Chapter 3

Processing Accounting Information

Key Concepts:

- What is the difference between an external and an internal event?
- What are the sources of accounting information?
- How is accounting information recorded?
- How is a trial balance used?
Chapter Outline

LO 1
External and Internal Events
Event: a happening of consequence to an entity
- Transaction: internal or external event recognized in financial statements
  - can be measured reliably
  - external: interaction between the entity and the outside environment
  - internal: entirely within the company (entity)

LO 2
The Role of Source Documents in Recording Transactions
Source document: written evidence that an event has taken place
- Supplier invoice
- Cash register tape
- Time card
- Sometimes the company must generate a document to establish that an event took place which was not initiated by a document
- Properly store these for later use by management, employees, internal and external auditors, and regulatory agencies (IRS, SEC)

LO 3
Analyzing the Effects of Transactions on the Accounting Equation
Assets = Liabilities + Owners' Equity
Account: any asset, liability, or owners' equity item for which the company wants to accumulate monetary amounts
- The basic recording unit
- Chart of accounts: numerical list of all of the company's accounts
  - numbered to identify type of account (asset, liability, owners' equity, revenue, expense)
- Transactions are recorded at the acquisition cost because this amount is objective and can be verified.

LO 4
The General Ledger
General ledger: file or book containing the company's accounts
- Generally automated nowadays, but no reason it cannot be a book or cards
- T account is a simplified form of general ledger account that shows left and right side entries to each individual account on a big "T"
- Many companies maintain subsidiary ledgers, a separate ledger account for each component of the general ledger account (i.e. accounts receivable, accounts payable, inventory, capital stock, and property, plant and equipment).

LO 5
Rules of debit and credit
- Left side of an account is called the debit side, right side is called the credit side
  - debit and credit can also be used as verbs: we debit (make an entry to left side) or credit (make an entry to right side) an account
- *charge* is another verb for debit
- debit (Dr) and credit (Cr) do not necessarily mean “increase” and “decrease,” only left and right

<table>
<thead>
<tr>
<th></th>
<th>asset</th>
<th>liability</th>
<th>capital stock</th>
<th>revenue</th>
<th>expense</th>
<th>dividend</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Increase</strong></td>
<td>Dr</td>
<td>Cr</td>
<td>Cr</td>
<td>Cr</td>
<td>Dr</td>
<td>Dr</td>
</tr>
<tr>
<td><strong>Decrease</strong></td>
<td>Cr</td>
<td>Dr</td>
<td>Dr</td>
<td>Dr</td>
<td>Cr</td>
<td>Cr</td>
</tr>
<tr>
<td><strong>Normal balance</strong></td>
<td>Dr</td>
<td>Cr</td>
<td>Cr</td>
<td>Cr</td>
<td>Dr</td>
<td>Dr</td>
</tr>
</tbody>
</table>

- "Normal" balance is usually the entry to *increase* the account, or the balance we usually expect the account to have
- Debits and credits are not "bad" or "good," only left and right
- The "double entry" accounting system: every time we debit an account, we must credit (an)other account(s) in an equal amount
- can be more than one debit, or more than one credit, but TOTAL DOLLAR amount of debits has to equal TOTAL DOLLAR amount of credits

Three steps to **record a transaction**:
- **Analyze**: think! what account increases, what account decreases
- **Recall** the *debit and credit rules* as they apply to these increases and decreases
- **Record** using the rules: debit something(s), credit something(s)

**The Journal: The Firm’s Chronological Record of Transactions**

- **Journal**: book of original entry, kept in the order events occur
  - Chronological
  - Record here first, then transfer—**post**—to ledger

The **standard format for a journal entry**:
- **Date** on first line
- **Account debited** on the first line, followed by *amount* debited in a column labeled Dr (debit)
- **Account credited** indented to the right on next line followed by *amount* credited in Cr (credit) column to right of Dr column
- **Compound entry** has more than one debit or credit (or both) line
- **Explanation** of entry on last line

**Posting to the Ledger Accounts**:

- Number of transactions processed in a normal company is too large to use the journal to prepare statements
- **Ledger** summarizes information by *account*
- **Posting** transfers amounts from the journal to the proper ledger account

**The Trial Balance**

- **Trial balance** is a list of each account and its balance at a specific point in time
  - Working paper, not a statement
  - Proves that total Dr = total Cr
  - Helps find certain entry posting errors
  - Does not necessarily mean correct accounts were used
Lecture Suggestions

LO 3

For the first time in the text, in this chapter students follow a series of events, each of which must be recorded in its proper place in the accounting equation. Guiding this process in class reinforces the process of analysis and recording, which is essential to the understanding of further concepts. Point out at this time that understanding transaction analysis is absolutely essential and that after this chapter all explanations will be in this format. Stress that use of the transactions format permits one to focus on the effects of a decision on the statements without becoming ensnared in accounting procedures. The following technique is a good way to introduce students to performing transaction analysis. Hand out at the beginning of class a sheet on which you have written the accounting equation across the top, with sample accounts listed under each heading, such as Exhibit 3-1 in the book. List transaction numbers (corresponding to the example in the text) down the left side, at intervals large enough for the students to fill in the amounts for the transactions. Students now have the correct format and can fill in the dollar amounts as the transactions are discussed in class. An alternative to the example within the chapter is Problem 3-2 at the end of the chapter. Using new numbers prevents the class from responding to your questions with the numbers in the book, instead of thinking through the transactions themselves. A pro forma balance sheet and income statement might also be included in the handout, so that a discussion of statement preparation from the transaction record can follow.

LO 4

Compare the general ledger cash account to a checkbook register. Both represent a location at which a user can view both the details and the account balance of a single account.

LO 5

Material in this lesson objective is likely to be confusing. Just when students thought they understood what was happening, these rules of recording appear. At this point, point out that the rules of debits and credits are essential knowledge for accountants, but that for most business students and business professionals being aware of them is adequate, that they need not develop proficiency in their use. Stress that they are simply the accountant’s convention for reporting increases and decreases in accounts and that what is important is for non accountants is understanding the effect of business decisions and transactions on the financial statements. If you intend to test students on the application of the rules of debit and credit, additional illustrations and practice should be given. Otherwise, you need not dwell on this topic; let your students rejoice in your having chosen the alternate edition of this textbook.

If requiring knowledge of debits and credits, a useful neumonic device to remember the rules is "DEAD" - Debits increase Expenses, Assets, and Dividends. Emphasize repeatedly the definitions of debit and credit. Debit is the left side of the account; credit is the right. Some instructors make a game out of it by having the whole class raise their left hands when a debit account is mentioned and their right hands when a credit account is mentioned.
This is an excellent point to reinforce the steps of the accounting cycle and to illustrate the benefits of computer technology in eliminating manual tasks. From the point of data entry, frequently at a point of sale terminal, much of the accounting cycle is highly automated with the steps being performed electronically and almost instantaneously. Take the students through the preparation of the trial balance. At this point it is useful to introduce the trial balance.

Students often confuse the trial balance and the balance sheet. The distinction needs to be made clear.

Let students know that the trial balance plays a role in the preparation of adjusting journal entries in Chapter 4.
Projects and Activities

LO 3

Analyzing the Effects of Transactions on the Accounting Equation

In-class discussion: What accounts will our business need?
The transition from seeing accounts listed in the text to choosing accounts to use in a real business is not always obvious. An interesting and informative exercise involves inventing a small business, and asking students to suggest a list of accounts (chart of accounts) that the business will need as it begins operations. Use very simple examples like a lemonade stand, a babysitting service, or newspaper delivery.

Solution
Encourage students to think about what it is that a business has to “keep track of.” A lemonade stand, for example, would probably need a cash account, perhaps accounts receivable, inventory, furniture (certainly an inverted crate, a table and chair if they get fancy), perhaps accounts payable (to mom), owner’s capital, and then a revenue account and some expenses: wages, supplies, permits. A lot will depend upon how your class imagines this business. In all cases, students have an opportunity to apply the textbook’s theory to a realistic situation.

LO 5

The General Ledger

In-class exercise: K2 Inc. income statement
Examine the income statement of K2 Inc. in your textbook. All the accounts listed are summarized from the many journal entries prepared by the company during the years 1996 – 1998. You have learned that accounting is a “double entry” system: that every transaction affects two accounts. For each item on the income statement, identify what other account or accounts were probably affected when transactions were recorded.

If you wish to emphasize debits and credits Ask students to determine the normal balance of each account on the income statement. Do they have a debit or a credit balance? Which account(s) do you think the company credited (debited) when they debited (credited) each of the income statement accounts? In other words, to which account(s) was the other half of the entry made?

Solution
The solution below works equally well for either illustrating the pure transactions approach or focusing on the rules of recording. The numbers do not matter for this exercise, only the accounts themselves:

<table>
<thead>
<tr>
<th>Statement Account</th>
<th>DR/CR?</th>
<th>Other account (DR/CR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net sales</td>
<td>Cr</td>
<td>cash or accounts receivable (Dr)</td>
</tr>
<tr>
<td>Cost of goods sold</td>
<td>Dr</td>
<td>inventory (Cr)</td>
</tr>
<tr>
<td>Selling, general and administrative expenses, and</td>
<td>Dr</td>
<td>cash, accounts payable, prepaid expense, wages payable,</td>
</tr>
<tr>
<td>research and development expenses</td>
<td></td>
<td>other liabilities (Cr)</td>
</tr>
<tr>
<td>Interest expense</td>
<td>Dr</td>
<td>interest payable or cash (Cr)</td>
</tr>
<tr>
<td>Other income</td>
<td>Cr</td>
<td>cash or receivable (i.e. interest, dividends) (Dr)</td>
</tr>
<tr>
<td>Provision for income taxes</td>
<td>Dr</td>
<td>tax payable, deferred tax, cash (Cr)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(students may not understand this)</td>
</tr>
</tbody>
</table>
Discontinued operations  Cr  cash (Dr)  (Although this is an item the students will not completely understand, the wording suggests a gain from disposing of a segment of operations.)

**Outside assignment: Subsidiary ledgers**

Subsidiary ledgers are also discussed in Chapter 7. The inclusion of this assignment in Chapter 3 helps students see how companies manage large amounts of information.

Examine the 1998 balance sheet, at February 1, 1998, of Dell Computer, shown below. List the accounts you believe have a subsidiary ledger to back them up. For each item you name, explain why the account requires a subsidiary ledger, and what information would be given for each entry in this subsidiary ledger.

**Solution**

Marketable securities: a list containing the cost and purchase date of each investment purchased, and a similar record for each one sold.

Accounts receivable: a listing by customer of amounts owed to Dell, to aid in collection. For each customer, list the date they were invoiced, and the amount billed.

Inventories: although the backup is not always thought of as a subsidiary ledger, companies do keep detailed inventory records by item, quantity, and cost.

Property and equipment, net: each non-current tangible asset, its cost, expected life, depreciation method, accumulated depreciation, and net book value.
Accounts payable: a list of debts owed by Dell, listed by supplier, with invoice dates and amounts.

Long term debt: if more than one note exists, a list by individual debt contract, interest rate, payment dates and amounts.

Stockholder list: for common stock. Generally not a “ledger” per se, and often not even kept by the company itself, but rather contracted out to an agent. It lists each stockholder and the number of shares owned.

**LO 5**

**The Rules of Debit and Credit**

**In-class exercise: Another debit / credit chart**

Debit and credit rules slow many students down. Another way to approach learning the rules is to make up a handout chart with the general rules, leaving space for students to fill in examples of specific accounts that they encounter in the text and in homework assignments to fit under each rule. The chart on the following page is one format. It can be reproduced to fit two to a page, and again used as a bookmark by students.
<table>
<thead>
<tr>
<th>Type of account</th>
<th>Normal balance</th>
<th>Increase by</th>
<th>Decrease by</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASSETS</td>
<td>debit (DR)</td>
<td>debit (DR)</td>
<td>credit (CR)</td>
</tr>
<tr>
<td>LIABILITIES</td>
<td>CR</td>
<td>CR</td>
<td>DR</td>
</tr>
<tr>
<td>CAPITAL STOCK</td>
<td>CR</td>
<td>CR</td>
<td>DR</td>
</tr>
<tr>
<td>RETAINED EARNINGS</td>
<td>CR</td>
<td>CR</td>
<td>DR</td>
</tr>
<tr>
<td>DIVIDENDS</td>
<td>DR</td>
<td>DR</td>
<td>CR</td>
</tr>
<tr>
<td>REVENUES</td>
<td>CR</td>
<td>CR</td>
<td>DR</td>
</tr>
<tr>
<td>EXPENSES</td>
<td>DR</td>
<td>DR</td>
<td>CR</td>
</tr>
</tbody>
</table>
Comment

Students use this chart in a number of ways. Some add more lines and list every account they encounter, until the rules of debit and credit are second nature to them. Others use it only to remind themselves of accounts that prove troublesome or difficult to remember. Begin the chart in class by referring to it as examples are discussed. Students may also use the same chart later on to note down more difficult accounts such as contra accounts or treasury stock, which always cause confusion. Another suggestion: this is most effective if you can copy it on colored paper. It will call attention to itself, and not get lost among the wad of notes, papers, notices, and so on that accumulate in books.

LO 6

The Format for a Journal Entry

Outside assignment: Special journals

Companies use “special journals” for repetitive transactions that always affect the same account i.e. debit or credit. Which transactions can you think of that fall into this category? What is the effect of this type transaction on the financial statements? Which accounts are affected? How would you design a special journal for these that would cut down on the amount of writing required recording them? Do you think it would be significantly different on a computerized system? Explain.

Solution

This exercise gives students another opportunity to design an accounting system, as they would do, for example, as entrepreneurs. The usual candidates for special journals are cash receipts, cash disbursements, accounts receivable, and accounts payable. Once the students decide on these, perhaps beginning this part in class, they can move on to how to reduce processing time. Answers will be close to what the real journals look like, with essentially one-sided entries made to a special journal, summarized when posted to the ledger.

Ask students to look at accounting software packages and report which special journals and/or subsidiary ledgers are included.

LO 8

The Trial Balance

Food for thought: Does the trial balance have to be perfect?

Does a trial balance have to balance perfectly? What if you prepare a trial balance with totals in the hundreds of thousands of dollars, and the two columns differ by a dollar? Can you say, as we often do in everyday life for a situation like this, “close enough!” and go on from there? Discuss the pros and cons of this decision. What would you do if you were responsible for preparing statements? Are there any ethical considerations involved here?

Solution

The trial balance does have to balance perfectly. Accountants hesitate to “write off” a minor imbalance because they’ve seen instances where a small imbalance masks a big problem. For example, two accountants reconciling a troublesome intercompany account for a new subsidiary of their company came within a couple of thousand dollars (in an 8-figure balance). The temptation to write it off and go home was great, but they had a bad feeling about it since so much had gone wrong already, so they kept working on it. After a couple of more hours they found the error, in excess of $3 million. Students’ rationales on both sides of this question are interesting because most of them do not have very extensive business experience and do not see immediately the possibility of two very large, not quite counterbalancing errors resulting in a very minor total difference. In ethical terms, accountants are not paid to bury their mistakes, but to accurately record and report the company’s financial status.

This is also an example of materiality. The difference in dollars may be immaterial. However, the underlying error(s) may be significant.