The Accounting Cycle

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Welcome to the World of Accounting

Part 1

Your goals for this "welcoming" chapter are to learn about:

- The nature of financial and managerial accounting information.
- The accounting profession and accounting careers.
- The fundamental accounting equation: Assets = Liabilities + Owners' Equity.
- How transactions impact the fundamental accounting equation.
- The four core financial statements.

1. Accounting Information

You likely have a general concept of what accountants do. They capture information about the transactions and events of a business, and summarize that activity in reports that are used by persons interested in the entity. But, you likely do not realize the complexity of accomplishing this task. It involves a talented blending of technical knowledge and measurement artistry that can only be fully appreciated via extensive study of the subject. The best analogy is to say that you probably know what a heart surgeon does, but you no doubt appreciate that considerable knowledge and skill is needed to successfully treat a patient. If you were studying to be a surgeon, you would likely begin with some basic anatomy class. In this chapter, you will begin your study of accounting by looking at the overall structure of accounting and the basic anatomy of reporting.

Be advised that a true understanding of accounting does not come easily. It only comes with determination and hard work. But, if you persevere, you will be surprised at what you discover about accounting. Knowledge of accounting is very valuable to business success. And, once you conquer the basics, accounting is actually quite an interesting subject.

1.1 Accounting Defined

It seems fitting to begin with a more formal definition of accounting: Accounting is a set of concepts and techniques that are used to measure and report financial information about an economic unit. The economic unit is generally considered to be a separate enterprise. The information is potentially reported to a variety of different types of interested parties. These include business managers, owners, creditors, governmental units, financial analysts, and even employees. In one way or another, these users of accounting information tend to be concerned about their own interests in the entity. Business managers need accounting information to make sound leadership decisions. Investors hold out hope for profits that may eventually lead to distributions from the business (e.g., “dividends”).

Creditors are always concerned about the entity’s ability to repay its obligations. Governmental units need information to tax and regulate. Analysts use accounting data to form their opinions on which they base their investment recommendations. Employees want to work for successful companies to further their individual careers, and they often have bonuses or options tied to enterprise performance. Accounting information about specific entities helps satisfy the needs of all these interested parties. The diversity of interested parties leads to a logical division in the discipline of accounting: financial accounting and managerial accounting. Financial accounting is concerned with external reporting of information to parties outside the firm. In contrast, managerial accounting is primarily concerned with providing information for internal management. You may have some trouble seeing why a distinction is needed; after all aren’t we just reporting financial facts? Let’s look closer at the distinctions.

1.2 Financial Accounting

Consider that financial accounting is targeted toward a broad base of external users, none of whom control the actual preparation of reports or have access to underlying details. Their ability to understand and have confidence in reports is directly dependent upon standardization of the principles and practices that are used to prepare the reports. Without such standardization, reports of different companies could be hard to understand and even harder to compare. As a result, there are well

organized processes to bring consistency and structure to financial reporting. In the United States, a private sector group called the Financial Accounting Standards Board (FASB) is primarily responsible for developing the rules that form the foundation of financial reporting. With the increase in global trade, the International Accounting Standards Board (IASB) has been steadily gaining prominence as a global accounting rule setter.

Financial reports prepared under the generally accepted accounting principles (GAAP) promulgated by such standard setting bodies are intended to be general purpose in orientation. This means they are not prepared especially for owners, or creditors, or any other particular user group. Instead, they are intended to be equally useful for all user groups. As such, attempts are made to keep them free from bias (neutral).

1.3 Managerial Accounting

In sharp contrast to financial accounting, managerial accounting information is intended to serve the specific needs of management. Business managers are charged with business planning, controlling, and decision making. As such, they may desire specialized reports, budgets, product costing data, and other details that are generally not reported on an external basis. Further, management may dictate the parameters under which such information is to be accumulated and presented. For instance, GAAP may require that certain research costs be deducted immediately in computing a business's externally reported income; on the other hand, management may see these costs as a long-term investment and stipulate that internal decision making be based upon income numbers that exclude such costs. This is their prerogative. Hopefully, such internal reporting is being done logically and rationally, but it need not follow any particular set of guidelines.

1.4 A Quality Information System

Both financial accounting and managerial accounting depend upon a strong information system to reliably capture and summarize business transaction data. Information technology has radically reshaped this mundane part of the practice of accounting during the past 30 years. The era of the "green eye-shaded" accountant has been relegated to the annals of history. Now, accounting is more of a dynamic, decision-making discipline, rather than a bookkeeping task.

1.5 Inherent Limitations

Accounting data is not absolute or concrete. Considerable amounts of judgment and estimation are necessary to develop the specific accounting measurements that are reported during a particular month, quarter, or year (e.g., how much pension expense should be reported now for the future benefits that are being earned by employees now, but the amounts will not be known with certainty until many years to come?). About the only way around the problem of utilizing estimation in accounting is to wait until all facts are known with certainty before issuing any reports. However, by the time any information could be reported, it would be so stale as to lose its usefulness. Thus, in order to timely present information, it is considered to be far better to embrace reasonable estimations in the normal preparation of ongoing financial reports.

In addition, accounting has not yet advanced to a state of being able to value a business (or a business's assets). As such, many transactions and events are reported based upon the historical cost principle (in contrast to fair value). This principle holds that it is better to maintain accountability over certain financial statement elements at amounts that are objective and verifiable, rather than opening the door to random adjustments for value changes that may not be supportable. For example, land is initially recorded in the accounting records at its purchase price. That historical cost will not be adjusted even if the fair value is perceived as increasing. While this enhances the "reliability" of reported data, it can also pose a limitation on its "relevance."

2. The Accounting Profession and Careers

To decide to be an accountant is no more descriptive than deciding to be a doctor. Obviously, there are many specialty areas. Many accountants engage in the practice of "public" accounting, which involves providing audit, tax, and consulting services to the general public. To engage in the practice of public accounting usually requires one to be licensed as a CPA (Certified Public Accountant). Auditing involves the examination of transactions and systems that underlie an organization's financial reports, with the ultimate goal of providing an independent report on the appropriateness of financial statements. Tax services relate to the providing of help in the preparation and filing of tax returns and the rendering of advice on the tax consequences of alternative actions. Consulting services can vary dramatically, and include such diverse activities as information systems engineering to evaluating production methods. Many accountants are privately employed directly by small and large businesses (i.e., "industry accounting") and not-for-profit agencies (such as hospitals, universities, and charitable groups). They may work in areas of product costing and pricing, budgeting, and the examination of investment alternatives. They may focus on internal auditing, which involves looking at controls and procedures in use by their employers. Objectives of these reviews are to safeguard company resources and assess the reliability and accuracy of accounting information and accounting systems. They may serve as in house tax accountants, financial managers, or countless other occupations. And, it probably goes without saying that many accountants work in the governmental sector, whether it be local, state, or national levels. You would expect to find many accountants at the Internal Revenue Service, General Accounting Office, Securities and Exchange Commission ("SEC" -- the USA governmental agency charged with regulating accounting and reporting by companies whose shares of stock are bought and sold in public markets), and even the Federal Bureau of Investigation.

2.1 Accounting and Professional Ethics

Because investors and creditors place great reliance on financial statements in making their investment and credit decisions, it is imperative that the financial reporting process be truthful and dependable. Accountants are expected to behave in an entirely ethical fashion, and this is generally the case. To help insure integrity in the reporting process, the profession has adopted a code of ethics to which its licensed members must adhere. In addition, checks and balances via the audit process, government oversight, and the ever vigilant "plaintiff's attorney" all serve a vital role in providing additional safeguards against the errant accountant. If you are preparing to enter the accounting profession, you should do so with the intention of behaving with honor and integrity. If you are not planning to enter the profession, you will likely rely upon accountants in some aspect of your personal or professional life. You have every right to expect those accountants to behave in a completely trustworthy and ethical fashion. After all, you will be entrusting them with your financial resources and confidential information.

3. The Fundamental Accounting Equation

The basic features of the accounting model we use today trace their roots back over 500 years. Luca Pacioli, a Renaissance era monk, developed a method for tracking the success or failure of trading ventures. The foundation of that system continues to serve the modern business world well, and is the entrenched cornerstone of even the most elaborate computerized systems. The nucleus of that system is the notion that a business entity can be described as a collection of assets and the corresponding claims against those assets. The claims can be divided into the claims of creditors and owners (i.e., liabilities and owners' equity). This gives rise to the fundamental accounting equation:

$$\text{Assets} = \text{Liabilities} + \text{Owners' Equity}$$

3.1 Assets

Assets are the economic resources of the entity, and include such items as cash, accounts receivable (amounts owed to a firm by its customers), inventories, land, buildings, equipment, and even intangible assets like patents and other legal rights and claims. Assets are presumed to entail probable future economic benefits to the owner.

3.2 Liabilities

Liabilities are amounts owed to others relating to loans, extensions of credit, and other obligations arising in the course of business.

3.3 Owners' Equity

Owners' equity is the owner's "interest" in the business. It is sometimes called net assets, because it is equivalent to assets minus liabilities for a particular business. Who are the "owners?" The answer to this question depends on the legal form of the entity; examples of entity types include sole proprietorships, partnerships, and corporations. A sole proprietorship is a business owned by one person, and its equity would typically consist of a single owner's capital account. Conversely, a partnership is a business owned by more than one person, with its equity consisting of a separate capital account for each partner. Finally, a corporation is a very common entity form, with its ownership interest being represented by divisible units of ownership called shares of stock. These shares are easily transferable, with the current holder(s) of the stock being the owners. The total owners' equity (i.e., "stockholders' equity") of a corporation usually consists of several amounts, generally corresponding to the owner investments in the capital stock (by shareholders) and additional amounts generated through earnings that have not been paid out to shareholders as dividends (dividends are distributions to shareholders as a return on their investment). Earnings give rise to increases in "retained earnings," while dividends (and losses) cause decreases.

3.4 Balance Sheet

The fundamental accounting equation is the backbone of the accounting and reporting system. It is central to understanding a key financial statement known as the balance sheet (sometimes called the statement of financial position). The following illustration for Edelweiss Corporation shows a variety of assets that are reported at a total of $895,000. Creditors are owed $175,000, leaving $720,000 of stockholders' equity. The stockholders' equity section is divided into the $120,000 that was originally invested in Edelweiss Corporation by stockholders (i.e., capital stock), and the other $600,000 that was earned (and retained) by successful business performance over the life of the company.

EDELWEISS CORPORATION Balance Sheet December 31, 20X3			
Assets		**Liabilities**	
Cash	$ 25,000	Accounts payable	$ 50,000
Accounts receivable	50,000	Loans payable	125,000
Inventories	35,000	Total liabilities	$175,000
Land	125,000	**Stockholders' equity**	
Buildings	400,000	Capital stock	$120,000
Equipment	250,000	Retained earnings	600,000
Other assets	10,000	Total stockholders' equity	720,000
Total assets	$895,000	Total Liabilities and equity	$895,000

Does the stockholders' equity total mean the business is worth $720,000? No! Why not? Because many assets are not reported at current value. For example, although the land cost $125,000, the balance sheet does not report its current worth. Similarly, the business may have unrecorded resources to its credit, such as a trade secret or a brand name that allows it to earn extraordinary profits. If one is looking to buy stock in Edelweiss Corporation, they would surely give consideration to these important non-financial statement based valuation considerations. This observation tells us that accounting statements are important in investment and credit decisions, but they are not the sole source of information for making investment and credit decisions.

4. How Transactions Impact the Accounting Equation

The preceding balance sheet for Edelweiss was static. This means that it represented the financial condition at the noted date. But, each passing transaction or event brings about a change in the overall financial condition. Business activity will impact various asset, liability, and/or equity accounts; but, they will not disturb the equality of the accounting equation. So, how does this happen? To reveal the answer to this question, let's look at four specific transactions for Edelweiss Corporation. You will see how each transaction impacts the individual asset, liability, and equity accounts, without upsetting the basic equality of the overall balance sheet.

4.1 Edelweiss Collects an Account Receivable

If Edelweiss Corporation collected $10,000 from a customer on an existing account receivable (i.e., not a new sale, just the collection of an amount that is due from some previous transaction), then the balance sheet would be revised as follows:

EDELWEISS CORPORATION Balance Sheet December 31, 20X3 (before indicated transaction)				EDELWEISS CORPORATION Balance Sheet December 31, 20X3 (after indicated transaction)		
Assets				Assets		
Cash		$ 25,000	+ $10,000	Cash		$ 35,000
Accounts receivable		50,000	- $10,000	Accounts receivable		40,000
Inventories		35,000		Inventories		35,000
Land		125,000		Land		125,000
Building		400,000		Building		400,000
Equipment		250,000		Equipment		250,000
Other assets		10,000		Other assets		10,000
Total assets		$895,000	+ $0	Total assets		$895,000
Liabilities				Liabilities		
Accounts payable	$ 50,000			Accounts payable	$ 50,000	
Loans payable	125,000			Loans payable	125,000	
Total liabilities		$175,000	+ $0	Total liabilities		$175,000
Stockholders' equity				Stockholders' equity		
Capital stock	$120,000			Capital stock	$120,000	
Retained earnings	600,000			Retained earnings	600,000	
Total stockholders' equity		720,000	+ $0	Total stockholders' equity		720,000
Total liabilities and equity		$895,000		Total liabilities and equity		$895,000

The illustration plainly shows that cash (an asset) increased from $25,000 to $35,000, and accounts receivable (an asset) decreased from $50,000 to $40,000. As a result total assets did not change, and liabilities and equity accounts were unaffected. Thus, assets still equal liabilities plus equity.

4.2 Edelweiss Buys Equipment With Loan Proceeds

If Edelweiss Corporation purchased $30,000 of equipment, agreeing to pay for it later (i.e. taking out a loan), then the balance sheet would be further revised as follows.

EDELWEISS CORPORATION Balance Sheet December 31, 20X3 (before indicated transaction)				EDELWEISS CORPORATION Balance Sheet December 31, 20X3 (after indicated transaction)		
Assets				Assets		
Cash		$ 35,000		Cash		$ 35,000
Accounts receivable		40,000		Accounts receivable		40,000
Inventories		35,000		Inventories		35,000
Land		125,000		Land		125,000
Building		400,000		Building		400,000
Equipment		250,000	+ $30,000	Equipment		280,000
Other assets		10,000		Other assets		10,000
Total assets		$895,000	+ $30,000	Total assets		$925,000
Liabilities				Liabilities		
Accounts payable	$ 50,000			Accounts payable	$ 50,000	
Loans payable	125,000		+ $30,000	Loans payable	155,000	
Total liabilities		$175,000	+ $30,000	Total liabilities		$205,000
Stockholders' equity				Stockholders' equity		
Capital stock	$120,000			Capital stock	$120,000	
Retained earnings	600,000			Retained earnings	600,000	
Total stockholders' equity		720,000	+ $0	Total stockholders' equity		720,000
Total liabilities and equity		$895,000	+ $30,000	Total liabilities and equity		$925,000

This illustration shows that equipment (an asset) increased from $250,000 to $280,000, and loans payable (a liability) increased from $125,000 to $155,000. As a result, both total assets and total liabilities increased by $30,000, but assets still equal liabilities plus equity.

4.3 Edelweiss Provides Services to a Costumer on Account

What would happen if Edelweiss Corporation did some work for a customer in exchange for the customer's promise to pay $5,000? This requires further explanation; try to follow this logic closely! You already know that retained earnings is the income of the business that has not been distributed to the owners of the business. When Edelweiss Corporation earned $5,000 (which they will collect later) by providing a service to a customer, it can be said that they generated revenue of $5,000. Revenue is the enhancement to assets resulting from providing goods or services to customers. Revenue will bring about an increase to income, and income is added to retained earnings. Can you follow that?

As you examine the balance sheet on the top of the next page, notice that accounts receivable and retained earnings went up by $5,000 each, indicating that the business has more assets and more retained earnings. And, guess what: assets still equal liabilities plus equity.

4.4 Edelweiss Pays Expenses With Cash

It would be nice if you could run a business without incurring any expenses. However, such is not the case. Expenses are the outflows and obligations that arise from producing goods and services. Imagine that Edelweiss paid $3,000 for expenses. The lower set of balance sheets on the following page shows this impact.

4.5 Generalizing About the Impact of Transactions

There are countless types of transactions that can occur, and each and every transaction can be described in terms of its impact on assets, liabilities, and equity. What is important to know is that no transaction will upset the fundamental accounting equation of assets = liabilities + owners' equity.

Services to a customer on account:

EDELWEISS CORPORATION Balance Sheet December 31, 20X3 (before indicated transaction)				EDELWEISS CORPORATION Balance Sheet December 31, 20X3 (after indicated transaction)		
Assets				**Assets**		
Cash		$ 35,000		Cash		$ 35,000
Accounts receivable		40,000	+ $5,000	Accounts receivable		45,000
Inventories		35,000		Inventories		35,000
Land		125,000		Land		125,000
Building		400,000		Building		400,000
Equipment		280,000		Equipment		280,000
Other assets		10,000		Other assets		10,000
Total assets		$925,000	+ $5,000	Total assets		$930,000
Liabilities				**Liabilities**		
Accounts payable	$ 50,000			Accounts payable	$ 50,000	
Loans payable	155,000			Loans payable	155,000	
Total liabilities		$205,000	+ $0	Total liabilities		$205,000
Stockholders' equity				**Stockholders' equity**		
Capital stock	$120,000			Capital stock	$120,000	
Retained earnings	600,000		+ $5,000	Retained earnings	605,000	
Total stockholders' equity		720,000	+ $5,000	Total stockholders' equity		725,000
Total liabilities and equity		$925,000	+ $5,000	Total liabilities and equity		$930,000

Pays expenses:

EDELWEISS CORPORATION Balance Sheet December 31, 20X3 (before indicated transaction)				EDELWEISS CORPORATION Balance Sheet December 31, 20X3 (after indicated transaction)		
Assets				**Assets**		
Cash		$ 35,000	- $3,000	Cash		$ 32,000
Accounts receivable		45,000		Accounts receivable		45,000
Inventories		35,000		Inventories		35,000
Land		125,000		Land		125,000
Building		400,000		Building		400,000
Equipment		280,000		Equipment		280,000
Other assets		10,000		Other assets		10,000
Total assets		$930,000	- $3,000	Total assets		$927,000
Liabilities				**Liabilities**		
Accounts payable	$ 50,000			Accounts payable	$ 50,000	
Loans payable	155,000			Loans payable	155,000	
Total liabilities		$205,000	+ $0	Total liabilities		$205,000
Stockholders' equity				**Stockholders' equity**		
Capital stock	$120,000			Capital stock	$120,000	
Retained earnings	605,000		- $3,000	Retained earnings	602,000	
Total stockholders' equity		725,000	- $3,000	Total stockholders' equity		722,000
Total liabilities and equity		$930,000	- $3,000	Total liabilities and equity		$927,000

4.6 Distinguishing Between Revenue and Income

In day-to-day conversation, some terms can often be used casually and without a great deal of precision. Words may be treated as synonymous, when in fact they are not. Such is the case for the words "income" and "revenue." Each term has a very precise meaning, and you should accustom yourself to the correct usage. It has already been pointed out that revenues are enhancements resulting from providing goods and services to customers. Conversely, expenses can generally be regarded as costs of doing business. This gives rise to another "accounting equation":

$$\text{Revenues} - \text{Expenses} = \text{Income}$$

Revenue is the "top line" amount corresponding to the total benefits generated from business activity. Income is the "bottom line" amount that results after deducting the expenses from revenue. In some countries, revenue is also referred to as "turnover."

5. The Core Financial Statements

Your future will undoubtedly be marked by numerous decisions about investing money in the capital stock of some corporation. Another option that will present itself is to lend money to a company, either directly, or by buying that company's debt instruments known as "bonds." Stocks and bonds are two of the most prevalent financial instruments of the modern global economy. The financial press and television devote seemingly endless coverage to headline events pertaining to large public corporations. Public companies are those with securities that are readily available for purchase/sale through organized stock markets. Many more companies are private, meaning their stock and debt is in the hands of a narrow group of investors and banks. If you are contemplating an investment in a public or private entity, there is certain information you will logically seek to guide your decision process. What types of information will you desire? What do you want to know about the companies in which you are considering an investment? If you were to prepare a list of questions for the company's management, what subjects would be included? Whether this challenge is posed to a sophisticated investor or to a new business student, the listing almost always includes the same basic components.

What are the corporate assets? Where does the company operate? What are the key products? How much income is being generated? Does the company pay dividends? What is the corporate policy on ethics and environmental responsibility?

Many such topics are noted within the illustrated "thought cloud." Some of these topics are financial in nature (noted in blue). Other topics are of more general interest and cannot be communicated in strict mathematical terms (noted in red).,

Financial accounting seeks to directly report information for the topics noted in blue. Additional supplemental disclosures frequently provide insight about subjects such as those noted in red. But, you would also need to gain additional information by reviewing corporate web sites (many have separate sections devoted to their investors), filings with the securities regulators, financial journals and magazines, and other such sources. Most companies will have annual meetings for shareholders and host web casts every three months (quarterly). These events are very valuable in allowing investors and creditors to make informed decisions about the company, as well as providing a forum for direct questioning of management. You might even call a company and seek "special insight"

about emerging trends and developments. Be aware, however, that the company will likely not be able to respond in a meaningful way. Securities laws have very strict rules and penalties that are meant to limit selective or unique disclosures to any one investor or group (in the United States: Regulation Full Disclosure/Reg. FD). It is amusing, but rarely helpful, to review "message boards" where people anonymously post their opinions about a company.

5.1 Financial Statements

Financial accounting information is conveyed through a standardized set of reports. You have already been introduced to the balance sheet. The other fundamental financial statements are the income statement, statement of retained earnings, and statement of cash flows. There are many rules that govern the form and content of each financial statement. At the same time, those rules are not so rigid as to preclude variations in the exact structure or layout. For instance, the earlier illustration for Edelweiss was first presented as a "horizontal" layout of the balance sheet. The subsequent Edelweiss examples were representative of "vertical" balance sheet arrangements. Each approach, and others, is equally acceptable.

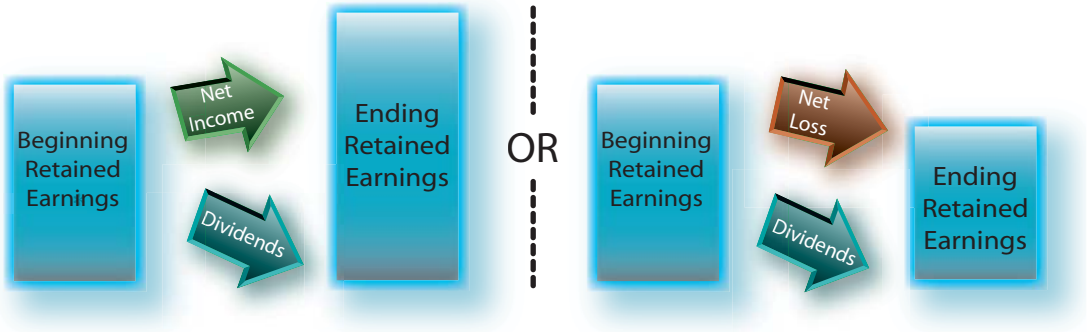
5.2 Income Statement

A summary of an entity's results of operation for a specified period of time is revealed in the income statement, as it provides information about revenues generated and expenses incurred. The difference between the revenues and expenses is identified as the net income or net loss. The income statement can be prepared using a single-step or a multiple-step approach, and might be further modified to include a number of special disclosures relating to unique items. These topics will be amplified in a number of subsequent chapters. For now, take careful note that the income statement relates to activities of a specified time period (e.g., year, quarter, month), as is clearly noted in its title:

QUARTZ CORPORATION Income Statement For the Year Ending December 31, 20X9		
Revenues		
Services to customers	$750,000	
Interest revenue	15,000	
Total revenues		$765,000
Expenses		
Salaries	$235,000	
Rent	115,000	
Other operating expenses	300,000	
Total expenses		650,000
Net income		$115,000

5.3 The Statement of Retained Earnings

The example balance sheets for Edelweiss revealed how retained earnings increased and decreased in response to events that impacted income. You also know that retained earnings are reduced by dividends paid to shareholders.



The statement of retained earnings provides a succinct reporting of these changes in retained earnings from one period to the next. In essence, the statement is nothing more than a reconciliation or "bird's-eye view" of the bridge between the retained earnings amounts appearing on two successive balance sheets.

QUARTZ CORPORATION Statement of Retained Earnings For the Year Ending December 31, 20X9	
Retained earnings - January 1, 20X9	$400,000
Plus: Net income	115,000
	$515,000
Less: Dividends	35,000
Retained earnings - December 31, 20X9	$480,000

If you examine very many sets of financial statements, you will soon discover that many companies provide an expanded statement of stockholders' equity in lieu of the required statement of retained earnings. The statement of stockholders' equity portrays not only the changes in retained earnings, but also changes in other equity accounts such as capital stock. The expanded statement of stockholders' equity is presented in a subsequent chapter.

5.4 Balance Sheet

The balance sheet focuses on the accounting equation by revealing the economic resources owned by an entity and the claims against those resources (liabilities and owners' equity). The balance sheet is prepared as of a specific date, whereas the income statement and statement of retained earnings cover a period of time. Accordingly, it is sometimes said that balance sheets portray financial position (or condition) while other statements reflect results of operations. Quartz's balance sheet is as follows:

QUARTZ CORPORATION Balance Sheet December 31, 20X9		
Assets		
Cash		$192,000
Accounts receivable		248,000
Land		450,000
Other assets		10,000
Total assets		$900,000
Liabilities		
Salaries payable	$ 34,000	
Accounts payable	166,000	
Total liabilities		$200,000
Stockholders' equity		
Capital stock	$220,000	
Retained earnings	480,000	
Total stockholders' equity		700,000
Total liabilities and equity		$900,000

5.5 Statement of Cash Flows

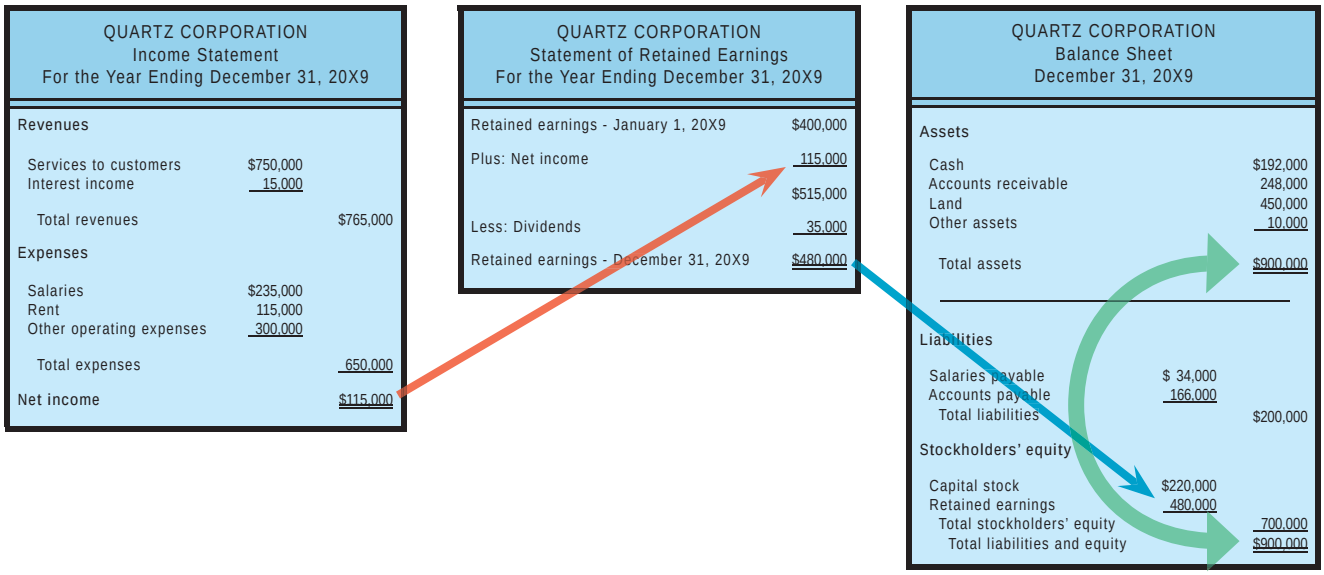
The statement of cash flows details the enterprise's cash flows. This operating statement reveals how cash is generated and expended during a specific period of time. It consists of three unique sections that isolate the cash inflows and outflows attributable to (a) operating activities, (b) investing activities, and (c) financing activities. Notice that the cash provided by operations is not the same thing as net income found in the income statement. This result occurs because some items hit income and cash flows in different periods. For instance, remember how Edelweiss (from the earlier illustration) generated income from a service provided on account. That transaction increased income without a similar effect on cash. These differences tend to even out over time.

QUARTZ CORPORATION Statement of Cash Flows For the Year Ending December 31, 20X9		
Operating activities		
Cash received from customers	$ 720,000	
Cash received for interest	15,000	
Cash paid for salaries	(240,000)	
Cash paid for rent	(115,000)	
Cash paid for other items	(300,000)	
Cash provided by operating activities		$ 80,000
Investing activities		
Purchase of land		(250,000)
Financing activities		
Payment of dividends		(35,000)
Decrease in cash		$(205,000)
Cash, January 1		397,000
Cash, December 31		$ 192,000

Suffice it to say that the underpinnings of the statement cash flows require a fairly complete knowledge of basic accounting. Do not be concerned if you feel like you lack a complete comprehension at this juncture. A future chapter is devoted to the statement.

5.6 Articulation

It is important for you to take note of the fact that the income statement, statement of retained earnings, and balance sheet articulate. This means they mesh together in a self-balancing fashion. The income for the period ties into to the statement of retained earnings, and the ending retained earnings ties into the balance sheet. This final tie-in causes the balance sheet to balance. These relationships are illustrated in the following diagram.



5.7 Unlocking the Mystery of Articulation

It seems almost magical that the final tie-in of retained earnings will exactly cause the balance sheet to balance. This is reflective of the brilliance of Pacioli's model, and is indicative of why it has survived for centuries.

Information Processing

Part 2

Your goals for this "information processing" chapter are to learn about:

- Accounts, debits and credits.
- The journal.
- The general ledger.
- The trial balance.
- Computerized processing systems.
- T-Accounts.

6. Accounts, Debits, and Credits

The previous chapter showed how transactions caused financial statement amounts to change. "Before" and "after" examples, etc. was used to develop the illustrations. Imagine if a real business tried to keep up with its affairs this way! Perhaps a giant chalk board could be set up in the accounting department. As transactions occurred, they would be called in to the department and the chalk board would be updated. Chaos would quickly rule. Even if the business could manage to figure out what its financial statements were supposed to contain, it probably could not systematically describe the transactions that produced those results. Obviously, a system is needed.

It is imperative that a business develop a reliable accounting system to capture and summarize its voluminous transaction data. The system must be sufficient to fuel the preparation of the financial statements, and be capable of maintaining retrievable documentation for each and every transaction In other words, some transaction logging process must be in place. In general terms, an accounting system is a system where transactions and events are reliably processed and summarized into useful financial statements and reports. Whether this system is manual or automated, the heart of the system will contain the basic processing tools: accounts, debits and credits, journals, and the general ledger. This chapter will provide insight into these tools and the general structure of a typical accounting system.

6.1 Accounts

The records that are kept for the individual asset, liability, equity, revenue, expense, and dividend components are known as accounts. In other words, a business would maintain an account for cash, another account for inventory, and so forth for every other financial statement element. All accounts, collectively, are said to comprise a firm's general ledger. In a manual processing system, you could imagine the general ledger as nothing more than a notebook, with a separate page for every account. Thus, you could thumb through the notebook to see the "ins" and "outs" of every account, as well as existing balances. An account could be as simple as the following:

ACCOUNT: Cash

Date	Description	Increase	Decrease	Balance
Jan. 1, 20X3	Balance forward			$ 50,000
Jan. 2, 20X3	Collected receivable	$ 10,000		60,000
Jan. 3, 20X3	Cash sale	5,000		65,000
Jan. 5, 20X3	Paid rent		$ 7,000	58,000
Jan. 7, 20X3	Paid salary		3,000	55,000
Jan. 8, 20X3	Cash sale	4,000		59,000
Jan. 8, 20X3	Paid bills		2,000	57,000
Jan. 10, 20X3	Paid tax		1,000	56,000
Jan. 12, 20X3	Collected receivable	7,000		63,000

This account reveals that cash has a balance of $63,000 as of January 12. By examining the account, you can see the various transactions that caused increases and decreases to the $50,000 beginning of month cash balance. In many respects, this Cash account resembles the "register" you might keep for a wallet style check book. If you were to prepare a balance sheet on January 12, you would include cash for the indicated amount (and, so forth for each of the other accounts comprising the entire financial statements).

6.2 Debits and Credits

Without a doubt, you have heard or seen a reference to debits and credits; perhaps you have had someone "credit" your account or maybe you have used a "debit" card to buy something. Debits (abbreviated "dr") and credits (abbreviated "cr") are unique accounting tools to describe the change in a particular account that is necessitated by a transaction. In other words, instead of saying that cash is "increased" or "decreased," we say that cash is "debited" or "credited." This method is again traced to Pacioli, the Franciscan monk who is given credit for the development of our enduring accounting

model. Why add this complexity -- why not just use plus and minus like in the previous chapter? You will soon discover that there is an ingenious answer to this question!

Understanding the answer to this question begins by taking note of two very important observations:

(1) every transaction can be described in debit/credit form
and
(2) for every transaction, debits = credits

6.3 The Fallacy of "+/-" Nomenclature

The second observation above would not be true for an increase/decrease system. For example, if services are provided to customers for cash, both cash and revenues would increase (a "+/+" outcome). On the other hand, paying an account payable causes a decrease in cash and a decrease in accounts payable (a "-/-" outcome). Finally, some transactions are a mixture of increase/decrease effects; using cash to buy land causes cash to decrease and land to increase (a "-/+" outcome). In the previous chapter, the "+/-" nomenclature was used for the various illustrations.

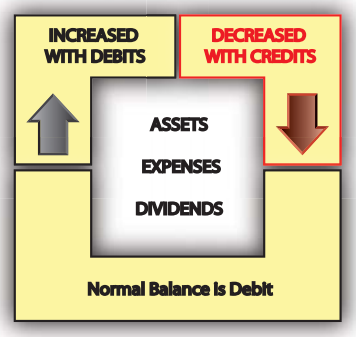
As you can tell by reviewing the illustration in Part 1, the "+/-" system lacks internal consistency. Therefore, it is easy to get something wrong and be completely unaware that something has gone amiss. On the other hand, the debit/credit system has internal consistency. If one attempts to describe the effects of a transaction in debit/credit form, it will be readily apparent that something is wrong when debits do not equal credits. Even modern computerized systems will challenge or preclude any attempt to enter an "unbalanced" transaction that does not satisfy the condition of debits = credits.

6.4 The Debit/Credit Rules

At first, it is natural for the debit/credit rules to seem confusing. However, the debit/credit rules are inherently logical (the logic is discussed at linked material in the online version of the text). But, memorization usually precedes comprehension. So, you are well advised to memorize the "debit/credit" rules now. If you will thoroughly memorize these rules first, your life will be much easier as you press forward with your studies of accounting.

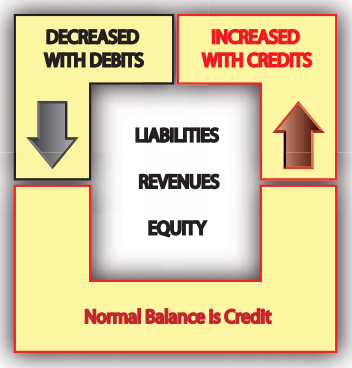
6.5 Assets/Expanses Dividends

As shown at right, these three types of accounts follow the same set of debit/credit rules. Debits increase these accounts and credits decrease these accounts. These accounts normally carry a debit balance. To aid your recall, you might rely on this slightly off–color mnemonic: D-E-A-D = debits increase expenses, assets, and dividends.



6.6 Liabilities/Revenues/Equity

These three types of accounts follow rules that are the opposite of those just described. Credits increase liabilities, revenues, and equity, while debits result in decreases. These accounts normally carry a credit balance.



6.7 Analysis of Transactions and Events

You now know that transactions and events can be expressed in “debit/credit” terminology. In essence, accountants have their own unique shorthand to portray the financial statement consequence for every recordable event. This means that as transactions occur, it is necessary to perform an analysis to determine (a) what accounts are impacted and (b) how they are impacted (increased or decreased). Then, debits and credits are applied to the accounts, utilizing the rules set forth in the preceding paragraphs.

Usually, a recordable transaction will be evidenced by some “source document” that supports the underlying transaction. A cash disbursement will be supported by the issuance of a check. A sale might be supported by an invoice issued to a customer. Receipts may be retained to show the reason for a particular expenditure. A time report may support payroll costs. A tax statement may document the amount paid for taxes. A cash register tape may show cash sales. A bank deposit slip may show collections of customer receivables. Suffice it to say, there are many potential source documents, and this is just a small sample. Source documents usually serve as the trigger for initiating the recording of a transaction. The source documents are analyzed to determine the nature of a transaction and what accounts are impacted. Source documents should be retained (perhaps in electronic form) as an important part of the records supporting the various debits and credits that are entered into the accounting records. A properly designed accounting system will have controls to make sure that all transactions are fully captured. It would not do for transactions to slip through the cracks and go unrecorded. There are many such safeguards that can be put in place, including use of renumbered documents and regular reconciliations. For example, you likely maintain a checkbook where you record your cash disbursements. Hopefully, you keep up with all of the checks (by check number) and perform a monthly reconciliation to make sure that your checkbook accounting system has correctly reflected all of your disbursements. A business must engage in similar activities to make sure that all transactions and events are recorded correctly. Good controls are essential to business success.

6.8 Determining an Account’s Balance

The balance of a specific account can be determined by considering its beginning (of period) balance, and then netting or offsetting all of the additional debits and credits to that account during the period. Earlier, an illustration for a Cash account was presented. That illustration was developed before you were introduced to debits and credits. Now, you know that accounts are more likely maintained by using the debit/credit system. So, the Cash account is repeated below, except that the increase/decrease columns have been replaced with the more traditional debit/credit column leadings. A typical Cash account would look similar to this illustration:

ACCOUNT: Cash				
Date	Description	Debit	Credit	Balance
Jan. 1, 20X3	Balance forward			$ 50,000
Jan. 2, 20X3	Collected receivable	$ 10,000		60,000
Jan. 3, 20X3	Cash sale	5,000		65,000
Jan. 5, 20X3	Paid rent		$ 7,000	58,000
Jan. 7, 20X3	Paid salary		3,000	55,000
Jan. 8, 20X3	Cash sale	4,000		59,000
Jan. 8, 20X3	Paid bills		2,000	57,000
Jan. 10, 20X3	Paid tax		1,000	56,000
Jan. 12, 20X3	Collected receivable	7,000		63,000

6.9 A Common Misunderstanding About Credits

Many people wrongly assume that credits always reduce an account balance. However, a quick review of the debit/credit rules reveals that this is not true. Where does this notion come from?

Probably because of the common phrase “we will credit your account.” This wording is often used when you return goods purchased on credit; but, carefully consider that your account (with the store) is on the store’s books as an asset account (specifically, an account receivable from you). Thus, the store is reducing its accounts receivable asset account (with a credit) when it agrees to “credit your account.”

On the other hand, some may assume that a credit always increases an account. This incorrect notion may originate with common banking terminology. Assume that Matthew made a deposit to his account at Monalo Bank. Monalo’s balance sheet would include an obligation (“liability”) to Matthew or the amount of money on deposit. This liability would be credited each time Matthew adds to his account. Thus, Matthew is told that his account is being “credited” when he makes a deposit.

7. The Journal

Most everyone is intimidated by new concepts and terminology (like debits, credits, journals, etc.). But, learning can be made quite simple by relating new concepts to preexisting notions that are already well understood. So, think: what do you know about a journal (not an accounting journal, just any journal)? It's just a log book, right? A place where you can record a history of transactions and events - usually in date (chronological) order. But, you knew that.

Likewise, an accounting journal is just a log book that contains a chronological listing of a company's transactions and events. However, rather than including a detailed narrative description of a company's transactions and events, the journal lists the items by a "form of shorthand notation." Specifically, the notation indicates the accounts involved, and whether each is debited or credited. Remember what was said at the beginning of the chapter: "The system must be sufficient to fuel the preparation of the financial statements, and be capable of maintaining retrievable documentation for each and every transaction. In other words, some transaction logging process must be in place." The journal satisfies the need for this logging process!

The general journal is sometimes called the book of original entry. This means that source documents are reviewed and interpreted as to the accounts involved. Then, they are documented in the journal via their debit/credit format. As such the general journal becomes a log book of the recordable transactions and events. The journal is not sufficient, by itself, to prepare financial statements. That objective is fulfilled by subsequent steps. But, maintaining the journal is the point of beginning toward that end objective.

7.1 Illustrating the Accounting Journal

The following illustration draws upon the facts for the Xao Corporation. Specifically it shows the journalizing process for Xao's transactions. You should review it carefully, specifically noting that it is in chronological order with each transaction of the business being reduced to the short-hand description of its debit/credit effects. You will also note that each transaction is followed by a brief narrative description; this is a good practice to provide further documentation. For each transaction, it is customary to list "debits" first (flush left), then the credits (indented right). Finally, notice that a transaction may involve more than two accounts (as in the January 28 transaction below); the corresponding journal entry for these complex transactions is called a "compound" entry.

As you review the general journal for Xao, note that it is only two pages long. An actual journal for a business might consume hundreds and thousands of pages to document its many transactions. As a result, some businesses may maintain the journal in electronic form only.

7.2 Special Journals

First, the illustrated journal was referred to as a "general" journal. All transactions and events can be recorded in the general journal. However, a business may sometimes use "special journals." Special journals are totally optional; they are typically employed when there are many redundant transactions. Thus, a company could have special journals for each of the following: cash receipts, cash payments, sales, purchases, and/or payroll. These special journals do not replace the general journal. Instead,

GENERAL JOURNAL				Page 1
Date	Accounts		Debits	Credits
1-1-X3	Cash		25,000	
	Capital Stock			25,000
	Issued stock to shareholders, in exchange for cash			
1-4-X3	Advertising Expense		2,000	
	Cash			2,000
	Paid advertising expense for initial advertising programs			
1-8-X3	Cash		4,000	
	Service Revenue			4,000
	Provided services to customers for cash			

GENERAL JOURNAL				Page 2
Date	Accounts		Debits	Credits
1-15-X3	Utilities Expense		1,000	
	Accounts Payable			1,000
	Received bill for utility costs incurred			
1-17-X3	Accounts Receivable		8,000	
	Service Revenue			8,000
	Provided services to customers on account			
1-18-X3	Accounts Payable		500	
	Cash			500
	Paid half of the amount due on the utility bill received on January 15			
1-25-X3	Cash		4,800	
	Accounts Receivable			4,800
	Received 60% of the amount due on the receivable that was established on January 17			
1-28-X3	Land		15,000	
	Cash			5,000
	Notes Payable			10,000
	Purchased land by giving $5,000 cash, and promising to pay the remainder in 90 days			

Now that you have reviewed the journal entries for January, consider a few more points.

they just strip out recurring type transactions and place them in their own separate journal. The transaction descriptions associated with each transaction found in the general journal are not normally needed in a special journal, given that each transaction is redundant in nature. Without special journals, you can well imagine how voluminous a general journal could become. But, for learning purposes, let's just rely on the general journal to accomplish our goals.

7.3 Page Numbering

Second, notice that the illustrated journal consisted of two pages (labeled page 1 and page 2). Although the journal is chronological, it is helpful to have the page number indexing for transaction cross referencing and working backward from financial statement amounts to individual transactions.

7.4 But, What are the Account Balances?

The general journal is a great tool to capture transaction and event details, but it certainly does nothing to tell a company about the balance in each specific account. For instance, how much cash does Xao Corporation have at the end of January? One could go through the journal and net the debits and credits to Cash ($25,000 - $2,000 + $4,000 - $500 + $4,800 - $5,000 = $26,300). But, this is tedious and highly susceptible to error. It would become virtually impossible if the journal were hundreds of pages long. A better way is needed. This is where the general ledger comes into play.

8. The General Ledger

As you just saw, the general journal is, in essence, a notebook that contains page after page of detailed accounting transactions. In contrast, the general ledger is, in essence, another notebook that contains a page for each and every account in use by a company. The ledger account for Xao would include the Cash page as illustrated below:

	ACCOUNT: Cash				
	Date	Description	Debit	Credit	Balance
	Jan. 1, 20X3	Balance forward			$ -
	Jan. 1, 20X3	Journal page 1	$ 25,000		25,000
*	Jan. 4, 20X3	Journal page 1		$ 2,000	23,000
	Jan. 8, 20X3	Journal page 1	4,000		27,000
	Jan. 18, 20X3	Journal page 2		500	26,500
	Jan. 25, 20X3	Journal page 2	4,800		31,300
	Jan. 28, 20X3	Journal page 2		5,000	26,300

Xao's transactions utilized all of the following accounts:

- Cash
- Accounts Receivable
- Land
- Accounts Payable
- Notes Payable
- Capital Stock
- Service Revenue
- Advertising Expense
- Utilities Expense

Therefore, Xao Corporation's general ledger will include a separate page for each of these nine accounts.

8.1 Posting

Before diving into the details of each account, let's consider what we are about to do. We are going to determine the balance of each specific account by posting. To do this, we will copy ("post") the entries listed in the journal into their respective ledger accounts.

In other words, the debits and credits in the journal will be accumulated ("transferred"/ "sorted") into the appropriate debit and credit columns of each ledger page. Following is an illustration of the posting process.

Notice that arrows are drawn to show how the first journal entry is posted. A similar process would occur for each of the other accounts.

In reviewing the ledger accounts at right, notice that the "description" column includes a cross-reference back to the journal page in which the transaction was initially recorded. This reduces the amount of detailed information that must be recorded in the ledger, and provides an audit trail back to the original transaction in the journal.

GENERAL JOURNAL Page 1

Date	Accounts		Debits	Credits
1-1-X3	Cash	√	25,000	
	Capital Stock	√		25,000
	Issued stock to shareholders, in exchange for cash			
1-4-X3	Advertising Expense	√	2,000	
	Cash	√		2,000
	Paid advertising expense for initial advertising programs			
1-8-X3	Cash	√	4,000	
	Service Revenue	√		4,000
	Provided services to customers for cash			

GENERAL JOURNAL Page 2

Date	Accounts		Debits	Credits
1-15-X3	Utility Expense	√	1,000	
	Accounts Payable	√		1,000
	Received bill for utility costs incurred			
1-17-X3	Accounts Receivable	√	8,000	
	Service Revenue	√		8,000
	Provided services to customers on account			
1-18-X3	Accounts Payable	√	500	
	Cash	√		500
	Paid half of the amount due on the utility bill received on January 15			
1-25-X3	Cash	√	4,800	
	Accounts Receivable	√		4,800
	Received 60% of the amount due on the receivable that was established on January 17			
1-28-X3	Land	√	15,000	
	Cash	√		5,000
	Notes Payable	√		10,000
	Purchased land by giving $5,000 cash, and promising to pay the remainder in 90 days			

ACCOUNT: Cash

Date	Description	Debit	Credit	Balance
Jan. 1, 20X3	Balance forward			$ -
Jan. 1, 20X3	Journal page 1	$ 25,000		25,000
Jan. 4, 20X3	Journal page 1		$ 2,000	23,000
Jan. 8, 20X3	Journal page 1	4,000		27,000
Jan. 18, 20X3	Journal page 2		500	26,500
Jan. 25, 20X3	Journal page 2	4,800		31,300
Jan. 28, 20X3	Journal page 2		5,000	26,300

ACCOUNT: Accounts Receivable

Date	Description	Debit	Credit	Balance
Jan. 1, 20X3	Balance forward			$ -
Jan. 17, 20X3	Journal page 2	$ 8,000		8,000
Jan. 25, 20X3	Journal page 2		$ 4,800	3,200

ACCOUNT: Land

Date	Description	Debit	Credit	Balance
Jan. 1, 20X3	Balance forward			$ -
Jan. 28, 20X3	Journal page 2	$ 15,000		15,000

ACCOUNT: Accounts Payable

Date	Description	Debit	Credit	Balance
Jan. 1, 20X3	Balance forward			$ -
Jan. 15, 20X3	Journal page 2		$ 1,000	1,000
Jan. 18, 20X3	Journal page 2	$ 500		500

ACCOUNT: Notes Payable

Date	Description	Debit	Credit	Balance
Jan. 1, 20X3	Balance forward			$ -
Jan. 28, 20X3	Journal page 2		$ 10,000	10,000

ACCOUNT: Capital Stock

Date	Description	Debit	Credit	Balance
Jan. 1, 20X3	Balance forward			$ -
Jan. 1, 20X3	Journal page 1		$ 25,000	25,000

ACCOUNT: Service Revenue

Date	Description	Debit	Credit	Balance
Jan. 1, 20X3	Balance forward			$ -
Jan. 8, 20X3	Journal page 1		$ 4,000	4,000
Jan. 17, 20X3	Journal page 2		8,000	12,000

ACCOUNT: Advertising Expense

Date	Description	Debit	Credit	Balance
Jan. 1, 20X3	Balance forward			$ -
Jan. 4, 20X3	Journal page 1	$ 2,000		2,000

ACCOUNT: Utilities Expense

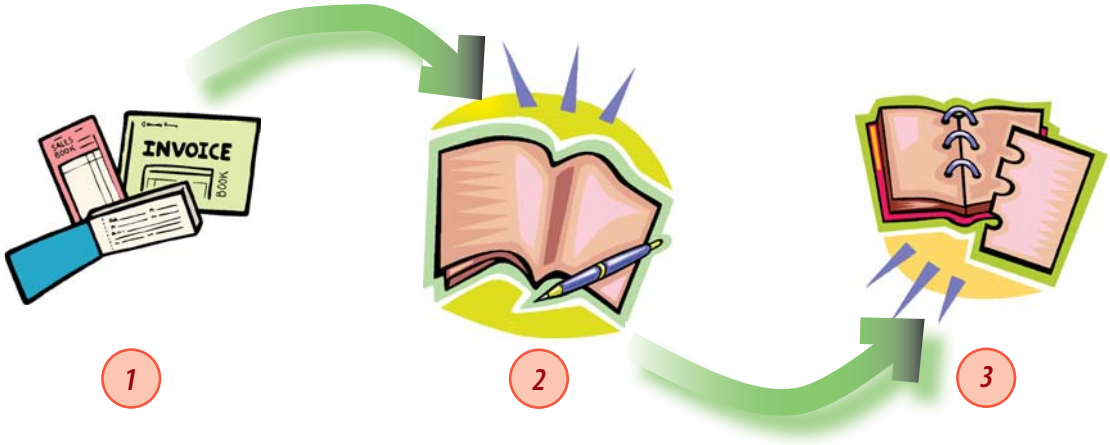
Date	Description	Debit	Credit	Balance
Jan. 1, 20X3	Balance forward			$ -
Jan. 15, 20X3	Journal page 2	$ 1,000		1,000

The Check Marks (√) in the journal indicate that a particular transaction has been posted to the ledger. Without these marks (in a manual system), it would be very easy to fail to post a transaction, or even post the same transaction twice.

8.2 To Review

Thus far you should have grasped the following accounting "steps":

- STEP 1: Each transaction is analyzed to determine the accounts involved
- STEP 2: A journal entry is entered into the general journal for each transaction
- STEP 3: Periodically, the journal entries are posted to the appropriate general ledger page



9. The Trial Balance

After all transactions have been posted from the journal to the ledger, it is a good practice to prepare a trial balance. A trial balance is simply a listing of the ledger accounts along with their respective debit or credit balances. The trial balance is not a formal financial statement, but rather a self-check to determine that debits equal credits. Following is the trial balance prepared from the general ledger of Xao Corporation.

XAO CORPORATION
Trial Balance
January 31, 20X3

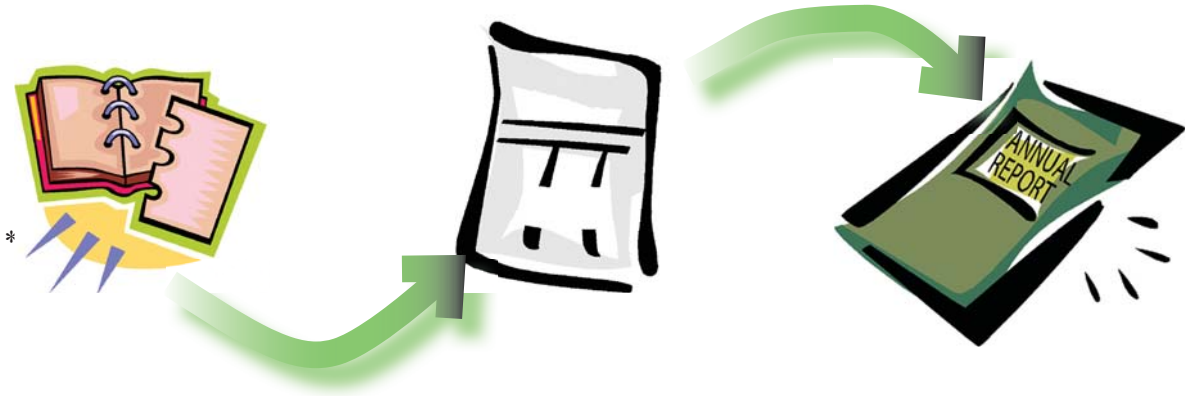
	Debits	Credits
Cash	$26,300	
Accounts receivable	3,200	
Land	15,000	
Accounts payable		$ 500
Notes payable		10,000
Capital stock		25,000
Service revenues		12,000
Advertising expense	2,000	
Utilities expense	1,000	
	$47,500	$47,500

9.1 Debits Equal Credits

Since each transaction was journalized in a way that insured that debits equaled credits, one would expect that this equality would be maintained throughout the ledger and trial balance. If the trial balance fails to balance, an error has occurred and must be located. It is much better to be careful as you go, rather than having to go back and locate an error after the fact. You should also be aware that a "balanced" trial balance is no guarantee of correctness. For example, failing to record a transaction, recording the same transaction twice, or posting an amount to the wrong account would produce a balanced (but incorrect) trial balance.

9.2 Financial Statements From the Trial Balance

In the next chapter you will learn about additional adjustments that may be needed to prepare a truly correct and up-to-date set of financial statements. But, for now, you can probably see that a tentative set of financial statements could be prepared based on the trial balance. The basic process is to transfer amounts from the general ledger to the trial balance, then into the financial statements:



In reviewing the following financial statements for Xao, notice that blue italics were used to draw attention to the items taken directly from the trial balance above. The other line items and amounts simply relate to totals and derived amounts within the statements. These statements would appear as follows:

XAO CORPORATION
Income Statement
For the Year Ending January 31, 20X3

Revenues		
Services to customers		$12,000
Expenses		
Advertising	$2,000	
Utilities	1,000	3,000
Net income		$9,000

XAO CORPORATION
Statement of Retained Earnings
For the Year Ending January 31, 20X3

Retained earnings - January 1, 20X3	$ -
Plus: Net income	9,000
	$9,000
Less: Dividends	-
Retained earnings - January 31, 20X3	$9,000

XAO CORPORATION
Balance Sheet
January 31, 20X3

Assets		
Cash		$26,300
Accounts receivable		3,200
Land		15,000
Total assets		$44,500
Liabilities		
Accounts payable	$ 500	
Notes payable	10,000	
Total liabilities		$10,500
Stockholders' equity		
Capital stock	$25,000	
Retained earnings	9,000	
Total stockholders' equity		34,000
Total liabilities and equity		$44,500

10. Computerized Processing Systems

You probably noticed that much of the material in this chapter involves rather mundane processing. Once the initial journal entry is prepared, the data are merely being manipulated to produce the ledger, trial balance, and financial statements. No wonder, then, that some of the first business applications that were computerized many years ago related to transaction processing. In short, the only "analytics" relate to the initial transaction recordation. All of the subsequent steps are merely mechanical, and are aptly suited to computerization.

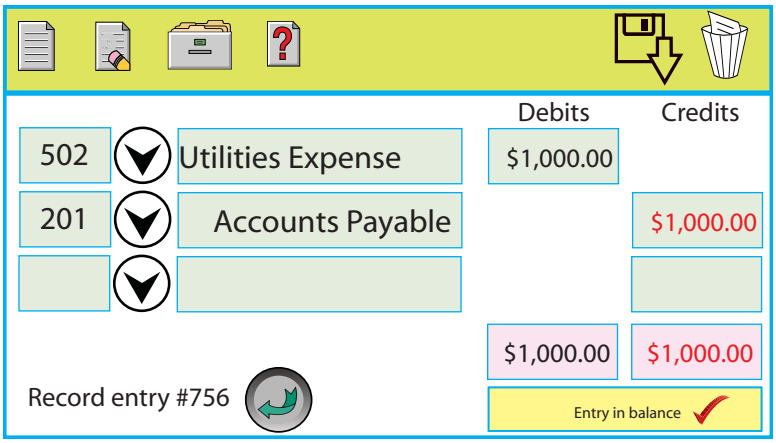
Many companies produce accounting software. These packages range from the simple to the complex. Some basic products for a small business may be purchased for under $100. In large organizations, millions may be spent hiring consultants to install large enterprise-wide packages. Recently, some software companies have even offered accounting systems maintained on their own network, with the customers utilizing the internet to enter data and produce their reports.

10.1 What do they Look Like

As you might expect, the look, feel, and function of software-based packages varies significantly. Each company's product must be studied to understand its unique attributes. But, in general, accounting software packages:

- Attempt to simplify and automate data entry (e.g., a point-of-sale terminal may actually become a data entry device so that sales are automatically "booked" into the accounting system as they occur).
- Frequently divide the accounting process into modules related to functional areas such as sales/collection, purchasing/payment, and others.
- Attempt to be "user-friendly" by providing data entry blanks that are easily understood in relation to the underlying transactions.
- Attempt to minimize key-strokes by using "pick lists," automatic call-up functions, and auto complete type technology.
- Are built on data-base logic, allowing transaction data to be sorted and processed based on any query structure (e.g., produce an income statement for July, provide a listing of sales to Customer Smith, etc.)
- Provide up-to-date data that may be accessed by key business decision makers.
- Are capable of producing numerous specialized reports in addition to the key financial statements.

Following is a very typical data entry screen. It should look quite familiar. After the data are input, The subsequent processing (posting, etc.) is totally automated.



Despite each product's own look and feel, the persons primarily responsible for the maintenance and operation of the accounting function must still understand accounting basics such as those introduced in this chapter: accounts, debits and credits, journal entries, etc. Without that intrinsic knowledge, the data input decisions will quickly go astray, and the output of the computerized accounting system will become hopelessly trashed. So, while it is safe to assume that you will probably be working in a computerized accounting environment, it equally true to say that you should first come to understand the basic processing described in this and subsequent chapters. These principles will clearly guide you toward successful implementation and use of most any computerized accounting product, and the reports they produce.

11. T-accounts

A useful tool for demonstrating certain transactions and events is the "t-account." Importantly, one would not use t-accounts for actually maintaining the accounts of a business. Instead, they are just a quick and simple way to figure out how a small number of transactions and events will impact a company. T-accounts would quickly become unwieldy in an enlarged business setting. In essence, t-accounts are just a "scratch pad" for account analysis. They are useful communication devices to discuss, illustrate, and think about the impact of transactions. The physical shape of a t-account is a "T," and debits are on the left and credits on the right. The "balance" is the amount by which debits exceed credits (or vice versa). Below is the t-account for Cash for the transactions and events of Xao Corporation. Carefully compare this t-account to the actual running balance ledger account which is also shown (notice that the debits in black total to $33,800, the credits in red total to $7,500, and the excess of debits over credits is $26,300 -- which is the resulting account balance shown in blue).

CASH

25,000	2,000
4,000	500
4,800	5,000
33,800	7,500
26,300	

ACCOUNT: Cash

Date	Description	Debit	Credit	Balance
Jan. 1, 20X3	Balance forward			$ -
Jan. 1, 20X3	Journal page 1	$ 25,000		25,000
Jan. 4, 20X3	Journal page 1		$ 2,000	23,000
Jan. 8, 20X3	Journal page 1	4,000		27,000
Jan. 18, 20X3	Journal page 2		500	26,500
Jan. 25, 20X3	Journal page 2	4,800		31,300
Jan. 28, 20X3	Journal page 2		5,000	26,300

11.1 Comprehensive T-Accounting Illustration

The following diagram illustrating the f ow of transactions from a general journal to a set of t-accounts may look rather "busy" but it is actually quite simple. The debits/credits for each entry can be traced to the corresponding accounts. Once all of entries are transferred, the resulting balances for each account can be carried forward to form the trial balance.

GENERAL JOURNAL Page 1

Date	Accounts	Debits	Credits
1-1-X3	Cash	25,000	
	Capital Stock		25,000
	Issued stock to shareholders, in exchange for cash		
1-4-X3	Advertising Expense	2,000	
	Cash		2,000
	Paid advertising expense for initial advertising programs		
1-8-X3	Cash	4,000	
	Service Revenue		4,000
	Provided services to customers for cash		

GENERAL JOURNAL Page 2

Date	Accounts	Debits	Credits
1-15-X3	Utilities Expense	1,000	
	Accounts Payable		1,000
	Received bill for utility costs incurred		
1-17-X3	Accounts Receivable	8,000	
	Service Revenue		8,000
	Provided services to customers on account		
1-18-X3	Accounts Payable	500	
	Cash		500
	Paid half of the amount due on the utility bill received on January 15		
1-25-X3	Cash	4,800	
	Accounts Receivable		4,800
	Received 60% of the amount due on the receivable that was established on January 17		
1-28-X3	Land	15,000	
	Cash		5,000
	Notes Payable		10,000
	Purchased land by giving $5,000 cash, and promising to pay the remainder in 90 days		

CASH

25,000	2,000
4,000	500
4,800	5,000
33,800	7,500
26,300	

LAND

15,000	
15,000	

ACCOUNTS RECEIVABLE

8,000	4,800
3,200	

ACCOUNTS PAYABLE

500	1,000
	500

NOTES PAYABLE

	10,000
	10,000

CAPITAL STOCK

	25,000
	25,000

SERVICE REVENUE

	4,000
	8,000
	12,000
	12,000

ADVERTISING EXPENSE

2,000	
2,000	

UTILITIES EXPENSE

1,000	
1,000	

XAO CORPORATION
Trial Balance
January 31, 20X3

	Debits	Credits
Cash	$26,300	
Accounts receivable	3,200	
Land	15,000	
Accounts payable		$ 500
Notes payable		10,000
Capital stock		25,000
Service revenues		12,000
Advertising expense	2,000	
Utilities expense	1,000	
	$47,500	$47,500

11.2 Chart of Account

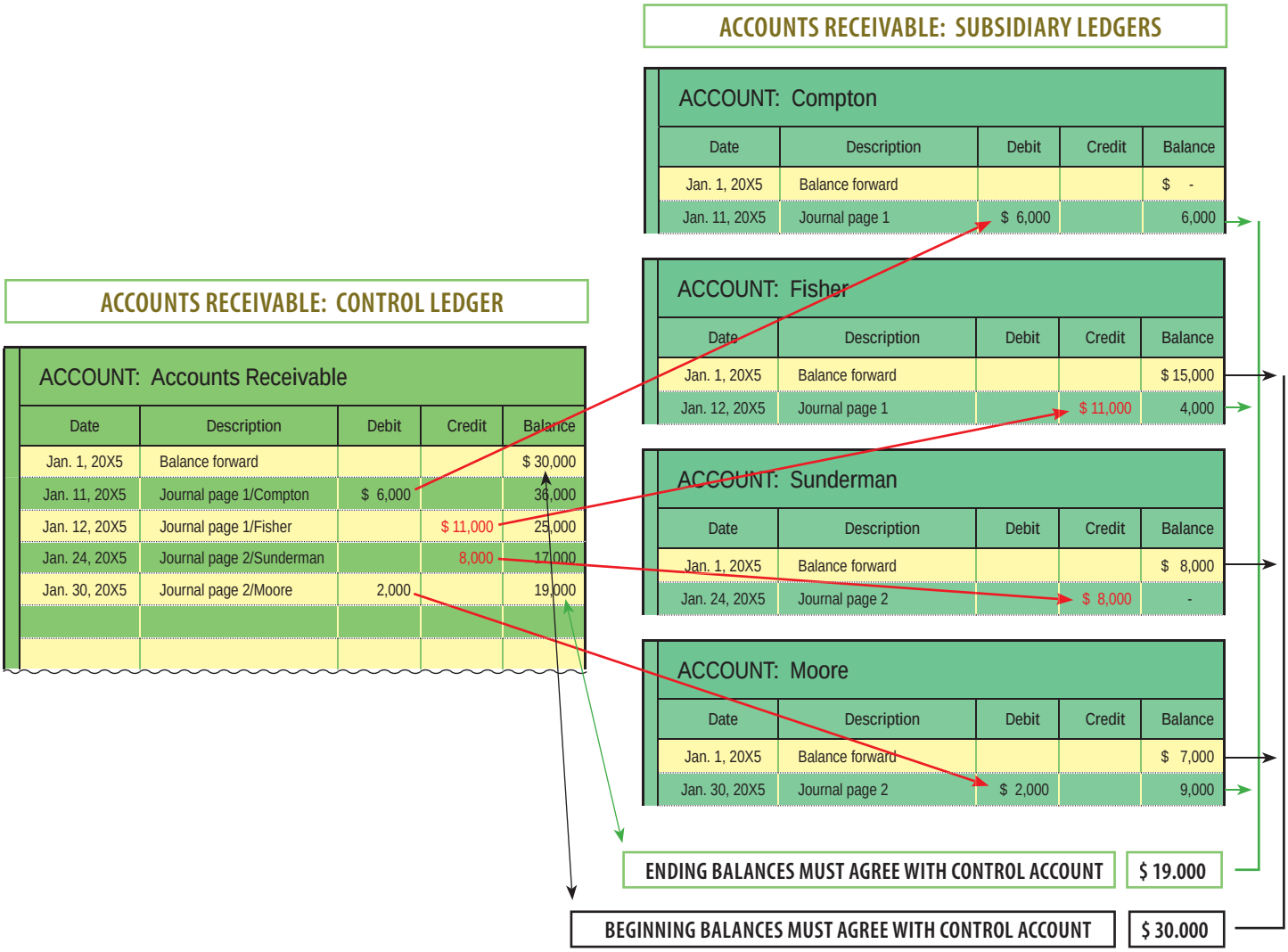
A listing of all accounts in use by a particular company is called the chart of accounts. Individual accounts are often given a specific reference number. The numbering scheme helps keep up with the accounts in use, and helps in the classification of accounts. For example, all assets may begin with "1" (e.g., 101 for Cash, 102 for Accounts Receivable, etc.), liabilities with "2," and so forth. A simple chart of accounts for Xao Corporation might appear as follows:

No. 101: Cash
No. 102: Accounts Receivable
No. 103: Land
No. 201: Accounts Payable
No. 202: Notes Payable
No. 301: Capital Stock
No. 401: Service Revenue
No. 501: Advertising Expense
No. 502: Utilities Expense

The assignment of a numerical account number to each account assists in data management, in much

11.3 Control and Subsidiary Accounts

Some general ledger accounts are made of many sub-components. For instance, a company may have total accounts receivable of $19,000, consisting of amounts due from Compton, Fisher, and Moore. The accounting system must be sufficient to reveal the total receivables, as well as amounts due from each customer. Therefore, sub-accounts are used. For instance, in addition to the regular general ledger account, separate auxiliary receivable accounts would be maintained for each customer, as shown in the following illustration:



The total receivables are the sum of all the individual receivable amounts. Thus, the Accounts Receivable general ledger account total is said to be the "control account" or control ledger, as it represents the total of all individual "subsidiary account" balances.

The company's chart of accounts will likely be based upon some convention such that each subsidiary account is a sequence number within the broader chart of accounts. For instance, if Accounts Receivable bears the account number 102, you would expect to find that individual customers might be numbered as 102.001, 102.002, 102.003, etc. It is simply imperative that a company be able to reconcile subsidiary accounts to the broader control account that is found in the general ledger. Here, computers can be particularly helpful in maintaining the detailed and aggregated data in perfect harmony.

Income Measurement

Part 3

Your goals for this "Income Measurement" chapter are to learn about:

- "Measurement triggering" transactions and events.
- The periodicity assumption and its accounting implications.
- Basic elements of revenue recognition.
- Basic elements of expense recognition.
- The adjusting process and related entries.
- Accrual- versus cash-basis accounting.

12. “Measurement Triggering” Transactions and Events

Economists often refer to income as a measure of “better-offenses.” In other words, economic income represents an increase in the command over goods and services. Such notions of income capture a business’s operating successes, as well as good fortune from holding assets that may increase in value.

12.1 The Meaning of “Accounting” Income

Accounting does not attempt to measure all value changes (e.g., land is recorded at its purchase price and that historical cost amount is maintained in the balance sheet, even though market value may increase over time -- this is called the “historical cost” principle). Whether and when accounting should measure changes in value has long been a source of debate among accountants. Many justify historical cost measurements because they are objective and verifiable. Others submit that market values, however imprecise, may be more relevant for decision-making purposes. Suffice it to say that this is a long-running debate, and specific accounting rules are mixed. For example, although land is measured at historical cost, investment securities are apt to be reported at market value. There are literally hundreds of specific accounting rules that establish measurement principles; the more you study accounting, the more you will learn about these rules and their underlying rationale.

For introductory purposes, it is necessary to simplify and generalize: thus, accounting (a) measurements tend to be based on historical cost determined by reference to an exchange transaction with another party (such as a purchase or sale) and (b) income represents “revenues” minus “expenses” as determined by reference to those “transactions or events.”

12.2 More Income Terminology

At the risk of introducing too much too soon, the following definitions may prove helpful:

- Revenues -- Inflows and enhancements from delivery of goods and services that constitute central ongoing operations
- Expenses -- Outflows and obligations arising from the production of goods and services that constitute central ongoing operations
- Gains -- Like revenues, but arising from peripheral transactions and events
- Losses -- Like expenses, but arising from peripheral transactions and events

Thus, it may be more precisely said that income is equal to Revenues + Gains - Expenses - Losses. You should not worry too much about these details for now, but do take note that revenue is not synonymous with income. And, there is a subtle distinction between revenues and gains (and expenses and losses).

12.3 An Emphasis on Transactions and Events

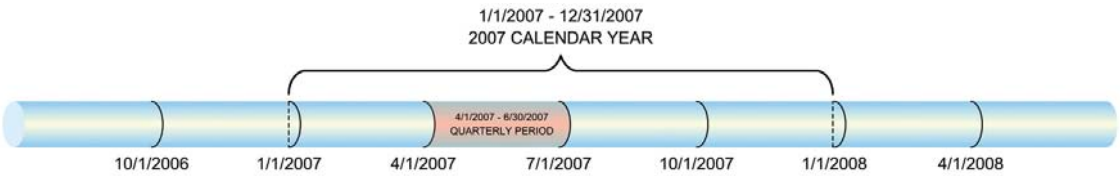
Although accounting income will typically focus on recording transactions and events that are exchange based, you should note that some items must be recorded even though there is not an identifiable exchange between the company and some external party. Can you think of any nonexchange events that logically should be recorded to prepare correct financial statements? How about the loss of an uninsured building from fire or storm? Clearly, the asset is gone, so it logically should be removed from the accounting records. This would be recorded as an immediate loss. Even more challenging for you may be to consider the journal entry: debit a loss (losses are increased with debits since they are like expenses), and credit the asset account (the asset is gone and is reduced with a credit).

13. The Periodicity Assumption

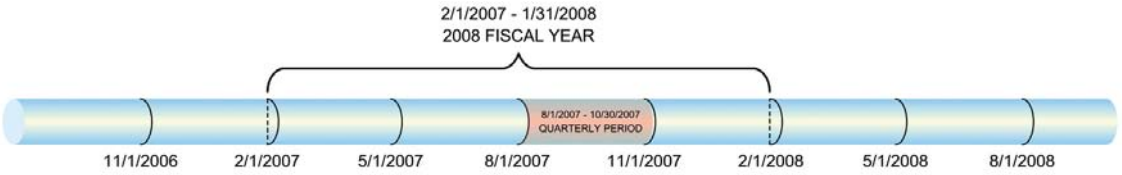
Business activity is fluid. Revenue and expense generating activities are in constant motion. Just because it is time to turn a page on a calendar does not mean that all business activity ceases. But, for purposes of measuring performance, it is necessary to "draw a line in the sand of time." A periodicity assumption is made that business activity can be divided into measurement intervals, such as months, quarters, and years.

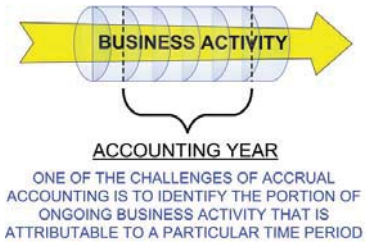
13.1 Accounting Implications

Accounting must divide the continuous business process, and produce periodic reports. An annual reporting period may follow the calendar year by running from January 1 through December 31. Annual periods are usually further divided into quarterly periods containing activity for three months.



In the alternative, a fiscal year may be adopted, running from any point of beginning to one year later. Fiscal years often attempt to follow natural business year cycles, such as in the retail business where a fiscal year may end on January 31 (allowing all of the Christmas rush, and corresponding returns, to cycle through). Note in the following illustration that the "2008 Fiscal Year" is so named because it ends in 2008:





You should also consider that internal reports may be prepared on even more frequent monthly intervals. As a general rule, the more narrowly defined a reporting period, the more challenging it becomes to capture and measure business activity. This results because continuous business activity must be divided and apportioned among periods; the more periods, the more likely that "ongoing" transactions must be allocated to more than one reporting period. Once a measurement period is adopted, the accountant's task is to apply the various rules and procedures of generally accepted accounting principles (GAAP) to assign revenues and expenses to the reporting period. This process is called "accrual basis" accounting – accrue means to come about as a natural growth or increase -- thus, accrual basis accounting is reflective of measuring revenues as earned and expenses as incurred.

The importance of correctly assigning revenues and expenses to time periods is pivotal in the determination of income. It probably goes without saying that reported income is of great concern to investors and creditors, and its proper determination is crucial. These measurement issues can become highly complex. For example, if a software company sells a product for $25,000 (in year 20X1), and agrees to provide updates at no cost to the customer for 20X2 and 20X3, then how much revenue is "earned" in 20X1, 20X2, and 20X3? Such questions are vexing, and they make accounting far more challenging than most realize. At this point, suffice it to say that we would need more information about the software company to answer their specific question. But, there are several basic rules about revenue and expense recognition that you should understand, and they will be introduced in the following sections.

Before moving away from the periodicity assumption, and its accounting implications, there is one important factor for you to note. If accounting did not require periodic measurement, and instead, took the view that we could report only at the end of a process, measurement would be easy. For example, if the software company were to report income for the three-year period 20X1 through 20X3, then revenue of $25,000 would be easy to measure. It is the periodicity assumption that muddies the water. Why not just wait? Two reasons: first, you might wait a long time for activities to close and become measurable with certainty, and second, investors cannot wait long periods of time before learning how a business is doing. Timeliness of data is critical to its relevance for decision making. Therefore, procedures and assumptions are needed to produce timely data, and that is why the periodicity assumption is put in play.

14. Basic Elements of Revenue Recognition

To recognize an item is to record it into the accounting records. Revenue recognition normally occurs at the time services are rendered or when goods are sold and delivered to a customer. The basic conditions of revenue recognition are to look for both (a) an exchange transaction, and (b) the earnings process being complete.

For a manufactured product, should revenue be recognized when the item rolls off of the assembly line? The answer is no! Although production may be complete, the product has not been sold in an exchange transaction. Both conditions must be met. In the alternative, if a customer ordered a product that was to be produced, would revenue be recognized at the time of the order? Again, the answer is no! For revenue to be recognized, the product must be manufactured and delivered. Modern business transactions frequently involve complex terms, bundled items (e.g., a cell phone with a service contract), intangibles (e.g. a software user license), order routing (e.g., an online retailer may route an order to the manufacturer for direct shipment), and so forth. It is no wonder that many "accounting failures" involve misapplication of revenue recognition concepts. The USA Securities and Exchange Commission has additional guidance, noting that revenue recognition would normally be appropriate only when there is persuasive evidence of an arrangement, delivery has occurred (or services rendered), the seller's price is fixed or determinable, and collectability is reasonably assured.

14.1 Payment and Revenue Recognition

It is important to note that receiving payment is not a criterion for initial revenue recognition. Revenues are recognized at the point of sale, whether that sale is for cash or a receivable. Recall the earlier definition of revenue (inflows and enhancements from delivery of goods and services), noting that it contemplates something more than simply reflecting cash receipts. Also recall the study of journal entries from Chapter 2; specifically, you learned to record revenues on account. Much business activity is conducted on credit, and severe misrepresentations of income could result if the focus was simply on cash receipts. To be sure, if collection of a sale was in doubt, allowances would be made in the accounting records. When you study the chapter on accounts receivable you will see how to deal with these issues.

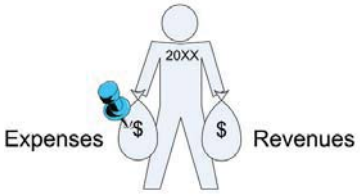
15. Basic Elements of Expense Recognition

Expense recognition will typically follow one of three approaches, depending on the nature of the cost:

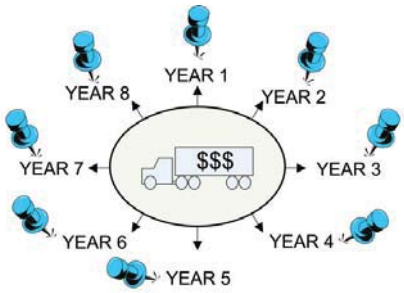
- Associating cause and effect: Many costs can be directly linked to the revenue they help produce. For example, a sales commission owed to an employee is directly based on the amount of a sale. Therefore, the commission expense should be recorded in the same accounting period as the sale. Likewise, the cost of inventory delivered to a customer should be expensed when the sale is recognized. This is what is meant by "associating cause and effect," and is most often referred to as the matching principle.

- Systematic and rational allocation: In the absence of a clear link between a cost and revenue item, other expense recognition schemes must be employed. Some costs benefit many periods. Stated differently, these costs "expire" over time. For example, a truck may last many years; determining how much cost is attributable to a particular year is difficult. In such cases, accountants may use a systematic and rational allocation scheme to spread a portion of the total cost to each period of use (in the case of a truck, through a process known as depreciation).

- Immediate recognition: Last, some costs cannot be linked to any production of revenue, and do not benefit future periods either. These costs are recognized immediately. An example would be severance pay to a fired employee, which would be expensed when the employee is terminated.



MATCHING



ALLOCATION

IMMEDIATE

15.1 Payment and Expense Recognition

It is important to note that making payment is not a criterion for initial expense recognition. Expenses are based on one of the three approaches just described, no matter when payment of the cost occurs. Recall the earlier definition of expense (outflows and obligations arising from the production of goods and services), noting that it contemplates something more than simply making a cash payment.

16. The Adjusting Process and Related Entries

In the previous chapter, you saw how tentative financial statements could be prepared directly from a trial balance. However, you were also cautioned about "adjustments that may be needed to prepare a truly correct and up-to-date set of financial statements." This occurs because:

- MULTI-PERIOD ITEMS: Some revenue and expense items may relate to more than one accounting period, or

- ACCRUED ITEMS: Some revenue and expense items have been earned or incurred in a given period, but not yet entered into the accounts (commonly called accruals).

In other words, the ongoing business activity brings about changes in economic circumstance that have not been captured by a journal entry. In essence, time brings about change, and an adjusting process is needed to cause the accounts to appropriately reflect those changes. These adjustments typically occur at the end of each accounting period, and are akin to temporarily cutting off the flow through the business pipeline to take a measurement of what is in the pipeline -- consistent with the revenue and expense recognition rules described in the preceding portion of this chapter.

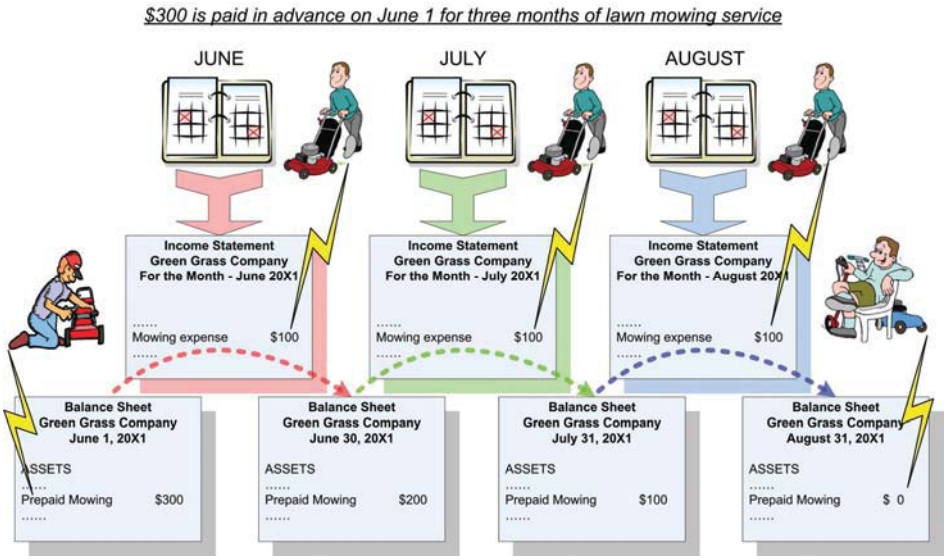
There is simply no way to catalog every potential adjustment that a business may need to make. What is required is firm understanding of a particular business's operations, along with a good handle on accounting measurement principles. The following discussion will describe "typical adjustments" that one would likely encounter. You should strive to develop a conceptual understanding based on these examples. Your critical thinking skills will then allow you to extend these basic principles to most any situation you are apt to encounter. Specifically, the examples will relate to:

MULTI-PERIOD ITEMS
PREPAID EXPENSES:
Prepaid Insurance
Prepaid Rent
Supplies
Depreciation
Unearned Revenue

ACCRUED ITEMS
UNRECORDED EXPENSES:
Accrued Salaries
Accrued Interest
Accrued Rent
UNRECORDED REVENUES:
Accrued Revenue

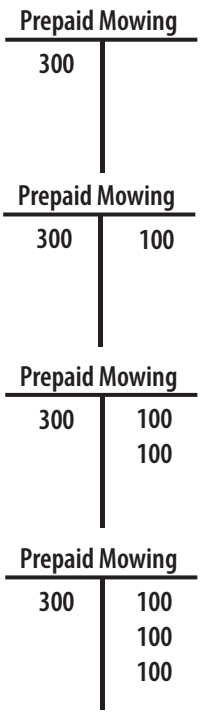
It is quite common to pay for goods and services in advance. You have probably purchased insurance this way, perhaps prepaying for an annual or semi-annual policy. Or, rent on a building may be paid ahead of its intended use (e.g., most landlords require monthly rent to be paid at the beginning of each month). Another example of prepaid expense relates to supplies that are purchased and stored in advance of actually needing them.

At the time of purchase, such prepaid amounts represent future economic benefits that are acquired in exchange for cash payments. As such, the initial expenditure gives rise to an asset. As time passes, the asset is diminished. This means that adjustments are needed to reduce the asset account and transfer the consumption of the asset's cost to an appropriate expense account. As a general representation of this process, assume that you prepay $300 on June 1 for three months of lawn mowing service. As shown in the following illustration, this transaction initially gives rise to a $300 asset on the June 1 balance sheet. As each month passes, $100 is removed from the balance sheet account and transferred to expense (think: an asset is reduced and expense is increased, giving rise to lower income and equity -- and leaving the balance sheet in balance):



Examine the journal entries for this cutting-edge illustration, and take note of the impact on the balance sheet account for Prepaid Mowing (as shown by the T-accounts at right):

June 1	Prepaid Mowing		300	
	Cash			300
	To record prepayment of mowing service			
June 30	Mowing Expense		100	
	Prepaid Mowing			100
	To record mowing service for June			
July 31	Mowing Expense		100	
	Prepaid Mowing			100
	To record mowing service for July			
August 31	Mowing Expense		100	
	Prepaid Mowing			100
	To record mowing service for August			



Now that you have a general sense of the process of accounting for prepaid items, let's take a closer look at some specific illustrations.

16.1 Illustration of Prepaid Insurance

Insurance policies are usually purchased in advance. You probably know this from your experience with automobile coverage. Cash is paid up front to cover a future period of protection. Assume a three-year insurance policy was purchased on January 1, 20X1, for $9,000. The following entry would be needed to record the transaction on January 1:

	1-1-X1	Prepaid Insurance		9,000	
		Cash			9,000
**		*Prepaid a three-year insurance policy for cash*			

By December 31, 20X1, $3,000 of insurance coverage would have expired (one of three years, or 1/3 of the $9,000). Therefore, an adjusting entry to record expense and reduce prepaid insurance would be needed by the end of the year:

12-31-X1	Insurance Expense		3,000	
	Prepaid Insurance			3,000
	To adjust prepaid insurance to reflect portion expired ($9,000/3 = $3,000)			

As a result of the above entry and adjusting entry, the income statement for 20X1 would report insurance expense of $3,000, and the balance sheet at the end of 20X1 would report prepaid insurance of $6,000 ($9,000 debit less $3,000 credit). The remaining $6,000 amount would be transferred to expense over the next two years by preparing similar adjusting entries at the end of 20X2 and 20X3.

16.2 Illustration of Prepaid Rent

Assume a two-month lease is entered and rent paid in advance on March 1, 20X1, for $3,000. The following entry would be needed to record the transaction on March 1:

3-1-X1	Prepaid Rent		3,000	
	Cash			3,000
	Prepaid a two-month lease			

By March 31, 20X1, half of the rental period has lapsed. If financial statements were to be prepared at the end of March, an adjusting entry to record rent expense and reduce prepaid rent would be needed on that financial statement date:

3-31-X1	Rent Expense		1,500	
	Prepaid Rent			1,500
	To adjust prepaid rent for portion lapsed ($3,000/2 months = $1,500)			

As a result of the preceding entries, the income statement for March would report rent expense of $1,500, and the balance sheet at March 31, would report prepaid rent of $1,500 ($3,000 debit less $1,500 credit). The remaining $1,500 prepaid amount would be expensed in April.

16.3 I'm a Bit Confused – Exactly When do I Adjust?

In the illustration for insurance, the adjustment was applied at the end of December, but the rent adjustment occurred at the end of March. What's the difference? What was not stated in the first illustration was an assumption that financial statements were only being prepared at the end of the year, in which case the adjustments were only needed at that time. In the second illustration, it was explicitly stated that financial statements were to be prepared at the end of March, and that necessitated an end of March adjustment. There is a moral to this: adjustments should be made every

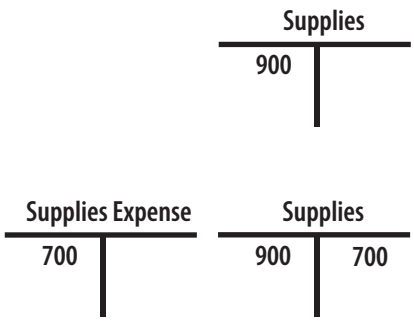
time financial statements are prepared, and the goal of the adjustments is to correctly assign the appropriate amount of expense to the time period in question (leaving the remainder in a balance sheet account to carry over to the next time period(s)). Every situation will be somewhat unique, and careful analysis and thoughtful consideration must be brought to bear to determine the correct amount of adjustment.

To extend your understanding of this concept, return to the facts of the insurance illustration, but assume monthly financial statements were prepared. What adjusting entry would be needed each month? The answer is that every month would require an adjusting entry to remove (credit) an additional $250 from prepaid insurance ($9,000/36 months during the 3-year period = $250 per month), and charge (i.e., debit) insurance expense. This would be done in lieu of the annual entry.

16.4 Illustration of Supplies

The initial purchase of supplies is recorded by debiting Supplies and crediting Cash. Supplies Expense should subsequently be debited and Supplies should be credited for the amount used. This results in supplies expense on the income statement being equal to the amount of supplies used, while the remaining balance of supplies on hand is reported as an asset on the balance sheet. The following illustrates the purchase of $900 of supplies. Subsequently, $700 of this amount is used, leaving $200 of supplies on hand in the Supplies account:

Dec. 8	Supplies	900	
	Cash		900
	To record purchase of supplies		
Dec. 31	Supplies Expense	700	
	Supplies		700
	Adjusting entry to reflect supplies used		



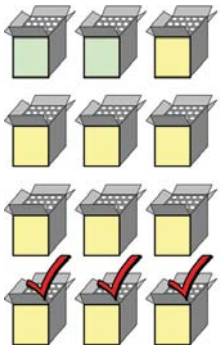
The above example is probably not too difficult for you. So, let's dig a little deeper, and think about how these numbers would be produced. Obviously, the $900 purchase of supplies would be traced to a specific transaction. In all likelihood, the supplies were placed in a designated supply room (like cabinet, closet, or chest). Perhaps the storage room has a person "in charge" to make sure that supplies are only issued for legitimate purposes to authorized personnel (a log book may be maintained). Each time someone withdraws supplies, a journal entry to record expense could be initiated; but, of course, this would be time consuming and costly (you might say that the record keeping cost would exceed the benefit). Instead, it is more likely that supplies accounting records will only be updated at the end of an accounting period.

To determine the amount of adjustment, one might "back in" to the calculation: Supplies in the storage room are physically counted at the end of the period (assumed to be $200); since the account has a $900 balance from the December 8 entry, one "backs in" to the $700 adjustment on December 31. In other words, since $900 of supplies was purchased, but only $200 was left over, then $700 must have been used.

The following year becomes slightly more challenging. If an additional $1,000 of supplies is purchased during 20X2, and the ending balance at December 31, 20X2, is physically counted at $300, then these entries would be needed:

	X-X-X2	Supplies	1,000	
		Cash		1,000
		Purchased supplies for $1,000		
**	12-31-X2	Supplies Expense	900	
		Supplies		900
		Adjusting entry to reflect supplies used		

The $1,000 amount is clear enough, but what about the $900 of expense? You must take into account that you started 20X2 with a $200 beginning balance (last year's "leftovers"), purchased an additional $1,000 (giving you total "available" for the period at $1,200), and ended with only $300 of supplies. Thus, $900 was "used up" during the period:



Beginning balance	$ 200
Plus: Purchases	1,000
Supplies available	$1,200
Less: Ending supplies (per count)	300
Supplies used (i.e., expense)	$ 900

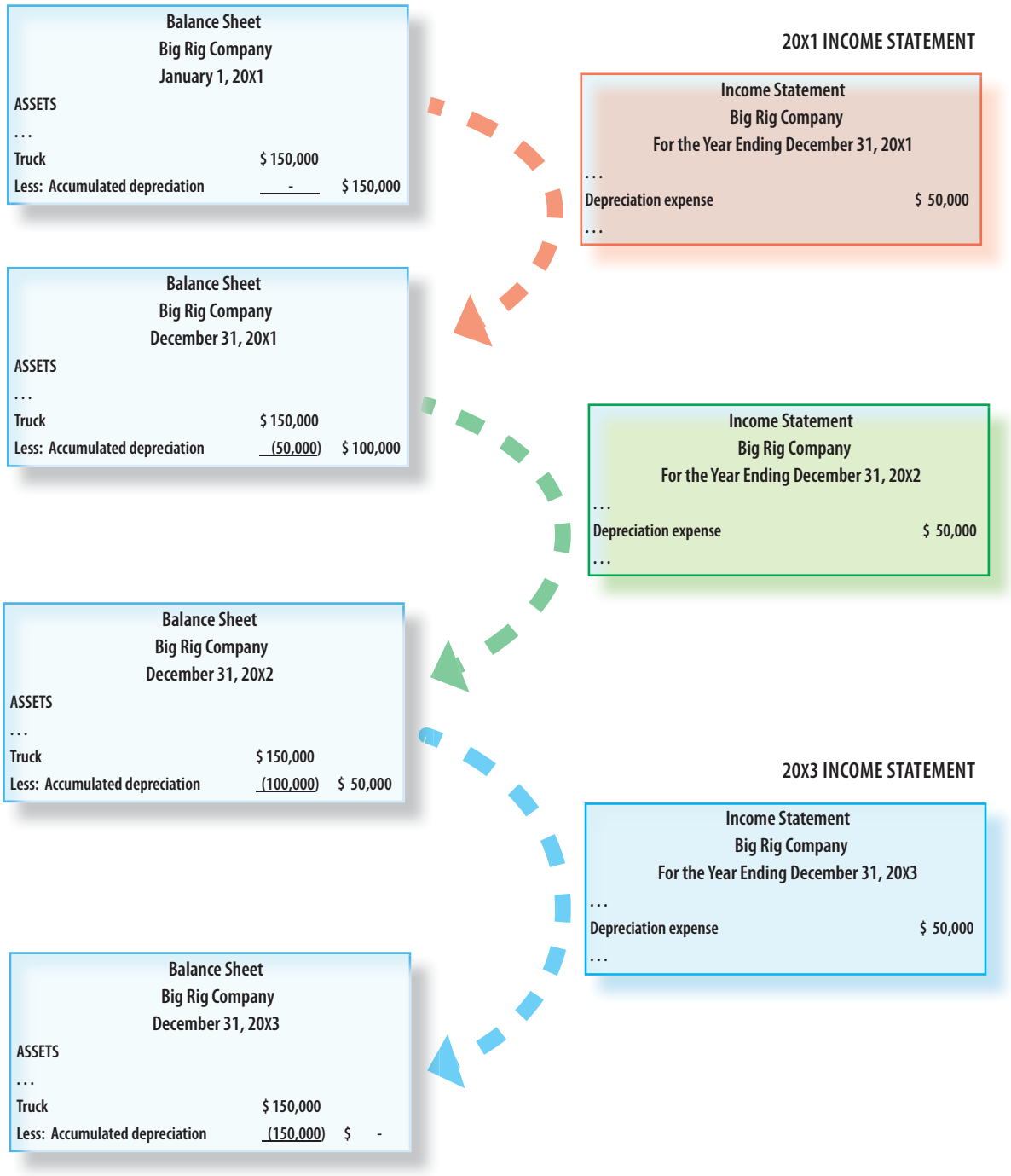
16.5 Depreciation

Many assets have a very long life. Examples include buildings and equipment. These assets will provide productive benefits to a number of accounting periods. Accounting does not attempt to measure the change in "value" of these assets each period. Instead, a portion of their cost is simply allocated to each accounting period. This process is called depreciation. A subsequent chapter will cover depreciation methods in great detail. However, one simple approach is called the straight-line method. Under this method, an equal amount of asset cost is assigned to each year of service life. In other words, the cost of the asset is divided by the years of useful life, resulting in annual depreciation expense.

By way of example, if a $150,000 truck with an 3-year life was purchased on January 1 of Year 1, depreciation expense would be $50,000 ($150,000/3 = $50,000) per year. $50,000 of expense would be reported on the income statement each year for three years. Each year's journal entry to record depreciation involves a debit to Depreciation Expense and a credit to Accumulated Depreciation (rather than crediting the asset account directly):

	12-31-XX	Depreciation Expense	50,000	
**		Accumulated Depreciation		50,000
		To record annual depreciation expense		

Accumulated depreciation is a very unique account. It is reported on the balance sheet as a contra asset. A contra account is an account that is subtracted from a related account. As a result, contra accounts have opposite debit/credit rules from those of the associated accounts. In other words, accumulated deprecation is increased with a credit, because the associated asset normally has a debit balance. This topic usually requires additional clarification. Let's see how this truck, the related accumulated depreciation, and depreciation expense would appear on the balance sheet and income statement for each year:



As you can see on each year's balance sheet, the asset continues to be reported at its $150,000 cost. However, it is also reduced each year by the ever-growing accumulated depreciation. The asset cost minus accumulated depreciation is known as the "net book value" of the asset. For example, at December 31, 20X2, the net book value of the truck is $50,000, consisting of $150,000 cost less $100,000 of accumulated depreciation. By the end of the asset's life, its cost has been fully depreciated and its net book value has been reduced to zero. Customarily the asset could then be removed from the accounts, presuming it is then fully used up and retired.

16.6 Unearned Revenues

Often, a business will collect monies in advance of providing goods or services. For example, a magazine publisher may sell a multi-year subscription and collect the full payment at or near the beginning of the subscription period. Such payments received in advance are initially recorded as a debit to Cash and a credit to Unearned Revenue. Unearned revenue is reported as a liability, reflecting the company's obligation to deliver product in the future. Remember, revenue cannot be recognized in the income statement until the earnings process is complete. As goods and services are delivered (e.g., the magazines are delivered), the Unearned Revenue is reduced (debited) and Revenue is increased (credited). The balance sheet at the end of an accounting period would include the remaining unearned revenue for those goods and services not yet delivered. The rationale for this approach is important to grasp; a liability exists to deliver goods and services in the future and should be reflected in the balance sheet. Equally important, revenue (on the income statement) should only be reflected as goods and services are actually delivered (in contrast to recognizing them solely at the time of payment). Unearned Revenue accounts may be found in the balance sheets of many businesses, including software companies (that license software use for multiple periods), funeral homes (that sell preneed funeral agreements), internet service providers (that sell multi-period access agreements), advertising agencies (that sell advertising services in advance), law firms (that require advance "retainer" payments), airlines (that sell tickets in advance), and so on. Following are illustrative entries for the accounting for unearned revenues:

4-1-X1	Cash		1,200	
	Unearned Revenue			1,200
	Sold a one-year software license for $1,200			
12-31-X1	Unearned Revenue		900	
	Revenue			900
	Year-end adjusting entry to reflect "earned" portion of software license (9 months at $100 per month)			

16.7 Accruals

Another type of adjusting journal entry pertains to the "accrual" of unrecorded expenses and revenues. Accruals are expenses and revenues that gradually accumulate throughout an accounting period. Accrued expenses relate to such things as salaries, interest, rent, utilities, and so forth. Accrued revenues might relate to such events as client services that are based on hours worked. Because of their importance, several examples follow.

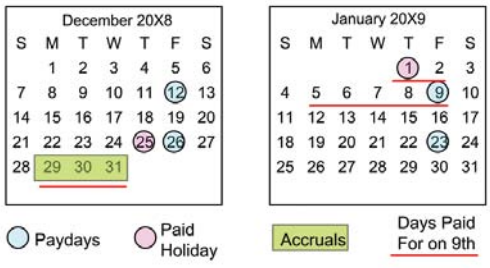
16.8 Accrued Salaries

Few, if any, businesses have daily payroll. Typically, businesses will pay employees once or twice per month. Suppose a business has employees that collectively earn $1,000 per day. The last payday occurred on December 26, as shown in the 20X8 calendar at right below. Employees worked three days the following week, but would not be paid for this time until January 9, 20X9. As of the end of the accounting period, the company owes employees $3,000 (pertaining to December 29, 30, and 31). As a result, the adjusting entry to record the accrued payroll would appear as follows:

	12-31-X8	Salaries Expense		3,000	
		Salaries Payable			3,000
*		*To record accrued salaries*			

The above entry records the $3,000 of expense for services rendered by the employees to the company during year 20X8, and establishes the liability for amounts that have accumulated and will be included in the next round of paychecks.

Before moving on to the next topic, you should also consider the entry that will be needed on the next payday (January 9, 20X9). Suppose the total payroll on that date is $10,000 ($3,000 relating to the prior year (20X8) and another $7,000 for an additional seven days in 20X9). The journal entry on the actual payday needs to reflect that the $10,000 is partially for expense and partially to extinguish a previously established liability:



1-9-X9	Salaries Expense	7,000	
	Salaries Payable	3,000	
	Cash		10,000
	To record payment of payroll relating to two separate accounting periods		

You should carefully note that the above process assigns the correct amount of expense to each of the affected accounting years (regardless of the moment of payment). In other words, $3,000 is expensed in 20X8 and $7,000 is expensed in 20X9.

16.9 Accrued Interest

Most loans include charges for interest. Interest charges are usually based on agreed rates, such as 6% per year. The amount of interest therefore depends on the amount of the borrowing ("principal"), the interest rate ("rate"), and the length of the borrowing period ("time"). The total amount of interest on a loan is calculated as Principal X Rate X Time. For example, if $100,000 is borrowed at 6% per year for 18 months, the total interest will amount to $9,000 ($100,000 X 6% X 1.5 years). However, even if the interest is not payable until the end of the loan, it is still logical and appropriate to "accrue" the interest as time passes. This is necessary to assign the correct interest cost to each accounting period. Assume that our 18 month loan was taken out on July 1, 20X1, and was due on December 31, 20X2. The accounting for the loan on the various dates (assume a December year end, with an appropriate year-end adjusting entry for the accrued interest) would be as follows:

20X1	----------		
7-1-X1	Cash	100,000	
	Loan Payable		100,000
	To record the borrowing of $100,000 at 6% per annum; principal and interest due on 12-31-X2		
12-31-X1	Interest Expense	3,000	
	Interest Payable		3,000
	To record accrued interest for 6 months ($100,000 X 6% X 6/12)		

20X2	----------		
12-31-X2	Interest Expense	6,000	
	Interest Payable	3,000	
	Loan Payable	100,000	
	Cash		109,000
	To record repayment of loan and interest (note that $3,000 of the total interest was previously accrued)		

In reviewing the above entries, it is important to note that the loan benefited 20X1 for six months, hence $3,000 of the total interest was expensed in 20X1. The loan benefited 20X2 for twelve months, and twice as much interest expense was recorded in 20X2.

16.10 Accrued Rent

Accrued rent is the opposite of the prepaid rent discussed earlier. Recall that prepaid rent accounting related to rent that was paid in advance. In contrast, accrued rent relates to rent that has not yet been paid – but the utilization of the asset has already occurred. For example, assume that office space is leased, and the terms of the agreement stipulate that rent will be paid within 10 days after the end of each month at the rate of $400 per month. During December of 20X1, Cabul Company occupied the lease space, and the appropriate adjusting entry for December follows:

	12-31-X1	Rent Expense		400	
*		Rent Payable			400
		To record accrued rent			

When the rent is paid on January 10, 20X2, this entry would be needed:

	1-10-X2	Rent Payable		400	
		Cash			400
*		*To record payment of accrued rent*			

16.11 Accrued Revenue

Many businesses provide services to clients under an understanding that they will be periodically billed for the hours (or other units) of service provided. For example, an accounting firm may track hours worked on various projects for their clients. These hours are likely accumulated and billed each month, with the periodic billing occurring in the month following the month in which the service is provided. As a result, money has been "earned" during a month, even though it won't be billed until the following month. Accrual accounting concepts dictate that such revenues be recorded when "earned." The following entry would be needed at the end of December to accrue revenue for services rendered to date (even though the physical billing of the client may not occur until January):

12-31-X2	Accounts Receivable	500	
	Revenue		500
	Year-end adjusting entry to reflect "earned" revenues for services provided in December		

16.12 Recap of Adjustments

The preceding discussion of adjustments has been presented in great detail because it is imperative to grasp the underlying income measurement principles. Perhaps the single most important element of accounting judgment is to develop an appreciation for the correct measurement of revenues and expenses. These processes can be fairly straight-forward, as in the above illustrations. At other times, the measurements can grow very complex. A business process rarely starts and stops at the beginning and end of a month, quarter or year – yet the accounting process necessarily divides that flowing business process into measurement periods. And, the adjusting process is all about getting it right; to assign costs and revenues to each period in a proper fashion.

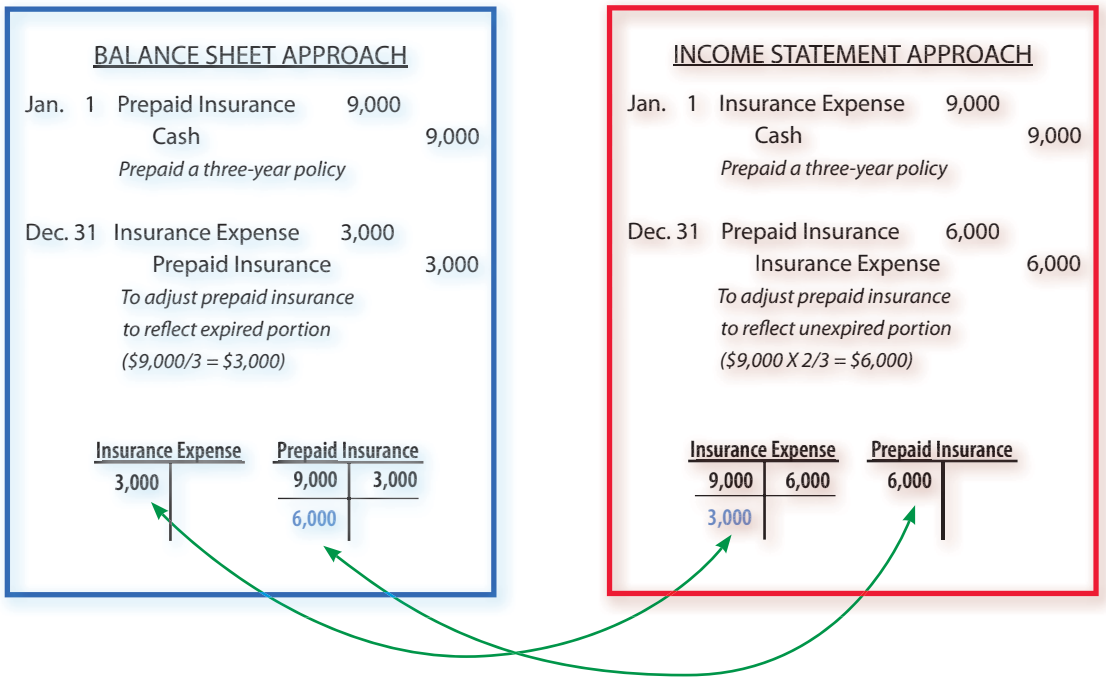
16.13 The Adjusted Trial Balance

Keep in mind that the trial balance introduced in the previous chapter was prepared before considering adjusting entries. Subsequent to the adjustment process, another trial balance can be prepared. This adjusted trial balance demonstrates the equality of debits and credits after recording adjusting entries. The adjusted trial balance would look the same as the trial balance, except that all accounts would be updated for the impact of each of the adjusting entries. Therefore, correct financial statements can be prepared directly from the adjusted trial balance. The next chapter looks at the adjusted trial balance in detail.

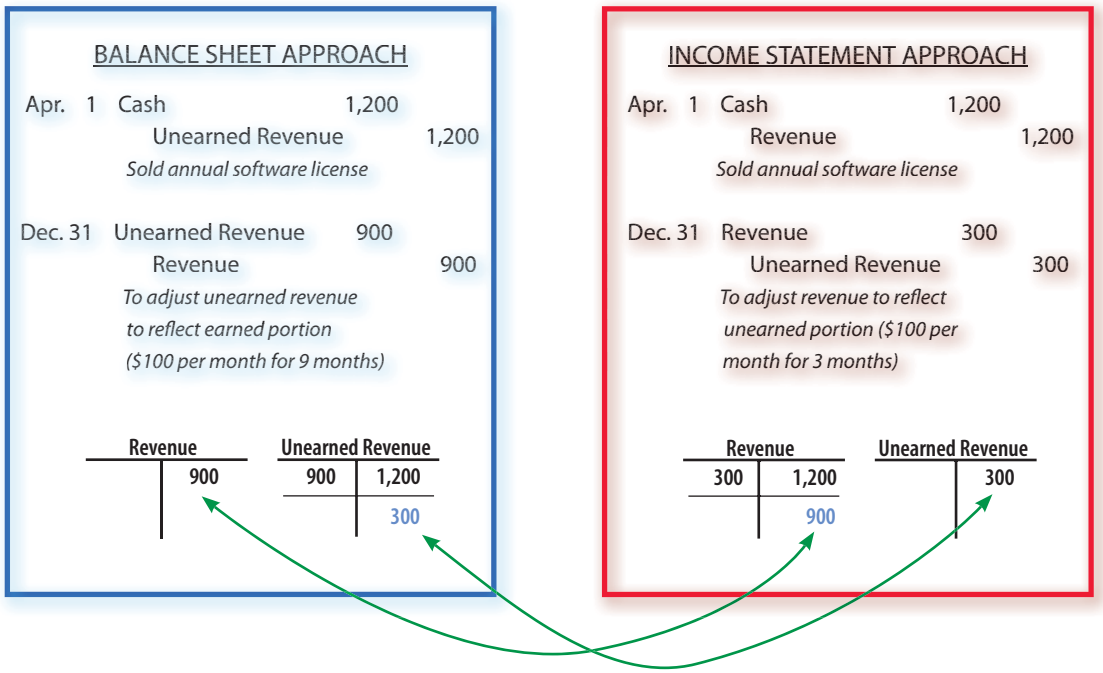
16.14 Alternative Procedures for Certain Adjustments

In accounting, as in life, there is often more than one approach to the same end result. The mechanics of accounting for prepaid expenses and unearned revenues can be carried out in several ways. No matter which method is employed, the resulting financial statements should be identical.

As an example, recall the illustration of accounting for prepaid insurance -- Prepaid Insurance was debited and Cash was credited at the time of purchase. This is referred to as a "balance sheet approach" because the expenditure was initially recorded into a prepaid account on the balance sheet. However, an alternative approach is the "income statement approach." With this approach, the Expense account is debited at the time of purchase. The appropriate end-of-period adjusting entry "establishes" the Prepaid Expense account with a debit for the amount relating to future periods. The off setting credit reduces the expense account to an amount equal to the amount consumed during the period. Review the following comparison, noting in particular that Insurance Expense and Prepaid Insurance accounts have identical balances at December 31 under either approach:



Accounting for unearned revenue can also follow a balance sheet or income statement approach. The balance sheet approach for unearned revenue was presented earlier in this chapter, and is represented at left below. At right is the income statement approach for the same facts. Under the income statement approach, the initial receipt is recorded entirely to a Revenue account. Subsequent end-of-period adjusting entries reduce Revenue by the amount not yet earned and increase unearned revenue. As you can see, both approaches produce the same financial statements.



The balance sheet and income statement methods result in identical financial statements. Notice that the income statement approach does have an advantage if the entire prepaid item or unearned revenue is fully consumed or earned by the end of an accounting period. No adjusting entry is needed because the expense or revenue was fully recorded at the date of the original transaction.

17. Accrual- Versus Cash- Basis Accounting

Generally accepted accounting principles (GAAP) require that a business use the "accrual basis." Under this method, revenues and expenses are recognized as earned or incurred, utilizing the various principles introduced throughout this chapter.

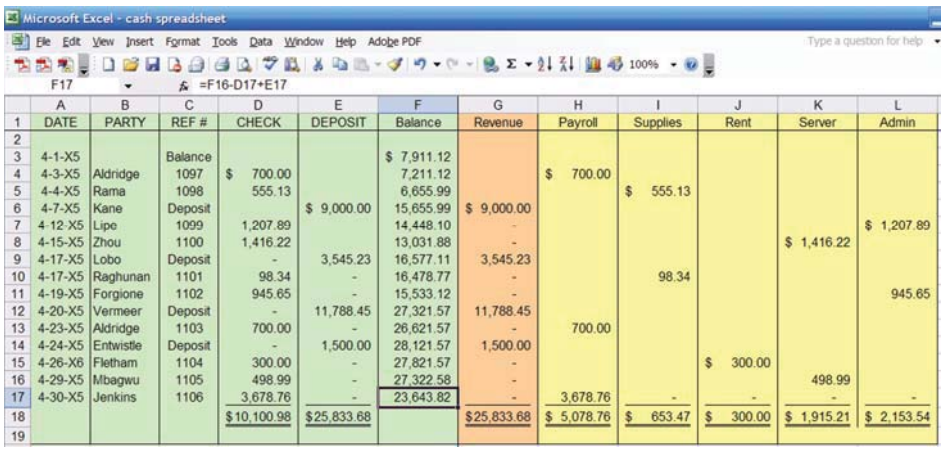
An alternative method in use by some small businesses is the "cash basis." The cash basis is not compliant with GAAP, but a small business that does not have a broad base of shareholders or creditors does not necessarily need to comply with GAAP. The cash basis is much simpler, but its financial statement results can be very misleading in the short run. Under this easy approach, revenue is recorded when cash is received (no matter when it is "earned"), and expenses are recognized when paid (no matter when "incurred").

17.1 Modified Approaches

The cash and accrual techniques may be merged together to form a modified cash basis system. The modified cash basis results in revenue and expense recognition as cash is received and disbursed, with the exception of large cash outflows for long-lived assets (which are recorded as assets and depreciated over time). However, to repeat, proper income measurement and strict compliance with GAAP dictates use of the accrual basis; virtually all large companies use the accrual basis.

17.2 Illustration of Cash- Versus Accrual Basis of Accounting

Let's look at an example for Ortiz Company. Ortiz provides web design services to a number of clients and has been using the cash basis of accounting. The following spreadsheet is used by Ortiz to keep up with the business's cash receipts and payments. This type of spreadsheet is very common for a small business. The "checkbook" is in green, noting the date, party, check number, check amount, deposit amount, and resulting cash balance. The deposits are spread to the revenue column (shaded in tan) and the checks are spread to the appropriate expense columns (shaded in yellow). Note that total cash on hand increased by $15,732.70 (from $7,911.12 to $23,643.82) during the month.


Microsoft Excel - cash spreadsheet

File Edit View Insert Format Tools Data Window Help Adobe PDF

F17 =F16-D17+E17

	A	B	C	D	E	F	G	H	I	J	K	L
1	DATE	PARTY	REF #	CHECK	DEPOSIT	Balance	Revenue	Payroll	Supplies	Rent	Server	Admin
2												
3	4-1-X5		Balance			$ 7,911.12						
4	4-3-X5	Aldridge	1097	$ 700.00		7,211.12		$ 700.00				
5	4-4-X5	Rama	1098	555.13		6,655.99			$ 555.13			
6	4-7-X5	Kane	Deposit		$ 9,000.00	15,655.99	$ 9,000.00					
7	4-12-X5	Lipe	1099	1,207.89		14,448.10	-					$ 1,207.89
8	4-15-X5	Zhou	1100	1,416.22		13,031.88	-				$ 1,416.22	
9	4-17-X5	Lobo	Deposit	-	3,545.23	16,577.11	3,545.23					
10	4-17-X5	Raghunan	1101	98.34	-	16,478.77	-		98.34			
11	4-19-X5	Forgione	1102	945.65	-	15,533.12	-					945.65
12	4-20-X5	Vermeer	Deposit	-	11,788.45	27,321.57	11,788.45					
13	4-23-X5	Aldridge	1103	700.00	-	26,621.57	-	700.00				
14	4-24-X5	Entwistle	Deposit	-	1,500.00	28,121.57	1,500.00					
15	4-26-X6	Fletham	1104	300.00	-	27,821.57	-			$ 300.00		
16	4-29-X5	Mbagwu	1105	498.99	-	27,322.58	-				498.99	
17	4-30-X5	Jenkins	1106	3,678.76	-	23,643.82	-	3,678.76	-	-	-	-
18				$10,100.98	$25,833.68		$25,833.68	$ 5,078.76	$ 653.47	$ 300.00	$ 1,915.21	$ 2,153.54
19												

The information from this spreadsheet was used to prepare the following "cash basis" income statement for April, 20X5. The increase in cash that is evident in the spreadsheet is mirrored as the "cash basis income":

ORTIZ CORPORATION
Cash Basis Income Statement
For the Month Ending April 30, 20X5

Revenues		
Services to customers		$25,833.68
Expenses		
Payroll	$5,078.76	
Supplies	653.47	
Rent	300.00	
Server	1,915.21	
Administrative	2,153.54	
Total expenses		10,100.98
Cash Basis Income		$15,732.70

Internal Use Only: Cash Basis -- Not prepared under generally accepted accounting principles!

Ortiz has been approached by Mega Impressions, a much larger web-hosting and design firm. Mega has offered to buy Ortiz's business for a price equal to "100 times" the business's monthly net income, as determined under generally accepted accounting principles. An accounting firm has been retained to prepare Ortiz's April income statement under the accrual basis. The following additional information is gathered in the process of preparing the GAAP-based income statement:

Revenues:

- The $9,000 deposit on April 7 was an advance payment for work to be performed equally during April, May, and June.
- The $11,788.45 deposit on April 20 was collection of an account for which the work was performed during January and February.
- During April, services valued at $2,000 were performed and billed, but not yet collected.

Expenses:

- Payroll -- The $700 payment on April 3 related $650 to the prior month. An additional $350 is accrued by the end of April, but not paid.
- Supplies -- The amount paid corresponded to the amount used.
- Rent -- The amount paid corresponded to the amount used.
- Server -- The $1,416.22 payment on April 15 related $500 to prior month's usage.
- Admin -- An additional $600 is accrued by the end of April, but not paid.

The accounting firm prepared the following accrual basis income statement and corresponding calculations in support of amounts found in the statement:

ORTIZ CORPORATION Income Statement For the Month Ending April 30, 20X5		
Revenues		
a. Services to customers		$10,045.23
Expenses		
b. Payroll	$4,778.76	
Supplies	653.47	
Rent	300.00	
c. Server	1,415.21	
d. Administrative	2,753.54	
Total expenses		9,900.98
Net Income		$ 144.25

*

Cash Basis	**$25,833.68**	
Less: Advance Payment	**(9,000.00)**	
Plus: Portion of Advance Payment Earned	**3,000.00**	
Less: Collection of Prior Receivable	**(11,788.45)**	
Plus: Unbilled Services	**2,000.00**	
Accrual Basis Revenues	**$10,045.23**	a.
Cash Basis	**$ 5,078.76**	
Less: Payment for Prior Month	**(650.00)**	
Plus: Accrued Payroll at End of Month	**350.00**	
Accrual Basis Payroll	**$ 4,778.76**	b.
Cash Basis	**$ 1,915.21**	
Less: Payment for Prior Month	**(500.00)**	
Accrual Basis Server Expense	**$ 1,415.21**	c.
Cash Basis	**$ 2,153.54**	
Plus: Accrued Administrative Costs	**600.00**	
Accrual Basis Administrative Costs	**$ 2,753.54**	d.

Although Ortiz was initially very interested in Mega's offer, he was very disappointed with the resulting accrual-basis net income and decided to reject the deal. This illustration highlights the important differences between cash- and accrual-basis accounting. Cash basis statements are significantly influenced by the timing of receipts and payments, and can produce periodic statements that are not reflective of the actual economic activity of the business for the specific period in question. The accrual basis does a much better job of portraying the results of operations during each time period. This is why it is very important to grasp the revenue and expense recognition concepts discussed in this chapter, along with the related adjusting entries that may be needed at the end of each accounting period.

The Reporting Cycle

Part 4

Your goals for this "reporting cycle" chapter are to learn about:

- Preparation of financial statements.
- The accounting cycle and closing process.
- The nature of "optional" reversing entries.
- Classified balance sheets.
- The importance of business liquidity and the concept of an operating cycle.

18. Preparing Financial Statements

In the previous chapter, you learned all about adjustments that might be needed at the end of each accounting period. These adjustments were necessary to bring a company's books and records current in anticipation of calculating and reporting its income and financial position. However, Chapter 3 did not illustrate how those adjustments would be used to actually prepare the financial statements. This chapter will begin with that task.

18.1 An Illustration

To illustrate the process for preparing financial statements, let's look at some facts for England Tours Company. England began operation early in 20X3. In the process of preparing its financial statements for the year ending December 31, 20X3, England determined that the following adjusting entries were needed. The numbers are all "assumed" and you should not be concerned about that. But, if you are unclear as to why any one of these entries might be needed, you should definitely review the detailed discussion of adjusting entries from the previous chapter.

	12-31-X3	Depreciation Expense		5,000	
		Accumulated Depreciation			5,000
		To record annual depreciation expense for equipment with a 9-year life ($45,000/9)			
	12-31-X3	Salaries Expense		2,000	
		Salaries Payable			2,000
		To record accrued salaries due to employees at the end of December			
*	12-31-X3	Interest Expense		1,200	
		Interest Payable			1,200
		To record accrued interest on note payable ($20,000 X 6%)			
	12-31-X3	Unearned Revenue		1,800	
		Revenue			1,800
		Year-end adjusting entry to reflect "earned" portion of tours sold in advance			

Below is a graphic showing England's trial balance before the above adjusting entries, and after the adjusting entries. If England had prepared its financial statements based only on the unadjusted trial balance, the reported information would be incomplete and incorrect. Instead, it is necessary to utilize the adjusted trial balance because it has been updated to reflect the year-end adjusting entries.

ENGLAND TOURS COMPANY
Trial Balance
December 31, 20X3

	Debits	Credits
Cash	$15,500	
Accounts receivable	4,500	
Equipment	45,000	
Accounts payable		$ 4,000
Unearned revenue		3,000
Notes payable		20,000
Capital stock		30,000
Revenue		31,000
Salaries expense	15,000	
Advertising expense	5,000	
Fuel expense	2,000	
Dividends	1,000	-
	$88,000	$88,000

RECORD ADJUSTING ENTRIES IN JOURNAL

12-31-X3	Depreciation Expense	5,000	
	Accumulated Depreciation		5,000
	To record annual depreciation expense for equipment with a 9-year life ($45,000/9)		
12-31-X3	Salaries Expense	2,000	
	Salaries Payable		2,000
	To record accrued salaries due to employees at the end of December		
12-31-X3	Interest Expense	1,200	
	Interest Payable		1,200
	To record accrued interest on note payable ($20,000 X 6%)		
12-31-X3	Unearned Revenue	1,800	
	Revenue		1,800
	Year-end adjusting entry to reflect "earned" portion of tours sold in advance		

POST ENTRIES TO THE LEDGER

ACCOUNT: Cash

Date	Description	Debit	Credit	Balance
Dec. 31, 20X3	Balance			$ 15,500

ACCOUNT: Accounts Receivable

Date	Description	Debit	Credit	Balance
Dec. 31, 20X3	Balance			$ 4,500

ACCOUNT: Equipment

Date	Description	Debit	Credit	Balance
Dec. 31, 20X3	Balance			$ 45,000

ACCOUNT: Accumulated Depreciation

Date	Description	Debit	Credit	Balance
Dec. 31, 20X3	Adjusting entry		$ 5,000	$ 5,000

ACCOUNT: Accounts Payable

Date	Description	Debit	Credit	Balance
Dec. 31, 20X3	Balance			$ 4,000

ACCOUNT: Unearned Revenue

Date	Description	Debit	Credit	Balance
Dec. 31, 20X3	Balance			$ 3,000
Dec. 31, 20X3	Adjusting entry	$ 1,800		$ 1,200

ACCOUNT: Salaries Payable

Date	Description	Debit	Credit	Balance
Dec. 31, 20X3	Adjusting entry		$ 2,000	$ 2,000

ACCOUNT: Interest Payable

Date	Description	Debit	Credit	Balance
Dec. 31, 20X3	Adjusting entry		$ 1,200	$ 1,200

ACCOUNT: Notes Payable

Date	Description	Debit	Credit	Balance
Dec. 31, 20X3	Balance			$ 20,000

ACCOUNT: Capital Stock

Date	Description	Debit	Credit	Balance
Dec. 31, 20X3	Balance			$ 30,000

ACCOUNT: Revenue

Date	Description	Debit	Credit	Balance
Dec. 31, 20X3	Balance			$ 31,000
Dec. 31, 20X3	Adjusting entry		$ 1,800	$ 32,800

ACCOUNT: Salaries Expense

Date	Description	Debit	Credit	Balance
Dec. 31, 20X3	Balance			$ 15,000
Dec. 31, 20X3	Adjusting entry	$ 2,000		$ 17,000

ACCOUNT: Advertising Expense

Date	Description	Debit	Credit	Balance
Dec. 31, 20X3	Balance			$ 5,000

ACCOUNT: Fuel Expense

Date	Description	Debit	Credit	Balance
Dec. 31, 20X3	Balance			$ 4,000

ACCOUNT: Depreciation Expense

Date	Description	Debit	Credit	Balance
Dec. 31, 20X3	Adjusting entry	$ 5,000		$ 5,000

ACCOUNT: Interest Expense

Date	Description	Debit	Credit	Balance
Dec. 31, 20X3	Adjusting entry	$ 1,200		$ 1,200

ACCOUNT: Dividends

Date	Description	Debit	Credit	Balance
Dec. 31, 20X3	Balance	$ 1,000		$ 1,000

PREPARE ADJUSTED TRIAL BALANCE FROM LEDGER

ENGLAND TOURS COMPANY
Adjusted Trial Balance
December 31, 20X3

	Debits	Credits
Cash	$15,500	
Accounts receivable	4,500	
Equipment	45,000	
Accumulated depreciation		$ 5,000
Accounts payable		4,000
Unearned revenue		1,200
Salaries payable		2,000
Interest payable		1,200
Notes payable		20,000
Capital stock		30,000
Revenue		32,800
Salaries expense	17,000	
Advertising expense	5,000	
Fuel expense	2,000	
Depreciation expense	5,000	
Interest expense	1,200	
Dividends	1,000	-
	$96,200	$96,200

18.2 Considering the Actual Process for Adjustments

Most of the time, a company will prepare its trial balance, analyze the trial balance for potential adjustments, and develop a list of necessary adjusting entries. Knowing what to adjust is not necessarily intuitive. It usually requires hands-on review by someone who is very knowledgeable about the business and accounting. As a practical matter, a company should not allow anyone and everyone to have access to the accounting system for purposes of entering year-end adjustments; too many errors and rogue entries will appear. Instead, a company will usually have a defined process where proposed entries are documented on a form (sometimes called a journal voucher). These forms are submitted to a chief accountant/controller who reviews and approves such proposed entries. The approved journal vouchers then serve as supporting documents to authorize data entry into the accounting system. The adjusting entries are entered in the journal, posted to the appropriate ledger accounts, and then the adjusted trial balance can be prepared from the up-to-date ledger.

18.3 Financial Statements

The adjusted trial balance is ordinarily sufficient to facilitate preparation of financial statements. You should take time to trace the amounts from England's adjusted trial balance to the financial statements that follow:

ENGLAND TOURS COMPANY
Income Statement
For the Year Ending December 31, 20X3

Revenues		
Tour services		$32,800
Expenses		
Salaries	$17,000	
Advertising	5,000	
Fuel	2,000	
Depreciation	5,000	
Interest	1,200	30,200
Net income		$ 2,600

ENGLAND TOURS COMPANY
Statement of Retained Earnings
For the Year Ending December 31, 20X3

Beginning retained earnings	$ -
Plus: Net income	2,600
	$2,600
Less: Dividends	1,000
Ending retained earnings	$1,600

ENGLAND TOURS COMPANY
Balance Sheet
December 31, 20X3

Assets		
Cash		$15,500
Accounts receivable		4,500
Equipment	$45,000	
Less: Accumulated depr.	(5,000)	40,000
Total assets		$60,000
Liabilities		
Accounts payable	$ 4,000	
Salaries payable	2,000	
Interest payable	1,200	
Notes payable	20,000	
Unearned revenue	1,200	
Total liabilities		$28,400
Stockholders' equity		
Capital stock	$30,000	
Retained earnings	1,600	
Total stockholders' equity		31,600
Total liabilities and equity		$60,000

18.4 Computerization

The financial statement preparation process is mostly mechanical, and easily automated. Once the adjusting entries have been prepared and entered, every accounting software package will race through the steps of processing the data to produce the financial statements. As such, you may be inclined to discount your need to understand how to move amounts from an adjusted trial balance into a set of financial statements. In some respects that is true, just as it is true that you do not need to know how to add and subtract if you own a calculator. Of course, you probably see the value of understanding addition and subtraction even if you use a calculator. In the same light, please consider that understanding the flow of transactions into financial statements is an essential foundation for furthering your knowledge of accounting.

18.5 A Worksheet Approach

Occasionally, one may desire to prepare financial statements that take into account necessary adjustments, but without actually updating journals and ledgers. Why? A manager may desire monthly financial reports even though the business may not formally prepare and book adjusting entries every month. A worksheet approach can be used for this purpose. Or, an auditor may use a worksheet to prepare financial statements that take into account recommended adjustments, before proposing that the actual journal/ledger be updated. The accounting department could be requested to prepare financial statements at any point in time; rather than break routine and book entries outside of the normal cycle, they might instead simply prepare financial statements via an informal worksheet.

The following illustrates a typical worksheet. The data and adjustments correspond to information previously presented for England. The first set of columns is the unadjusted trial balance. The next set of columns reveals the end-of-period adjustments. The information in the first two sets of columns is combined to generate the adjusted trial balance columns. The last three pairs of columns in the worksheet are the appropriate financial statement extensions of amounts from the adjusted trial balance columns. For example, Cash is an asset account with a debit balance, and is “appropriately” extended to the debit column of the balance sheet pair of columns. Likewise, Service Revenue is an income statement account with a credit balance; notice that it is extended to the income statement credit column. This extension of accounts should occur for every item in the adjusted trial balance. Look at the worksheet, and then consider the additional comments that follow.

After all adjusted trial balance amounts have been extended to the appropriate financial statement columns; the income statement columns are subtotaled. If credits exceed debits, the company has more revenues than expenses (e.g., $32,800 vs. $30,200 = $2,600 net income)). On the other hand, an excess of debits over credits would represent a net loss. To complete the worksheet, the amount of net income or loss is entered in the lower portion of the income statement columns in a manner which causes total debits to equal total credits. England Tours had a $2,600 net income, and a debit is needed to balance the income statement pair. An offsetting credit is entered in the lower portion of the retained earnings columns. This credit represents income for the year that must be added to retained earnings to complete the preparation of a formal statement of retained earnings. Within the retained earnings columns, the subtotal indicates that ending retained earnings is $1,600 (noted by the excess of credits ($2,600) over debits ($1,000)); this amount is debited in the retained earnings columns and credited in the balance sheet columns -- thereby bringing both sets of columns into final balance.

ENGLAND TOURS COMPANY
WORKSHEET TO PREPARE FINANCIAL STATEMENTS
DECEMBER 31, 20X3

	TRIAL BALANCE		ADJUSTMENTS		ADJUSTED TRIAL BALANCE		INCOME STATEMENT		STATEMENT OF RETAINED EARNINGS		BALANCE SHEET	
	Debit	Credit	Debit	Credit	Debit	Credit	Debit	Credit	Debit	Credit	Debit	Credit
Cash	$ 15,500				$ 15,500						$ 15,500	
Accounts receivable	4,500				4,500						4,500	
Equipment	45,000				45,000						45,000	
Accounts payable		$ 4,000				$ 4,000						$ 4,000
Unearned revenue		3,000	$ 1,800			1,200						1,200
Notes payable		20,000				20,000						20,000
Capital stock		30,000				30,000						30,000
Service revenue		31,000		$ 1,800		32,800		$ 32,800				
Salaries expense	15,000		2,000		17,000		$ 17,000					
Advertising expense	5,000				5,000		5,000					
Fuel expense	2,000				2,000		2,000					
Dividends	1,000								$ 1,000			
Depreciation expense			5,000		5,000		5,000					
Accumulated Depreciation				5,000		5,000						5,000
Salaries payable				2,000		2,000						2,000
Interest expense			1,200		1,200		1,200					
Interest payable	-	-	-	1,200	-	1,200	-	-				1,200
	$ 88,000	$ 88,000	$ 10,000	$ 10,000	$ 96,200	$ 96,200	$ 30,200	$ 32,800				
Net income							2,600	-	-	$ 2,600		
							$ 32,800	$ 32,800	$ 1,000	$ 2,600		
Retained earnings									1,600	-	-	1,600
									$ 2,600	$ 2,600	$ 65,000	$ 65,000

18.6 An Additional Illustration

The illustration shown assumed England Tours was formed early in 20X3. As such, there was no beginning retained earnings balance. You may wonder how the worksheet would be influenced by a beginning retained earnings balance. If you were to look at England's 20X4 worksheet, the $1,600 ending retained earnings from 20X3 would carry over to become the beginning balance for 20X4.

19. The Accounting Cycle and Closing Process

Reflecting on the accounting processes thus far described reveals the following typical steps:

- transactions are recorded in the journal
- journal entries are posted to appropriate ledger accounts
- a trial balance is constructed
- adjusting entries are prepared and posted
- an adjusted trial balance is prepared
- formal financial statements are produced (perhaps with the assistance of a worksheet)

It appears that we have completed the accounting cycle -- capturing transaction and event data and moving it through an orderly process that results in the production of useful financial statements. And, importantly, we are left with substantial records that document each transaction (the journal) and each account's activity (the ledger). It is no wonder that the basic elements of this accounting methodology have endured for hundreds of years.

19.1 The Closing Process

There remains one final step. It is known as the closing process. The purpose of the closing process is two-fold:

1. Closing is a mechanism to update the retained earnings account in the ledger to equal the end-of-period balance. Keep in mind the recording of each item of revenue, expense, or dividend does not automatically produce an updating debit or credit to retained earnings. As such, the beginning-of-period retained earnings amount remains in the ledger until the closing process "updates" the retained earnings account for the impact of the period's operations.

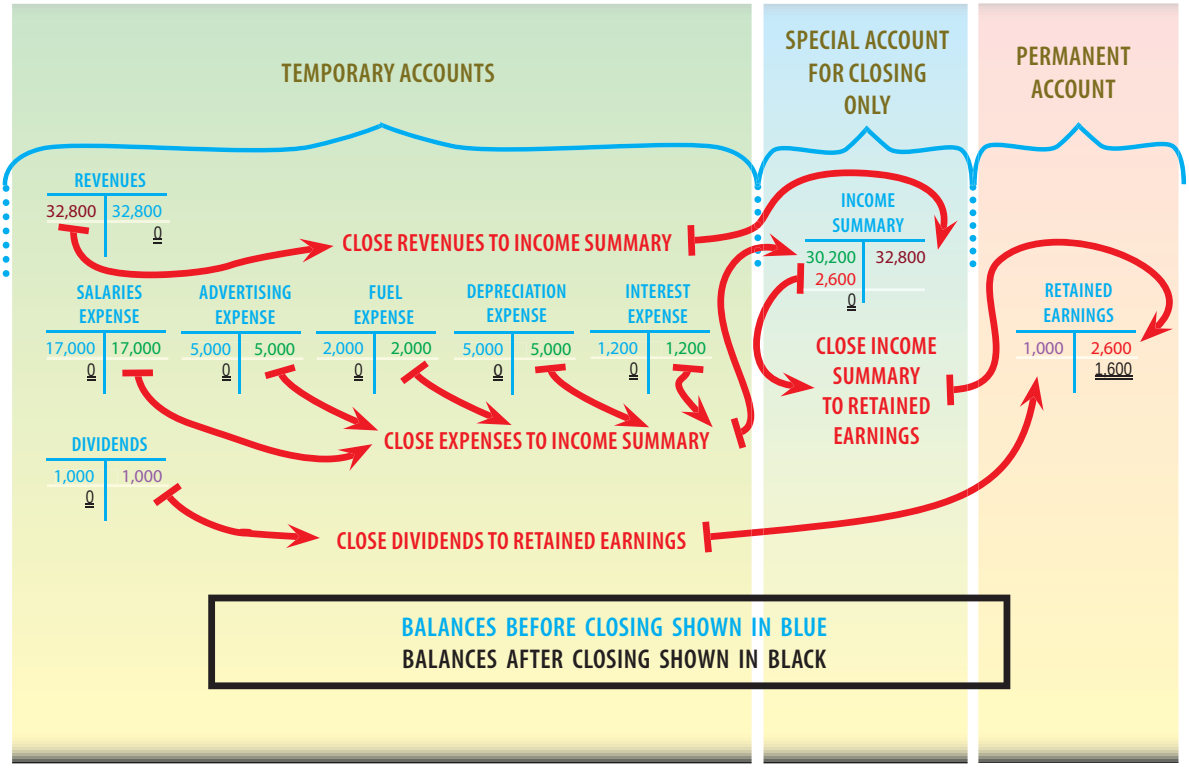
2. Revenue, expense, and dividend accounts represent amounts for a period of time; one must "zero out" these accounts at the end of each period (as a result, revenue, expense, and dividend accounts are called temporary or nominal accounts). In essence, by zeroing out these accounts, one has reset them to begin the next accounting period. In contrast, asset, liability, and equity accounts are called real accounts, as their balances are carried forward from period to period. For example, one does not "start over" each period accumulating assets like cash and so on -- their balances carry forward.

Closing involves a four step process: (a) close revenue accounts (to a unique account called Income Summary -- a non-financial statement account used only to facilitate the closing process), (b) close expense accounts to Income Summary, (c) close the Income Summary account to Retained Earnings, and (d) close the Dividend account to Retained Earnings. By doing this, all revenues and expenses are "corralled" in Income Summary (the net of which represents the income or loss for the period). In turn, the income or loss is then swept to Retained Earnings along with the dividends. Recall that beginning retained earnings, plus income, less dividends, equals ending retained earnings; likewise, the closing process updates the beginning retained earnings to move forward to the end-of-period balance.

Below are the closing entries for England Tours. You may find it helpful to compare the accounts and amounts below to those that appeared in the previous adjusted trial balance:

12-31-X3	Revenues	32,800	
	Income Summary		32,800
	To close revenues to Income Summary		
12-31-X3	Income Summary	30,200	
	Salaries Expense		17,000
	Advertising Expense		5,000
	Fuel Expense		2,000
	Depreciation Expense		5,000
	Interest Expense		1,200
	To close expenses to Income Summary		
12-31-X3	Income Summary	2,600	
	Retained Earnings		2,600
	To close Income Summary to retained earnings (balance equals net income)		
12-31-X3	Retained Earnings	1,000	
	Dividends		1,000
	To close dividends		

Be certain to note the effect of the above entries is to (1) update the retained earnings account and (2) cause a zero balance to occur in the temporary (revenue, expense, and dividends) accounts. The Income Summary account is also left "zeroed" out ($32,800 (cr.) = $30,200 (dr.) + $2,600 (dr.)). The following T-accounts reveal the effects of the closing entries on the various accounts:



19.2 Post Closing Trial Balance

The post-closing trial balance reveals the balance of accounts after the closing process, and consists of balance sheet accounts only. The post-closing trial balance is a tool to demonstrate that accounts are in balance; it is not a formal financial statement. All of the revenue, expense, and dividend accounts were zeroed away via closing, and do not appear in the post-closing trial balance.

ENGLAND TOURS COMPANY
Trial Balance
December 31, 20X3

	Debits	Credits
Cash	$15,500	
Accounts receivable	4,500	
Equipment	45,000	
Accumulated depreciation		$ 5,000
Accounts payable		4,000
Salaries payable		2,000
Interest payable		1,200
Notes payable		20,000
Unearned revenue		1,200
Capital stock		30,000
Retained earnings		1,600
	$65,000	$65,000

19.3 Revisiting Computerization

Many accounting software programs are based on data-base logic. These powerful tools allow the user to query with few restrictions. As such, one could request financial results for most any period of time (e.g., the 45 days ending October 15, 20XX), even if it related to a period several years ago. In these cases, the notion of closing the accounts becomes far less relevant. Very simply, the computer can mine all transaction data and pull out the accounts and amounts that relate to virtually any requested interval of time.

20. Reversing Entries

Reversing entries are an optional accounting procedure which may prove useful in simplifying record keeping. A reversing entry is a journal entry to "undo" an adjusting entry. You will soon see how reversing entries can simplify the overall process.

First, consider this example, which does not utilize reversing entries. An adjusting entry was made to record $2,000 of accrued salaries at the end of 20X3. The next payday occurred on January 15, 20X4, when $5,000 was paid to employees. The entry on that date required a debit to Salaries Payable (for the $2,000 accrued at the end of 20X3) and Salaries Expense (for $3,000 earned by employees during 20X4):

Illustration without Reversing Entries

20X3	----------		
12-31-X3	Salaries Expense (20X3)	2,000	
	Salaries Payable		2,000
	Adjusting entry for accrued salaries due to employees at the end of December		
	Note: closing would "zero-out" all expense account at the end of 20X3		
20X4	----------		
1-15-X4	Salaries Expense (20X4)	3,000	
	Salaries Payable	2,000	
	Cash		5,000
	To record payroll, part of which related to prior year service		

Let's revisit these facts using reversing entries. The adjusting entry in 20X3 to record $2,000 of accrued salaries is the same as above. However, the first journal entry of 20X4 simply reverses the adjusting entry. On the following payday, January 15, 20X5, the entire payment of $5,000 is recorded as expense:

Illustration with Reversing Entries

20X3	----------		
12-31-X3	Salaries Expense (20X3)	2,000	
	Salaries Payable		2,000
	Adjusting entry for accrued salaries due to employees at the end of December		
	Note: closing would "zero-out" all expense account at the end of 20X3		

20X4	----------		
1-1-X4	Salaries Payable	2,000	
	Salaries Expense (20X4)		2,000
	Reversing entry for accrued salaries		
1-15-X4	Salaries Expense (20X4)	5,000	
	Cash		5,000
	To record payment of salaries		

The net impact of these procedures is to record the correct amount of salary expense for 20X4 ($2,000 credit and $5,000 debit, produces the correct $3,000 net debit to salaries expense). You may find it odd to credit an expense account on January 1, because, by itself, it makes no sense. The credit only makes sense when coupled with the subsequent debit on January 15. Notice from the following diagram that both approaches produce the same final results:

WITHOUT REVERSING ENTRIES:

20X3	----------		
12-31-X3	Salaries Expense	2,000	
	Salaries Payable		2,000
	Adjusting entry for accrued salaries due to employees at the end of December		
	Note: closing would "zero-out" all expense account at the end of 20X3		
20X4	----------		
1-15-X4	Salaries Expense	3,000	
	Salaries Payable	2,000	
	Cash		5,000
	To record payroll, part of which related to prior year service		

WITH REVERSING ENTRIES:

20X3	----------		
12-31-X3	Salaries Expense	2,000	
	Salaries Payable		2,000
	Adjusting entry for accrued salaries due to employees at the end of December		
	Note: closing would "zero-out" all expense account at the end of 20X3		
20X4	----------		
1-1-X4	Salaries Payable	2,000	
	Salaries Expense		2,000
	Reversing entry for accrued salaries		
1-15-X4	Salaries Expense	5,000	
	Cash		5,000
	To record payment of salaries		

BY COMPARING THE ACCOUNTS AND AMOUNTS, NOTICE THAT THE SAME END RESULT IS PRODUCED!

In practice, reversing entries will simplify the accounting process. For example, on the first payday following the reversing entry, a "normal" journal entry can be made to record the full amount of salaries paid as expense -- without having to give special consideration to the impact of any prior adjusting entry. Reversing entries would ordinarily be appropriate for those adjusting entries that involve the recording of accrued revenues and expenses; specifically, those that involve future cash flows. Importantly, whether reversing entries are used or not, the same result is achieved!

21. Classified Balance Sheets

The balance sheet reveals the assets, liabilities, and equity of a company. In examining a balance sheet, you should always be mindful that the components listed in a balance sheet are not necessarily at fair value. Many assets are carried at historical cost, and other assets are not reported at all (such as the value of a company's brand name, patents, and other internally developed resources). Nevertheless, careful examination of the balance sheet is essential to analysis of a company's overall financial condition. To facilitate proper analysis, accountants will often divide the balance sheet into categories or classifications. The result is that important groups of accounts can be identified and subtotaled. Such balance sheets are called "classified balance sheets."

21.1 Assets

The asset side of the balance sheet may be divided into as many as five separate sections (when applicable), in the following order:

- Current Assets are those assets that will be converted into cash or consumed in a relatively short period of time; specifically, those assets that will be converted into cash or consumed within one year or the operating cycle, whichever is longer. The operating cycle for a particular company is the period of time it takes to convert cash back into cash (i.e., purchase inventory, sell the inventory on account, and collect the receivable); this is usually less than one year. In listing assets within the current section, the most liquid assets should be listed first (i.e., cash, short-term investments, and receivables). These are followed with inventories and prepaid expenses.

- Long-term Investments include land purchased for speculation, funds set aside for a plant expansion program, funds redeemable from insurance policies (e.g., cash surrender value of life insurance), and investments in other entities.

- Property, Plant, and Equipment includes the land, buildings, and equipment productively in use by the company.

- Intangible Assets lack physical existence, and include items like purchased patents and copyrights, "goodwill" (the amount by which the price paid to buy another entity exceeds that entity's identifiable assets), and similar items.

- Other Assets is the section used to report asset accounts that just don't seem to fit elsewhere, such as a special long-term receivable.

21.2 Liabilities

Just as the asset side of the balance sheet may be divided, so too for the liability section. The liability section is customarily divided into:

- Current Liabilities are those obligations that will be liquidated within one year or the operating cycle, whichever is longer. Normally, current liabilities are paid with current assets.

- Long-term Liabilities relate to any obligation that is not current, and include bank loans, mortgage notes, and the like. Importantly, some long-term notes may be classified partially as a current liability and partially as a long-term liability. The portion classified as current would be the principal amount to be repaid within the next year (or operating cycle, if longer). Any amounts due after that period of time would be shown as a long-term liability.

21.3 Equity

The appropriate financial statement presentation for equity depends on the nature of the business organization for which it is prepared. The illustrations in this book generally assume that the business is incorporated. Therefore, the equity section consists of:

- Capital Stock includes the amounts received from investors for the stock of the company. The investors become the owners of the company, and that ownership interest is represented by shares that can be transferred to others (without further involvement by the company). In actuality, the legalese of stock issues can become quite involved, and you are apt to encounter expanded capital stock related accounts (such as preferred stock, common stock, paid-in-capital in excess of par, and so on). Those advanced issues are covered in subsequent chapters.

- Retained Earnings is familiar to you, representing the accumulated income less the dividends. In essence, it is the profit that has been retained and plowed back (reinvested) into expansion of the business.

CLASSY COMPANY
Balance Sheet
December 31, 20X3

ASSETS				**LIABILITIES**		
Current Assets				**Current Liabilities**		
Cash		$ 100,000		Accounts payable	$ 80,000	
Short-term investments		50,000		Salaries payable	10,000	
Accounts receivable		75,000		Interest payable	15,000	
Inventories		200,000		Taxes payable	5,000	
Prepaid insurance		25,000	$ 450,000	Current portion of note	40,000	$ 150,000
Long-term Investments				**Long-term Liabilities**		
Stock investments		$ 40,000		Notes payable	$ 190,000	
Cash value of insurance		10,000	50,000	Mortgage liability	110,000	300,000
Property, Plant & Equipment				**Total Liabilities**		$450,000
Land		$ 25,000				
Buildings and equipment	$ 150,000					
Less: Accumulated depreciation	(50,000)	100,000	125,000	**STOCKHOLDERS' EQUITY**		
Intangible Assets				Capital stock	$ 300,000	
Goodwill			275,000	Retained earnings	160,000	
Other Assets				**Total Stockholders' Equity**		460,000
Receivable from employee			10,000			
Total Assets			$ 910,000	**Total Liabilities and Equity**		$ 910,000

21.4 Other Entity Forms

There is nothing that requires that a business activity be conducted through a corporation. A sole proprietorship is an enterprise owned by one person. If the illustration above was instead being prepared for a sole proprietorship, it would look the same except that the equity section would consist of a single owner's capital account (instead of capital stock and retained earnings). If several persons are involved in a business that is not incorporated, it is likely a partnership. Again, the balance sheet would be unchanged except for the equity section; the equity section would be divided into separate accounts -- one for each partner (representing each partner's residual interest in the business). Recent years have seen a spate of legislation creating variants of these entity forms (limited liability companies/LLC, limited liability partnerships/LLP, etc.), but the overall balance sheet structure is relatively unaffected. The terminology used to describe entity forms and equity capital structure also varies considerably around the world, but there is very little substantive difference in the underlying characteristics or the general appearance and content of the balance sheet.

21.5 Notes to the Financial Statements

Financial statements, by themselves, may not tell the whole story. Many important details about a company cannot be described in money on the balance sheet. Notes are used to describe accounting policies, major business events, pending lawsuits, and other facets of operation. The principle of full disclosure means that financial statements result in a fair presentation and that all facts which would influence investors' and creditors' judgments about the company are disclosed in the financial statements or related notes.

22. Business Liquidity and the Operating Cycle

As was noted above, careful examination of the balance sheet is essential to analysis of a company's financial health, and the classified balance sheet helps in that analysis. Investors and creditors must be mindful of a company's liquidity. Liquidity is the ability of a firm to meet its near-term obligations as they come due. Inadequate liquidity can spell doom, even for a company with bright long-term prospects and significant noncash assets.

22.1 Working Capital

Working capital is the difference between current assets and current liabilities. The illustration for Classy Company revealed current assets of $450,000 and current liabilities of $150,000. Thus, working capital is $300,000 ($450,000 - $150,000). For obvious reasons, one would hope to find a positive amount of working capital. If not, it may be an indication of financial stress.

Of course, care should be taken in drawing blanket conclusions about a firm's condition based solely upon an examination of a single number. Could a firm have negative working capital, and still be in great shape? Yes! For instance, the firm may have a standby letter of credit at a bank that enables it to borrow money as needed to meet near-term obligations. Or, some companies are in great shape even though they have negative working capital. Consider a fast food restaurant that has virtually no receivables (most sales are for cash) and a very low inventory (you know bread and milk don't store well). The only current assets may consist of cash, nominal inventories, and some prepaid items. Nevertheless, they may have current liabilities in the form of significant accounts payable and short term debt. How do they survive? The velocity of their cash flow may be very fast, as they hopefully turn large volumes of business at high profit margins. This enables the spinning of enough free cash flow to pay obligations as they come due and have money left over to reinvest in growing other business locations. So, you see that working capital is important to monitor. Just be careful about blanket conclusions based on any single measure.

22.2 Current Ratio

Is $1,000,000 of working capital a lot? Maybe, maybe not. $1,000,000 is but a drop in the bucket to a corporate giant, and that amount of working capital could signal the end. On the other hand, a "mom and pop" business could be doing grand with far less than $1,000,000. So, it really depends on the ratio of current assets to current liabilities. The current ratio is used to express the relative amount of working capital. It is calculated by dividing current assets by current liabilities:

$$\text{Current Ratio} = \text{Current Assets}/\text{Current Liabilities}$$

Classy Company has a current ratio of 3:1 ($450,000/$150,000). Be advised that ratios can be manipulated. If Classy wished to increase their current ratio, they could just pay off a little debt. For instance, if they paid off $50,000 of accounts payable with cash, then current assets and current liabilities would each decline by $50,000, and the revised current ratio would "improve" to 4:1 (($450,000 -$50,000)/($150,000 - $50,000)).

22.3 Quick Ratio

A company could possess a large amount of inventory that is not easily sold. Thus, the current ratio (which includes inventory) could signal no problem, all the while the company is struggling to pay its bills. A tougher ratio is the quick ratio. This ratio provides a more stringent test of debt-paying ability by dividing only a firm's quick assets (cash, short-term investments, and accounts receivable) by current liabilities:

Quick Ratio = (Cash + Short-term Investments + Accounts Receivable)/Current Liabilities

Classy Company has a quick ratio of 1.5:1 (($100,000 + $50,000 + $75,000)/$150,000).