**Transactions** (business transactions) are a business's economic events recorded by accountants. Companies carry on many activities that do not represent business transactions. Examples are hiring employees, answering the telephone, talking with customers, and placing merchandise orders. Some of these activities may lead to business transactions: Employees will earn wages, and suppliers will deliver ordered merchandise. The company must analyze each event to find out if it affects the components of the accounting equation. If it does, the company will record the transaction. Illustration 1-7 demonstrates the transaction-identification process.

Each transaction must have a dual effect on the accounting equation. For example, if an asset is increased, there must be a corresponding: (1) decrease in another asset, or (2) increase in a specific liability, or (3) increase in stockholders' equity.

Two or more items could be affected. For example, as one asset is increased $10,000, another asset could decrease $6,000 and a liability could increase $4,000. Any change in a liability or ownership claim is subject to similar analysis.

**Transaction Analysis**

In order to analyze transactions, we will examine a computer programming business (Softbyte Inc.) during its first month of operations. As part of this analysis, we will expand the basic accounting equation. This will allow us to better illustrate the impact of transactions on stockholders' equity. Recall that stockholders' equity is comprised of two parts: common stock and retained earnings. Common stock is affected when the company issues new shares of stock in exchange for cash. Retained earnings is affected when the company earns revenue, incurs expenses, or pays dividends. Illustration 1-8 shows the expanded equation.

If you are tempted to skip ahead after you've read a few of the following transaction analyses, don't do it. Each has something unique to teach, something you'll need later. (We assure you that we've kept them to the minimum needed!)
Transaction 1. Investment by Stockholders. Ray and Barbara Neal decide to open a computer programming company that they incorporate as Softbyte Inc. On September 1, 2011, they invest $15,000 cash in the business in exchange for $15,000 of common stock. The common stock indicates the ownership interest that the Neals have in Softbyte Inc. This transaction results in an equal increase in both assets and stockholders' equity. The asset Cash increases $15,000, as does Common Stock. The effect of this transaction on the basic equation is:

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

\[
\begin{align*}
\text{Cash} & \quad \text{Common Stock} \\
+15,000 & \quad +15,000 \\
\text{Increase} & \quad \text{Increase}
\end{align*}
\]

Observe that the equality of the basic equation has been maintained. Note also that the source of the increase in stockholders' equity (in this case, Issued Stock) is indicated. Why does this matter? Because investments by stockholders do not represent revenues, and they are excluded in determining net income. Therefore, it is necessary to make clear that the increase is an investment rather than revenue from operations. Additional investments (i.e., investments made by stockholders after the corporation has been initially formed) have the same effect on stockholders' equity as the initial investment.

Transaction 2. Purchase of Equipment for Cash. Softbyte Inc. purchases computer equipment for $7,000 cash. This transaction results in an equal increase and decrease in total assets, though the composition of assets changes: Cash decreases $7,000, and the asset Equipment increases $7,000. The specific effect of this transaction and the cumulative effect of the first two transactions are:

\[
\begin{align*}
\text{Cash} & \quad \text{Equipment} \\
-7,000 & \quad +7,000 \\
\text{New Balance} & \quad \text{New Balance}
\end{align*}
\]

Observe that total assets are still $15,000. Common stock also remains at $15,000, the amount of the original investment.

Transaction 3. Purchase of Supplies on Credit. Softbyte Inc. purchases for $1,600 from Acme Supply Company computer paper and other supplies expected to last several months. Acme agrees to allow Softbyte to pay this bill in October. This transaction is a purchase on account (a credit purchase). Assets increase because of the expected future benefits of using the paper and supplies, and liabilities increase by the amount due Acme Company. The asset Supplies increases $1,600, and the liability Accounts Payable increases by the same amount. The effect on the equation is:

\[
\begin{align*}
\text{Assets} & \quad = \quad \text{Liabilities} + \text{Stockholders' Equity} \\
\text{Old Balance} & \quad \text{New Balance} \\
\text{Cash} + \text{Supplies} + \text{Equipment} & \quad \text{Accounts Payable} + \text{Common Stock} \\
8,000 + 1,600 + 7,000 & \quad 1,600 + 15,000 \\
16,600 & \quad 16,600
\end{align*}
\]

Total assets are now $16,600. This total is matched by a $1,600 creditor's claim and a $15,000 ownership claim.

Transaction 4. Services Provided for Cash. Softbyte Inc. receives $1,200 cash from customers for programming services it has provided. This transaction represents Softbyte's principal revenue-producing activity. Recall that revenue increases stockholders' equity. In this transaction, Cash increases $1,200, and revenues (specifically Service Revenue) increase $1,200. The new balances in the equation are:

\[
\begin{align*}
\text{Assets} & \quad = \quad \text{Liabilities} + \text{Stockholders' Equity} \\
\text{Old Balance} & \quad \text{New Balance} \\
\text{Cash} + \text{Supplies} + \text{Equipment} & \quad \text{Accounts Payable} + \text{Common Stock} + \text{Retained Earnings} \\
8,000 + 1,600 + 7,000 & \quad 1,600 + 15,000 + 1200 \\
17,800 & \quad 17,800
\end{align*}
\]

The two sides of the equation balance at $17,800. Note that stockholders' equity increases when revenues are earned. The title Service Revenue indicates the source of the increase in stockholders' equity. Service Revenue is included in determining Softbyte Inc.'s net income.

Transaction 5. Purchase of Advertising on Credit. Softbyte Inc. receives a bill for $250 from the Daily News for advertising the opening of its business but postpones payment of the bill until a later date. This transaction results in an increase in liabilities and a decrease in stockholders' equity. The specific items involved are Accounts Payable and Advertising Expense. The effect on the equation is:
The two sides of the equation still balance at $17,800. Retained Earnings decreases when Softbyte incurs the expense. In addition, the specific cause of the decrease (advertising expense) is noted. Expenses do not have to be paid in cash at the time they are incurred. When Softbyte pays at a later date, the liability Accounts Payable will decrease and the asset Cash will decrease [see Transaction (8)]. The cost of advertising is an expense (rather than an asset) because Softbyte has used the benefits. Advertising Expense is included in determining net income.

Transaction 6. Services Rendered for Cash and Credit. Softbyte Inc. provides $3,500 of programming services for customers. The company receives cash of $1,500 from customers, and it bills the balance of $2,000 on account. This transaction results in an equal increase in assets and stockholders’ equity. Three specific items are affected: Cash increases $1,500; Accounts Receivable increases $2,000; and Service Revenue increases $3,500. The new balances are as follows.

Transaction 7. Payment of Expenses. Softbyte pays the following expenses in cash for September: store rent $600, salaries of employees $900, and utilities $200. These payments result in an equal decrease in assets and stockholders’ equity. Cash decreases $1,700 and Retained Earnings decreases by the same amount. The effect of these payments on the equation is:

Transaction 8. Payment of Accounts Payable. Softbyte Inc. pays its Daily News advertising bill of $250 in cash. The company previously (in Transaction 5) recorded the bill as an increase in Accounts Payable and a decrease in Retained Earnings. This payment “on account” decreases the asset Cash by $250 and also decreases the liability Accounts Payable by $250. The effect of this transaction on the equation is:

Transaction 9. Receipt of Cash on Account. Softbyte receives the sum of $600 in cash from customers who had previously been billed for services (in Transaction 6). This transaction does not change total assets, but it changes the composition of those assets. Cash increases $600 and Accounts Receivable decreases $600. The new balances are:

The two sides of the equation still balance at $19,600. Three lines are required in the analysis to indicate the different types of expenses that have been incurred.
Note that the collection of an account receivable for services previously billed and recorded does not affect stockholders' equity. Softbyte already recorded this revenue (in Transaction 6) and should not record it again.

**Transaction 10. Dividends.** The corporation pays a dividend of $1,300 in cash to Ray and Barbara Neal, the stockholders of Softbyte Inc. This transaction results in an equal decrease in assets and stockholders' equity. Both Cash and Retained Earnings decrease $1,300, as shown on the next page.

<table>
<thead>
<tr>
<th>Assets</th>
<th>Liabilities</th>
<th>Stockholders' Equity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Old Bal.</td>
<td>$9,350</td>
<td>$1,600</td>
</tr>
<tr>
<td>New Bal.</td>
<td>$8,050</td>
<td>$7,000</td>
</tr>
</tbody>
</table>

Note that the dividend reduces retained earnings, which is part of stockholders' equity. **Dividends are not expenses.** Like stockholders' investments, dividends are excluded in determining net income.

**Summary of Transactions**

Illustration 1-9 summarizes the September transactions of Softbyte Inc. to show their cumulative effect on the basic accounting equation. It also indicates the transaction number and the specific effects of each transaction.

<table>
<thead>
<tr>
<th>Transaction</th>
<th>Assets</th>
<th>Liabilities</th>
<th>Stockholders' Equity</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>$15,000 + $15,000</td>
<td>$1,600</td>
<td>$15,000</td>
</tr>
<tr>
<td>(2)</td>
<td>+$1,600</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(3)</td>
<td>$1,600 + $1,600</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(4)</td>
<td>$7,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(5)</td>
<td>+$7,000</td>
<td>+$1,600</td>
<td>$1,600</td>
</tr>
<tr>
<td>(6)</td>
<td>+$7,000</td>
<td>+250</td>
<td>$1,600</td>
</tr>
<tr>
<td>(7)</td>
<td>+$7,000</td>
<td>+3,500</td>
<td>$1,600</td>
</tr>
<tr>
<td>(8)</td>
<td>$7,000</td>
<td>+$2,000</td>
<td>$1,600</td>
</tr>
<tr>
<td>(9)</td>
<td>+$7,000</td>
<td>+$2,000</td>
<td>$1,600</td>
</tr>
<tr>
<td>(10)</td>
<td>$18,050</td>
<td></td>
<td>$18,050</td>
</tr>
</tbody>
</table>

Illustration 1-9 demonstrates a number of significant facts:

1. Each transaction must be analyzed in terms of its effect on:
   a. the three components of the basic accounting equation.
   b. specific types (kinds) of items within each component.
2. The two sides of the equation must always be equal.
3. The Common Stock and Retained Earnings columns indicate the causes of each change in the stockholders' claim on assets.

There! You made it through transaction analysis. If you feel a bit shaky on any of the transactions, it might be a good idea at this point to get up, take a short break, and come back again for a brief (10- to 15-minute) review of the transactions, to make sure you understand them before you go on to the next section.

**Do it!**

**Tabular Analysis**

Transactions made by Virmari & Co., a public accounting firm, for the month of August are shown below. Prepare a tabular analysis which shows the effects of these transactions on the expanded accounting equation, similar to that shown in Illustration 1-9.

1. Stockholders purchased shares of stock for $25,000 cash.
2. The company purchased $7,000 of office equipment on credit.
3. The company received $8,000 cash in exchange for services performed.
4. The company paid $850 for this month's rent.
5. The company paid a dividend of $1,000 in cash to stockholders.

**Solution**

**Action Plan**

- Analyze the effects of each transaction on the accounting equation.
- Use appropriate category names (not descriptions).
- Keep the accounting equation in balance.

<table>
<thead>
<tr>
<th>Transaction</th>
<th>Assets</th>
<th>Liabilities</th>
<th>Stockholders' Equity</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>Cash + $25,000</td>
<td>Accounts Payable + $7,000</td>
<td>Common Stock + $25,000</td>
</tr>
<tr>
<td>(2)</td>
<td>Office Equipment + $7,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(3)</td>
<td>+8,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(4)</td>
<td>-850</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(5)</td>
<td>-1,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>$31,150</td>
<td>$7,000</td>
<td>$25,000 + $8,000 - $850 - $1,000</td>
</tr>
</tbody>
</table>

Related exercise material: BE1-6, BE1-7, BE1-8, BE1-9, E1-6. E1-7. E1-8, E1-10, and Do it! 1-3.