is in hand. After all, one can not spend the cash until it is received, right? This is the basic idea behind cash basis accounting.

Everyone is not happy with this answer; however, After all, since we trust our friend, then even if we don’t have the cash now, shouldn’t we feel justified in saying that we are reasonably certain that we will receive it? With this viewpoint, once we have down our part of the bargain – the lawn mowing
we have earned the revenue. This is the idea behind accrual basis accounting.

Cash basis accounting seems to work seamlessly in small systems such as lawn mowing services, but for larger business, it falls short. In fact, GAAP mandates that cash basis accounting cannot be used. But why? A critical assumption of financial accounting is periodicity.

Companies, although they hope to have long lies (and truly, it would be great for your company to last forever, right?) divide their lifetimes into periods for the purpose of keeping records. This is why companies release quarter and annual reports (or why even in our own lives, we divide into ages, grades, classes, and other arbitrary periods). Periodicity is what allows us to justify that "earnings" generally happens in the period that a task is completed..... So even though the cash isn’t in hand, if we trust our friend and we have completed the task (mowing the lawn), then we have ‘earned’ the revenue in that period.

2.20 The institute of Chartered Accountants in India

The Institute of Chartered Accountants (ICAI) is a statutory body established under the Chartered Accountants Act, 1949 (Act No.XXXVIII of 1949) for the regulation of the profession of Chartered Accountants in India. During its nearly six decades of existence, ICAI has achieved recognition as a premier accounting body not only in the country but also globally, for its contribution in the fields of education, professional development, maintenance of high accounting, auditing and ethical standard. ICAI now is the second largest accounting body in the whole world.
ICAI has its Headquarters at New Delhi with five Regional Offices at Mumbai, Chennai, Kanpur, Kolkata, New Delhi and 117 branches spread all over the country. In addition, it has also set up 19 chapters outside India and an office in Dubai.

The terms of the Chartered Accountants Act, 1949, the President is the Chief Executive Authority of the Council. The Secretariat of ICAI is headed by the Secretary who is in-charge of the office of ICAI as its Executive Head. The activities of IAI an be broadly divided into four parts comprising of Technical Directorate, CPE Directorate, Board of Studies and the Administration, each one headed by separate head. Other important wings of ICAI are the Examination Department, Disciplinary Cell, Legal Department, Members and Students Services, International Affairs, Research etc. ICAI has also set up the ICAI Accounting Research Foundation under Section 25 of the Companies Act, 195615.
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