# 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	In	crease	De	crease	В	alance		
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

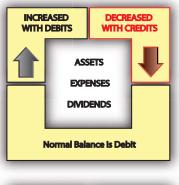
At first, it is natural for the debit/credit rules to seem confusing. However, the debit/credit rules are inherently logical (the logic is discussed at linked material in the online version of the text). But, memorization usually precedes comprehension. So, you are well advised to memorize the "debit/ 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.