

**Tenth Edition**  
**CPA**  
**Preparatory Program**

**Financial Accounting and Reporting**

**Sample Chapters:**  
**Earnings Per Share &**  
**State and Local Governments**

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**Editorial Notes**

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This material is designed exclusively to assist people in their exam preparation. No information in the material should be construed as authoritative business, accounting or consulting advice. Appropriate professionals should be consulted for such advice and consulting.

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## Earnings Per Share

**Note:** This topic is listed in Area I, Group D in the syllabus.

**Note:** Guidance in the *Accounting Standards Codification*<sup>®</sup> on calculation and presentation of earnings per share is in ASC 260.

Earnings per share figures, both basic and diluted, are required to be disclosed on the face of the financial statements. Thus they are an integral part of the financial statements.

Earnings per share (EPS) is the amount of income the holder of one share of common stock would have received if 100% of the company's profit had been "paid" (distributed as dividends) to the holders of all the common shares outstanding. Earnings belong to the common shareholders whether they are distributed as dividends or retained in the company to support future growth, so earnings per share is an important measure. The concept of "earnings per share" does not apply to preferred shares, because preferred shareholders have no claim on the company's earnings beyond their preferred dividend.

The basic calculation is:

**Income Available to Common Shareholders (IAC)**

**Weighted Average Number of Common Shares Outstanding (WANCSO)**

Two versions of EPS must be disclosed in a company's financial statements:

- 1) **Basic earnings per share (BEPS)** is the earnings per share for all common shares that were actually outstanding during the period.
- 2) **Diluted earnings per share (DEPS)** is the earnings per share that would have resulted if all potentially issuable, dilutive<sup>15</sup> common shares had been issued as common shares on the first day of the period (or, if the dilutive securities were issued during the period, on the date of their issue).

The *Accounting Standards Codification*<sup>™</sup> requires that companies disclose their EPS if they have either common stock or potential common stock in the form of convertible bonds, convertible preferred shares, options, and/or warrants outstanding.

Earnings per share calculations for BEPS and DEPS are both mathematical and fairly simple once you are familiar with them. The calculation of IAC and WANCSO can become complex, however.

### Income Available to Common Stockholders (IAC)

Income available to common stockholders is the amount of earnings that was available for distribution to common shareholders. Some of it or none of it may have actually been distributed as common dividends, but it is recognized as belonging to common shareholders whether or not it has actually been distributed.

If the company has preferred stock outstanding, the amount of income available to common shareholders is not the same as the company's net income. If the company has preferred stock, the company usually pays a dividend to its preferred shareholders. All dividends, including preferred dividends, are paid from earnings. Funds for dividends that belong to preferred shareholders cannot also belong to common shareholders.

**Therefore, preferred dividends are subtracted from net income to determine Income Available to Common Stockholders (IAC).**

<sup>15</sup> "Dilutive" means that the potentially issuable shares would have lowered EPS if they had actually been issued. They would have **diluted** each shareholder's share of the earnings.

What constitutes preferred dividends depends upon whether the preferred stock is **cumulative** or **noncumulative**.

- Usually, preferred shares receive a fixed, stated percentage of the par value of the preferred share as a dividend each year. However, **noncumulative** preferred shares receive that dividend only if the company chooses to pay it and declares the dividend. If the company does not declare a dividend, the company has no obligation to the holders of the noncumulative preferred stock to make up that dividend later. When the preferred dividend is **declared**, the amount of the preferred dividend is no longer available to the common shareholders since it has been set aside for distribution to preferred shareholders.
- Like noncumulative preferred shares, **cumulative preferred shares** receive a fixed, stated percentage of the par value of the preferred share as a dividend. But unlike noncumulative preferred shares, if the regular preferred dividend is not declared or paid in a specific year, it must be paid in a future year before **any** future common dividends can ever again be paid. Therefore, as soon as a preferred dividend is earned (which occurs with passing time), that preferred dividend earned is not available to common shareholders that year, whether or not the preferred dividend was declared that year. Even if a cumulative dividend is not declared for a given year, it is subtracted from net income in calculating IAC for that year.<sup>16</sup>

**Exam Tip:** If preferred shares are not specifically identified as **cumulative** preferred shares in an exam problem, they are **noncumulative** preferred shares.

The difference between cumulative and noncumulative preferred stock is important because in calculating IAC, **cumulative** preferred dividends are subtracted from net income **in the year they are earned**, whereas **noncumulative** preferred dividends are subtracted from net income **in the year they are declared**.

Income Available to Common Stockholders is calculated as follows:

$$\begin{array}{r}
 \text{Net Income} \\
 - \text{Noncumulative preferred dividends } \mathbf{DECLARED} \text{ (whether or not paid) } \mathbf{and/or} \\
 - \text{Cumulative preferred dividends } \mathbf{EARNED} \text{ (whether or not declared)} \\
 = \mathbf{\underline{\underline{Income Available to Common Stockholders (IAC)}}}
 \end{array}$$

A company could have both forms of preferred stock, but usually a company that has preferred stock will have one or the other but not both.

**Exam Tip:** On the exam, if a problem does not specifically say whether a preferred dividend (cumulative or noncumulative) was declared or not, **assume that it was declared**. Preferred dividends are declared and paid very reliably, unless the company is in deep financial trouble.

Cumulative preferred dividends are subtracted from net income in the year they are earned, whether or not they are declared that year. If cumulative preferred dividends are not declared in the year they are earned but are paid in a future year, they are **not** subtracted from net income to calculate IAC in the future year when they are paid, **because they have already been subtracted** in the year they were earned. To subtract them again would be to double count them.

**Exam Tip:** If a question gives the amount of income available to common stockholders, do not subtract any preferred dividends from it. Income available to common stockholders **is** net income minus preferred dividends. The preferred dividends **have already been subtracted** from net income to derive the IAC given in the problem. To subtract them again would be to subtract them twice.

<sup>16</sup> An undeclared and unpaid **cumulative** preferred dividend is subtracted from net income to calculate IAC for the year in which it was earned only. If it is paid in a subsequent year, it is not subtracted again from that subsequent year's net income, because to do that would be to count it twice.

**Note:** In calculating IAC, no adjustments are made for **common** dividends declared or paid because if common dividends have been declared and distributed, the amount of the dividend is still available to the common shareholder, only now it is given to them in the form of a cash dividend.

### Weighted Average Number of Common Shares Outstanding (WANCSO)

The Weighted Average Number of Common Shares Outstanding is the **average number of common shares** that were outstanding during the period. WANCSO **could** be calculated by summing the number of common shares outstanding on each day of the period and then dividing the sum by the number of days in the period, but that would be very time-consuming. Instead, the average is calculated as a weighted average. For example, if 10,000 new shares were issued on July 1, the weighted-average number of shares outstanding applicable to the new shares was 5,000 because the 10,000 shares were outstanding for only half the year.

**Note:** If the company reacquires some of its shares during the period (purchases treasury stock), the reacquired shares are outstanding only for the time they were owned by someone other than the company. So, for example, if the company purchased 12,000 of its own shares on the open market on September 1, the weighted average number of those shares outstanding during the year was 8,000 ( $12,000 \div 12 \text{ month} \times 8 \text{ months outstanding}$ ).

The calculation of WANCSO is usually done in the following manner, though there are variations.

- Begin with the number of shares outstanding at the beginning of the period and weight that for the entire year at 100%. Transactions that occur after the beginning of the period will be adjustments to this figure.
- New shares issued during the period are multiplied by the percentage of the year the new shares were outstanding and that amount is added to the number of shares outstanding at the beginning of the period.
- When shares are reacquired, the number of shares reacquired is multiplied by the percentage of the year they were **not** outstanding, and that amount is **subtracted** from the number of shares outstanding at the beginning of the period.
- To ensure that the weighted average number of shares outstanding and the resulting earnings per share reported are comparable for all periods presented, stock splits and stock dividends are reported as if they had occurred on January 1 of the first period presented in the comparative financial statements. All shares outstanding and all calculations that pre-date the split or stock dividend are adjusted, and the adjustment goes back to the beginning of the first period reported. Even if the stock split or stock dividend occurs after the year-end, if it occurs before the year's financial statements are issued, it is treated the same way—as having occurred at the beginning **of the first period presented** in the financial statements.

The adjustment for stock splits and stock dividends is made to all shares outstanding at the beginning of the earliest period presented and to all transactions (new shares issued, outstanding shares reacquired) that occurred **prior** to the stock split or stock dividend.

**However, transactions that occurred after the stock split/stock dividend took place are not adjusted.**

**Example:** Company Q began the year with 100,000 common shares outstanding. 10,000 new shares were issued on July 1. The weighted average number of common shares outstanding for this transaction was 5,000 since those 10,000 shares were outstanding for half of the year. 5,000 equivalent shares are added to the 100,000 shares outstanding on January 1.

The company reacquired 1,000 of its shares on October 1. The amount **subtracted** from the beginning outstanding shares is 250 equivalent shares— $3/12$  or 25% of 1,000 shares—since those 1,000 shares were **not** outstanding for 3 out of 12 months of the year.

Thus the weighted average number of common shares outstanding for the period was  $100,000 + 5,000 - 250 = 104,750$ .

The calculation of WANCSO is an important step in the calculation of Earnings Per Share. The following table shows the main share transactions and for what time period each is included in WANCSO.

| Share Item                                                                                                                                                                                                                                                                             | Included for what time period                                                                                                                                                                                                                                                                                                                  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Shares issued during the year.</b> (It does not matter whether the shares are previously unissued shares or treasury shares that are being reissued. Both are treated the same way in calculating WANCSO because treasury shares are not outstanding while the company holds them.) | Only the time period they are outstanding <b>after</b> being issued.                                                                                                                                                                                                                                                                           |
| Shares <b>reacquired by the company</b> during the year.                                                                                                                                                                                                                               | Only the time period <b>before</b> they are reacquired. This is accomplished by <b>subtracting</b> the shares reacquired, weighted for the period they were <b>not</b> outstanding, from the number of shares outstanding at the beginning of the period.                                                                                      |
| Shares issued as a part of a <b>stock split</b> .                                                                                                                                                                                                                                      | The entire year and all prior periods presented as comparative periods, as if the split had occurred at the beginning of the first period presented. All shares outstanding at the beginning of the period and all shares issued or acquired <b>before</b> the stock split took place are adjusted for the stock split.                        |
| Shares issued as a <b>stock dividend</b> .                                                                                                                                                                                                                                             | The entire year and all prior periods presented as comparative periods, as if the stock dividend had been distributed at the beginning of the first period presented. All shares outstanding at the beginning of the period and all shares issued or acquired <b>before</b> the stock dividend took place are adjusted for the stock dividend. |
| Treatment of shares issued or acquired <b>after</b> a stock dividend or a stock split has taken place                                                                                                                                                                                  | Shares issued or acquired <b>after</b> a stock dividend or stock split has taken place are <b>not</b> adjusted for the stock dividend or stock split.                                                                                                                                                                                          |

**Example No. 1:** Matthew Corp. has 100,000 common shares, par value \$10, outstanding on January 1, 20X0. During 20X0, the following share transactions take place:

- On April 1, 10,000 shares are issued for \$50 each.
- On August 1, Matthew repurchases 24,000 shares to be held as treasury stock.
- On October 1, Matthew carries out a 2-for-1 stock split.
- On November 1, 15,000 shares are issued for \$55 each.
- On December 15, Matthew declares a 10% stock dividend.

The calculation of the weighted average number of common shares outstanding is as follows:

| Date                | # Shares                                                                                             | Weighting | Wtd. Avg. | Adjustments for splits/stock dividends |                       |
|---------------------|------------------------------------------------------------------------------------------------------|-----------|-----------|----------------------------------------|-----------------------|
| Jan. 1              | 100,000 outstanding                                                                                  | 12/12     | 100,000   | $100,000 \times 2 \times 1.1 =$        | 220,000               |
| Apr. 1              | +10,000 issued                                                                                       | 9/12      | 7,500     | $7,500 \times 2 \times 1.1 =$          | 16,500                |
| Aug. 1              | (24,000) repurchased                                                                                 | 5/12 *    | (10,000)  | $(10,000) \times 2 \times 1.1 =$       | ( 22,000)             |
| Oct. 1              | 2-for-1 stock split: multiply the weighted average of each item previous to the split by 2.          |           |           |                                        |                       |
| Nov. 1              | +15,000 issued                                                                                       | 2/12      | 2,500     | $2,500 \times 1.1 = **$                | 2,750                 |
| Dec. 15             | 10% stock dividend: multiply the weighted average of each item previous to the stock dividend by 1.1 |           |           |                                        |                       |
| <b>Total WANCSO</b> |                                                                                                      |           |           |                                        | <b><u>217,250</u></b> |

\* The shares repurchased will **not** be outstanding for five months from August 1 through December 31. We are not weighting the treasury shares reacquired according to the number of months they were outstanding because those shares are already included in the 100,000 shares outstanding at the beginning of the year. Instead, we need to weight them according to the time the repurchased shares were **not** outstanding and **subtract** the weighted number of shares not outstanding from the number of shares outstanding at the beginning of the year.

\*\* Note that the opening number of shares outstanding and the April 1 and August 1 transactions that pre-date both the stock split and the stock dividend are adjusted for both the stock split that occurred on October 1 and the stock dividend that occurred on December 15. The 15,000 shares issued on November 1 took place **after** the October 1 stock split, however, so the number of shares issued on November 1 are **not** adjusted for the October 1 stock split because those 15,000 shares issued after the stock split did not receive the additional shares from the split. Those shares are, however, adjusted for the 10% stock dividend that took place on December 15 **after** those shares were issued on November 1, because those shares **did** receive the 10% stock dividend.

**Adjustments for stock splits and stock dividends are made only to shares/transactions that were in place before the stock split or stock dividend occurred.**

There are other ways of calculating WANCSO, as well. Whichever way it is done, the resulting weighted average should be the same as if you had taken the number of shares outstanding on each day of the year (including all adjustments for stock splits and stock dividends as if they had occurred at the beginning of the period for all shares outstanding at that time), added them together (including weekend days as days when no change takes place), and divided the sum by 365 days. All of the methods of calculating WANCSO are shortcuts to that number.

An exam question might present the facts as transaction data, as above, or as number of shares outstanding on each date. Thus, it is a good idea to be familiar with the various ways of calculating WANCSO. Two additional methods follow.

Using the same facts as in the previous example, here are two other ways of calculating WANCSO:

**Example No. 2:** Matthew Corp. has 100,000 common shares, par value \$10, outstanding on January 1, 20X0. During 20X0, the following share transactions take place:

- On April 1, 10,000 shares are issued for \$50, total shares outstanding 110,000.
- On August 1, Matthew repurchases 24,000 shares to be held as treasury stock, total shares outstanding 86,000.
- On October 1, Matthew carries out a 2-for-1 stock split.
- On November 1, 15,000 shares are issued for \$55 each.
- On December 15, Matthew declares a 10% stock dividend.

Using the number of shares outstanding on each date, the calculation of the weighted average number of common shares outstanding is done as follows:

| <u>Period Outstanding</u> | <u>Total Shares</u>                                                                                   | <u>Weighting</u> | <u>Wtd. Avg.</u> | <u>Adjustments for splits/stock dividends</u> |                |
|---------------------------|-------------------------------------------------------------------------------------------------------|------------------|------------------|-----------------------------------------------|----------------|
| Jan. 1-Mar. 31            | 100,000                                                                                               | 3/12             | 25,000           | $25,000 \times 2 \times 1.1 =$                | 55,000         |
| Apr. 1-Jul. 31            | 110,000                                                                                               | 4/12             | 36,667           | $36,667 \times 2 \times 1.1 =$                | 80,667         |
| Aug. 1-Dec. 31            | 86,000                                                                                                | 5/12             | 35,833           | $35,833 \times 2 \times 1.1 =$                | 78,833         |
| Oct. 1                    | 2-for-1 stock split: multiply the weighted average of each item previous to the split by 2.           |                  |                  |                                               |                |
| Nov. 1-Dec. 31            | 15,000                                                                                                | 2/12             | 2,500            | $2,500 \times 1.1 = *$                        | 2,750          |
| Dec. 15                   | 10% stock dividend: multiply the weighted average of each item previous to the stock dividend by 1.1. |                  |                  |                                               |                |
| <b>Total WANCSO</b>       |                                                                                                       |                  |                  |                                               | <b>217,250</b> |

\* Note that the additional shares outstanding for the period November 1 through December 31 are only the 15,000 shares that were issued on November 1. The shares that were outstanding before those 15,000 shares were issued are included in the number outstanding from August 1 through December 31. The existing 86,000 shares and the issued 15,000 shares are recorded separately because (1) their weightings are different and (2) the 86,000 existing shares needed to be adjusted for the 2-for-1 stock split that occurred on October 1 and the 10% stock dividend on December 15, whereas the 15,000 shares issued on November 1 needed to be adjusted only for the stock dividend that occurred after their issuance.

**Adjustments for stock splits and stock dividends are made only to shares that were issued and outstanding *before* the stock split or stock dividend occurred.**



**Example No. 3:** Matthew Corp. has 100,000 common shares, par value \$10, outstanding on January 1, 20X0. During 20X0, the following share transactions take place:

- On April 1, 10,000 shares are issued for \$50.
- On August 1, Matthew repurchases 24,000 shares to be held as treasury stock.
- On October 1, Matthew carries out a 2-for-1 stock split.
- On November 1, 15,000 shares are issued for \$55 each.
- On December 15, Matthew declares a 10% stock dividend.

Beginning with the **minimum** amount of shares outstanding all year and building up the average using the shares outstanding for part of the year, the calculation of the weighted average number of common shares outstanding can be done as follows:

|                                                                                                                  | <u>Total Shares</u> | <u>Weighting</u> | <u>Wtd. Avg.</u> | <u>Adj. for splits/stock dividends</u> |                |
|------------------------------------------------------------------------------------------------------------------|---------------------|------------------|------------------|----------------------------------------|----------------|
| Minimum outst. Jan. 1-Dec. 31                                                                                    | 76,000 *            | 12/12            | 76,000           | $76,000 \times 2 \times 1.1 =$         | 167,200        |
| Outstanding Apr. 1-Dec. 31                                                                                       | 10,000              | 9/12             | 7,500            | $7,500 \times 2 \times 1.1 =$          | 16,500         |
| Outstanding Jan. 1-Jul. 31**                                                                                     | 24,000              | 7/12             | 14,000           | $14,000 \times 2 \times 1.1 =$         | 30,800         |
| 2-for-1 stock split on Oct. 1: multiply the weighted average of each item previous to the split by 2.            |                     |                  |                  |                                        |                |
| Outstanding Nov. 1-Dec. 31                                                                                       | 15,000              | 2/12             | 2,500            | $2,500 \times 1.1 =$ ***               | 2,750          |
| 10% stock dividend on Dec. 15: multiply the weighted average of each item previous to the stock dividend by 1.1. |                     |                  |                  |                                        |                |
| <b>Total WANC SO</b>                                                                                             |                     |                  |                  |                                        | <b>217,250</b> |

\* 100,000 shares outstanding on Jan. 1 minus the 24,000 shares repurchased August 1 = 76,000, the minimum number of shares outstanding all year.

\*\* This is the period of time (7 months) the 24,000 repurchased shares were outstanding **before** they were repurchased.

\*\*\* Note that all shares for which the outstanding period began before the October 1 stock split are adjusted for that stock split and for the stock dividend received December 15. The 15,000 shares issued on November 1 took place **after** the October 1 stock split, so the 15,000 shares outstanding from Nov. 1 to Dec. 31 are **not** adjusted for the October 1 stock split. They are, however, adjusted for the 10% stock dividend that took place on December 15 **after** they were issued.

**Adjustments for stock splits and stock dividends are made only to shares/transactions that were in place before the stock split or stock dividend occurred.**

**Note:** A company can also carry out a **reverse split** of its shares. This might be done, for example, when a company is in financial trouble and its stock price falls to a level where the stock is in danger of being de-listed from the stock exchange(s) where it is traded. A reverse split **increases** the price per share and **decreases** the number of shares outstanding. For example, a company with a weighted average number of shares outstanding of 97,500 that carries out a 1-for-2 reverse split will have a WANC SO of 48,750 shares after the reverse split ( $97,500 \div 2$ ). The market price of each share will generally double in order to maintain the same market capitalization for the company, thus raising the share price above the level below which the shares would be de-listed. For the purposes of calculating WANC SO, a reverse split is also treated as occurring at the beginning of the first period presented in the financial statements.

Now that we have covered the calculations for IAC and WANC SO, we can turn our attention to the calculation of BEPS and then DEPS.

## Basic Earnings Per Share

The formula used in the calculation of Basic EPS is:

$$\frac{\text{Income Available to Common Shareholders (IAC)}}{\text{Weighted Average Number of Common Shares Outstanding (WANCSO)}}$$

If the company has net income/expense from discontinued operations or extraordinary items on the income statement that are reported below the income from continuing operations line, Basic EPS must be calculated three times:

- 1) Using income from continuing operations minus preferred dividends in the numerator.
- 2) Using the income from discontinued operations and/or the extraordinary items in the numerator.
- 3) Using net income minus preferred dividends in the numerator.

However, exam questions will generally not have any discontinued operations or extraordinary items, so the numerator of the Basic EPS calculation will usually simply be net income minus preferred dividends.

**Example 1:** Redford's capital structure at December 31, 20X1 was as follows:

- 100,000 shares of common stock issued and outstanding.
- 20,000 of nonconvertible preferred shares issued and outstanding.

On July 1, 20X2, Redford issued a 10% stock dividend on its common stock and declared and paid a cash dividend of \$2 per share on its preferred stock. Net income for the year ending December 31, 20X2 was \$780,000. Calculate Redford's basic EPS.

The **calculation of IAC** is as follows:

|                                           |                  |
|-------------------------------------------|------------------|
| Net income                                | \$780,000        |
| – Preferred dividend                      | <u>( 40,000)</u> |
| = Income available to common shareholders | <u>\$740,000</u> |

The **calculation of WANCSO** is as follows:

| <u>Date</u> | <u># Shares</u>                                                                             | <u>Weighting</u> | <u>Wtd. Avg.</u> | <u>Adjustments for splits/stock dividends</u> |
|-------------|---------------------------------------------------------------------------------------------|------------------|------------------|-----------------------------------------------|
| Jan. 1      | 100,000 outstanding                                                                         | 12/12            | 100,000          | 100,000 × 1.1 = 110,000                       |
| July 1      | 10% stock dividend: multiply the weighted average of each item previous to the split by 1.1 |                  |                  |                                               |

|                     |                       |
|---------------------|-----------------------|
| <b>Total WANCSO</b> | <u><b>110,000</b></u> |
|---------------------|-----------------------|

**Basic earnings per share** is calculated as follows:

$$\$740,000 \div 110,000 = \underline{\$6.73}$$

**Example 2:** Let us assume the same information, except that instead of a 10% stock dividend on July 1, Redford simply issued and sold 10,000 new shares on July 1. Since no stock split or stock dividend occurred, the final column is not required. WANCSO is the total of the amounts in the Weighted Average column, as follows:

The **calculation of WANCSO** is as follows:

| <u>Date</u>         | <u># Shares</u>     | <u>Weighting</u> | <u>Wtd. Avg.</u>      |
|---------------------|---------------------|------------------|-----------------------|
| Jan. 1              | 100,000 outstanding | 12/12            | 100,000               |
| July 1              | +10,000 issued      | 6/12             | <u>5,000</u>          |
| <b>Total WANCSO</b> |                     |                  | <u><u>105,000</u></u> |

**Basic earnings per share** is calculated as follows:

$$\$740,000 \div 105,000 = \$7.047 = \underline{\underline{\$7.05}}$$

When the shares were sold as in Example 2 rather than distributed as a stock dividend as in Example 1, WANCSO was lower and the resulting BEPS was higher.

The difference is due to the fact that we assume the shares issued in the stock dividend were outstanding for the full year, whereas the shares issued and sold were not outstanding for the full year.

## Diluted Earnings Per Share (DEPS)

When we calculate diluted earnings per share (DEPS), we pretend that all securities representing potentially issuable common shares that were outstanding at the year-end had actually been converted or exercised on January 1 (or on the date the securities representing the potential common shares were issued, if they were issued during the year). These potentially issuable shares are in the form of convertible bonds, convertible preferred shares, and options and warrants that are outstanding at the end of the year. They are classified as "potentially issuable shares" because they are not currently outstanding as shares, but someone other than the company has the ability to convert them into common shares.

The calculation of DEPS is done so that investors and potential investors are able to understand what EPS would have been if these potentially issuable shares had actually been outstanding shares. If, for example, the company has many potentially issuable shares outstanding in the form of stock options issued to executives, the exercise of those options in the future could greatly reduce the earnings per share of the existing shareholders.

If the company has no potential common shares (options, warrants, convertible securities), it has a **simple capital structure** and its DEPS will be the same as its BEPS. If the company **does** have potential common shares, it has a **complex capital structure**.

A company that has a complex capital structure must report both Basic and Diluted earnings per share on the face of the income statement with equal prominence.

**Note:** Remember that in calculating DEPS, we are working only with **potentially** issuable shares that have not yet been issued. Any of these items actually converted into common stock during the year are included in the calculation of Basic EPS instead.

### Evaluating Whether or Not Potential Common Shares Are Dilutive

Potential common shares are included in the calculation of DEPS **only if they are dilutive**. In other words, if they had been exercised during the period and their exercise would have caused a **decrease** in basic earnings per share, they are dilutive. If their exercise would have caused an **increase** in basic earnings per share (as some potential common shares can do), they are **antidilutive** and are not included in the calculation of DEPS.

Each issue of potential common stock must be considered individually in determining whether it is dilutive and thus to be included in the calculation of DEPS, or whether it is antidilutive and should be excluded from the calculation of DEPS.

Furthermore, per ASC 260-10-45-18, the effect on EPS of each issue of potential common stock must be considered in the proper sequence, from the **most dilutive** to the **least dilutive**. If they are considered in the wrong sequence, the resulting DEPS could be incorrect.

Options and warrants are usually evaluated and included first because their exercise would affect only the denominator of the EPS calculation, whereas the conversion of convertible securities would affect both the numerator and the denominator. Thus, if options and warrants are dilutive, they will be more dilutive than convertible securities that are dilutive.

### Options and Warrants

Outstanding call options and warrants issued by the company are evaluated for their dilutive potential using the **treasury stock** method. The treasury stock method assumes that:

- The options and warrants were converted at the beginning of the period into common stock (or at the time of issuance, if issued during the period), and
- The proceeds were used to purchase the company's common stock (treasury stock) at the average market price during the period.

Options and warrants would not cause any effect on the numerator of the EPS calculation if exercised, because their exercise would not change income available to common stockholders. However, the exercise of options and warrants would cause an increase in the weighted average number of common shares outstanding, the denominator of the EPS calculation.

The weighted average number of common shares outstanding is increased by the **difference** between the number of shares potentially to be issued and the number of shares that would be purchased for the treasury to replace the shares issued, calculated using the proceeds received from the sale of the new shares and the average market price of the stock during the period.

- If the options give purchasers the right to purchase stock at an exercise price that is **below** the average market price, the number of treasury shares presumed to be purchased with the proceeds of the sale will be **less** than the number of shares that would be sold in the option conversions. Thus, the net number of outstanding shares will **increase**, and the potential common stock will be dilutive.
- However, if the exercise price of the options or warrants is **above** the average market price, the number of treasury shares that could be purchased with the proceeds of the sale would be **greater** than the number of shares that would be sold in the option conversions, and the net number of outstanding shares would **decrease**. Thus if the exercise price of options or warrants is higher than the average market price for the period, the options or warrants are antidilutive.

**Note:** Companies sometimes offer stock options to their employees. This type of option is a form of compensation. It allows the employee to buy shares of the company's stock at a price that is usually a discount to the current market price when the options are issued.

When employee stock options are first issued, they are generally not vested. **Vested** stock options are options the employees may exercise. During the period that the options are unvested, the employees cannot exercise them. A waiting period may be required before the options become vested and the employees can exercise them to purchase the stock. Alternatively, the vesting of the options may be dependent upon the satisfaction of certain conditions, such as the company's reaching certain performance objectives.

- Unvested stock options that depend only on the future passage of time to become vested **are included** in the calculation of Diluted EPS if they are dilutive. Even though they were not available for exercise during the period (because the required time for them to become vested had not passed), they are to be included in the calculation of Diluted EPS per ASC 260-10-45-22.
- However, unvested stock options that depend upon the satisfaction of certain conditions are considered contingently issuable shares. Contingently issuable shares are included in the calculation of Diluted EPS **only if the required conditions have been satisfied or if the contingency period has expired** by the end of the reporting period and if they are dilutive, per ASC 260-10-45-31 and ASC 260-10-45-48.

## Convertible Securities

Convertible securities are analyzed for their dilutive potential using the **if-converted method**. The if-converted method assumes that the convertible security was converted **at the beginning of the period or at its time of issuance, if issued during the period**. The effect on income available to common shareholders due to decreased liability for interest expense (net of tax) or for preferred dividends if the convertible securities had been converted is an adjustment to the numerator of the EPS calculation, and the effect on the number of outstanding shares if the convertible securities had been converted is an adjustment to the denominator.

## DEPS Calculation

DEPS is calculated by following the steps below, and we will look at each step in detail:

- 1) Calculate BEPS.
- 2) Calculate the EPS Effect of warrants and options.
- 3) If warrants or options are dilutive, add their effect to WANCSO and calculate Intermediate DEPS.
- 4) Calculate the EPS Effect of convertible bonds or convertible preferred shares.
- 5) Rank the EPS Effects from convertible securities, from the most dilutive to the least dilutive.
- 6) In the correct order from the most dilutive to the least dilutive, add the effect of each convertible security to both IAC and WANCSO to calculate Intermediate DEPS for each security until reaching a security that is antidilutive.
- 7) Calculate the final Diluted EPS.

## 1. Calculate BEPS

Beginning with BEPS, make the series of adjustments needed to arrive at DEPS. Each of the adjustments will involve an adjustment to IAC or WANCSO, or both.

## 2. Calculate the Impact of Warrants and Options

Whenever a company has warrants or options outstanding at the end of the year, the options or warrants represent potentially issuable shares. As such, we must include the impact of these warrants and options into the DEPS calculation.

There is a 3-step process to determine how many shares to add to WANCSO related to these options and warrants:

- 1) Assume that all of the options were actually exercised on January 1 of the current year or on the issue date, if issued during the year. As a result, there will be a number of new shares "issued." (Remember that they have not **actually** been issued.) In this process of exercising the warrants and options, we pretend the company has also received as cash the exercise price of the warrant or option.
- 2) We then pretend that the company takes the money received from the exercise of the options or warrants and uses it to repurchase its own shares from the market at the average market price for the year.
- 3) Finally, the company nets together the number of shares that would have been issued in the exercise of the warrants or options and the number of shares that would have been repurchased using the proceeds from the sale of the newly issued shares. The result is the net number of shares that were "issued" as a result of the warrants or options. Again, no shares have actually been issued or repurchased; this has all been hypothetical.

**Note:** If the exercise price of the warrants or options is greater than the average market price of a share, we do not even need to do the above calculations. The exercise of the options or warrants would be antidilutive because more shares would be repurchased than issued. WANCSO would be decreased and EPS would be increased. Furthermore, no one holding an option or warrant would exercise it to purchase newly-issued shares at the higher price if he or she could buy an already-issued share for less on the open market.

## 3. Add the Dilutive Options/Warrants to WANCSO and Calculate Intermediate BEPS

Once the number of net shares potentially issued from the warrants or options has been calculated, if it causes the weighted average number of common shares to increase and is thus dilutive, we add it to the WANCSO that was calculated for BEPS. Dividing IAC by the adjusted WANCSO gives us what we will call the **Intermediate DEPS**. You will see later that there are potentially a number of steps between BEPS and DEPS. During this process, we will call each of the resulting EPS numbers **Intermediate DEPS**, or **IDEPS**.

**Example:** Kelly Corp. had a net income of \$1,000,000 for the year and the company had 500,000 common shares outstanding throughout the period.

Kelly had outstanding all year 7,500 shares of \$100 par value preferred stock paying a 4% dividend, for a par value outstanding of \$750,000 ( $\$100 \times 7,500$ ). Preferred dividends in the amount of \$30,000 ( $\$750,000 \times 0.04$ ) were paid during the year.

The company's BEPS was \$1.94, calculated as follows:

IAS =  $\$1,000,000 - \$30,000$  preferred dividend =  $\$970,000$ .

WANCSO is given as 500,000 common shares.

Therefore, BEPS =  $\$970,000 \div 500,000 = \$1.94$ .

During the year previous to the year for which DEPS is being calculated, Kelly also granted options to its president to purchase 30,000 common shares at a price of \$10 per share. In other words, the stock options were outstanding during the full year for which DEPS is being calculated. During the year, Kelly's common stock sold at the following prices:

|               |      |
|---------------|------|
| January 1     | \$22 |
| December 31   | \$30 |
| Average Price | \$27 |

In order to calculate the net number of shares that would have been "issued" due to exercise of the stock options for the calculation of DEPS, we will assume that all of the outstanding options were exercised during the year just past and that the company used the cash proceeds from that exercise to repurchase its own shares as treasury stock.

|                                                       |               |
|-------------------------------------------------------|---------------|
| Cash received from the exercise: $30,000 \times \$10$ | \$300,000     |
| ÷ Repurchase price (average price)                    | ÷ <u>\$27</u> |
| = Number of treasury shares repurchased               | 11,111        |

A total of 30,000 new shares would have been sold but 11,111 shares would have been repurchased for the treasury. Thus the net number of potential new common shares as a result of the options exercise would have been **18,889** ( $30,000 - 11,111$ ).

The weighted average number of common shares outstanding would have increased from 500,000 to 518,889, and thus this option is dilutive because it will cause EPS to decrease.

The calculation of IDEPS is:  $\$970,000 \div (500,000 + 18,889) = \$1.87$ . This means that if the options had been exercised on January 1, EPS for the year would have decreased from \$1.94 to \$1.87.

#### 4. Calculate the EPS Effect of Convertible Bonds and Preferred Shares

The next step in the calculation of DEPS is to determine what effect any convertible bonds and/or convertible preferred shares that were outstanding on December 31 would have had on IAC and WANCSO if they had actually been converted into common stock on January 1. This process is the calculation of the **EPS Effect**. The EPS Effect determines how much more income would have been available to common shareholders and how many more shares would have been outstanding if all of the convertible bonds or convertible preferred shares had actually been converted to common stock on January 1. Because of the difference between bonds and shares in respect to taxes, we will look at each of them separately.

### Convertible Bonds

If the bondholders had converted their convertible bonds into common stock on January 1 (or when issued, if issued during the year), more common shares would have been outstanding during the year and more income would have been available to the common shareholders.

- More shares would have been outstanding because of the issuance of the new shares.
- More income would have been available to common shareholders because the company would not have paid interest on the bonds. However, not all of the saved interest would have been available to common shareholders. The company's taxable income would have been higher if it had not paid the interest, and the increased taxable income would have caused the company's taxes to be higher. Therefore, we need to subtract the effect of the increased income taxes from the amount of the saved interest.

Putting these together, the EPS Effect of convertible bonds is calculated as follows:

$$\text{EPS Effect of Convertible Bonds} = \frac{\text{Interest on the Bonds} \times (1 - \text{Tax Rate})}{\text{\# of Shares the Bonds are Converted Into}}$$

**Continuing the Kelly Corp. example:** In addition to the options, Kelly had outstanding all year a convertible bond with a total face value of \$1,000,000 that incurred interest of 5% per annum. Each \$1,000 bond was convertible into 10 common shares. Kelly's tax rate is 30%.

The numerator of the EPS Effect is:  $(\$1,000,000 \times 0.05) \times (1 - 0.30) = \$35,000$ .

The denominator of the EPS Effect is:  $(\$1,000,000 \div \$1,000) \times 10 = 10,000$ .

The EPS Effect of the convertible bonds is:  $\$35,000 \div 10,000 = 3.5$ .

Until we have calculated the EPS Effect for all convertible securities, this is as far as we go with this.

### Convertible Preferred Shares

If the preferred shareholders had converted their convertible preferred shares into common stock on January 1, more common shares would have been outstanding during the year and probably more income would have been available to the common shareholders (because the preferred dividend would have been eliminated).

Whether and how much more income would have been available to common shareholders would depend upon the type of preferred shares and whether any dividends had been declared or earned during the year.

- 1) If the preferred shares were **cumulative preferred shares**, the amount of dividends that they **earned** during the period would have become available to common shareholders as a result of the conversion.
- 2) If the preferred shares were **noncumulative preferred shares**, more income would have become available to common shareholders only if preferred dividends were **declared** during the year.

However, in both cases above related to dividends, no adjustment is made for taxes. Because dividends are distributed after tax, they do not affect net taxable income.

Putting these together, the EPS Effect of convertible preferred shares is calculated as follows:

$$\text{EPS Effect of Convertible Preferred Shares} = \frac{\text{Dividends Earned (cumulative) and/or Declared (noncumulative)}}{\text{\# of Common Shares the Preferred Shares are Converted Into}}$$



**Continuing the Kelly Corp. example:** The 7,500 shares of \$100 par value preferred stock that Kelly had outstanding all year and that paid a 4% dividend were convertible preferred shares (noncumulative). The par value outstanding was \$750,000 ( $\$100 \times 7,500$ ). Preferred dividends in the amount of \$30,000 ( $\$750,000 \times 0.04$ ) were paid during the year. Each preferred share was convertible into 10 common shares at the option of the owner.

The numerator of the EPS Effect is:  $(7,500 \times \$100) \times (0.04) = \$30,000$ .

The denominator of the EPS Effect is:  $7,500 \times 10 = 75,000$ .

The EPS Effect of the convertible preferred stock is:  $\$30,000 \div 75,000 = 0.40$ .

The EPS Effect needs to be calculated as above for each individual class of convertible securities.

## 5. Rank the EPS Effects from Convertible Securities

After they have all been calculated, the EPS Effects of all the convertible securities are ranked according to their EPS Effect, from the lowest ratio to the highest ratio. The lower the ratio of the numerator to the denominator, the more dilutive the securities are because the more their conversion would decrease the company's EPS. EPS will be adjusted and Intermediate DEPS calculated according to each security's dilution, from the most dilutive (the lowest EPS Effect ratio) to the least dilutive (the highest EPS Effect ratio).

### Continuing the example of Kelly Corp.:

Kelly's rankings for convertible securities are as follows, from the lowest EPS Effect (the most dilutive) to the highest EPS Effect (the least dilutive):

- (1) Convertible preferred stock - 0.4.
- (2) Convertible bonds - 3.5.

Because its EPS Effect is lower than the EPS Effect of the convertible bonds, the convertible preferred stock is more dilutive than the convertible bonds are.

Note: We did not calculate the EPS Effect of the outstanding stock options, but if we had, it would have been zero. The numerator would have been zero because exercise of the stock options would cause no change in IAC. The denominator would have been 30,000 because exercise of the stock options would cause the number of shares to increase by 30,000. A zero in the numerator of any division calculation results in a quotient of zero.

An EPS Effect of zero is the lowest EPS Effect possible, which means options and warrants are the most dilutive securities possible. That is the reason we include dilutive options and warrants first without needing to calculate their EPS Effect.

## 6. Add in the EPS Effects

Now that the EPS Effect has been calculated for the convertible bonds and the convertible preferred shares, we are ready to add them into the IDEPS number that we started working on in Step 3.

We are going to add the EPS Effect of one convertible security at a time. In the process of adding EPS Effects into IDEPS, we will simply add together the numerators and denominators of the two numbers.

The EPS Effects of the bonds and shares are added to both IAC and WANCSO **one at a time in a very specific order according to their ranking in Step 5**. We start with the bond or preferred share that has the **lowest** EPS Effect (most dilutive security) and add this one first, calculating a new IDEPS. After adding the first (and lowest) EPS Effect, we take the next lowest EPS Effect (next most dilutive security) and add that to IAC and WANCSO of the previous IDEPS figure to recalculate IDEPS.

This will be done until we reach an IDEPS is **higher** than the previous IDEPS. If any convertible security would cause IDEPS to increase (instead of decrease), calculation of IDEPS stops without including that security or any others with higher EPS Effects.

**Note:** The EPS Effect is a ratio between the amount of change in the numerator and the amount of change in the denominator of the EPS calculation as a result of each potentially dilutive security. The EPS Effect of each security does **not** represent the amount of change that would occur in EPS if those potential common shares were issued. The sole purpose of calculating the EPS Effect of each potentially dilutive security is to determine each security's ranking among all potentially dilutive securities. When the EPS Effect of each security is added to the numerator and the denominator of the EPS calculation, the amount by which the IDEPS changes will **not** be equal to that security's EPS Effect.

## 7. Calculate the Final DEPS

We continue adding the security with the next lowest EPS Effect (the next most dilutive) until the Intermediate DEPS is actually higher than the last IDEPS figure. At this point we stop the process because the security that causes IDEPS to increase is **antidilutive**. Antidilutive securities are excluded, and the next-to-last IDEPS number becomes the final DEPS.

Any remaining convertible bonds or preferred shares will also be **antidilutive** since their inclusion would also increase DEPS. The antidilutive securities are not included in the DEPS calculation, but they must be disclosed in the notes to the financial statements because in the future they may be dilutive.

**Continuing the Kelly Corp. example:** Recall that we have already calculated BEPS and the Intermediate DEPS after including the stock options. Those calculations are included below:

|                             | (Numerator)     |   | (Denominator)   |   |            |
|-----------------------------|-----------------|---|-----------------|---|------------|
|                             | <u>IAC</u>      | ÷ | <u>WANCSO</u>   | = | <u>EPS</u> |
| Net income                  | \$1,000,000     |   |                 |   |            |
| Minus: Preferred dividend   | - <u>30,000</u> |   |                 |   |            |
| BEPS                        | \$ 970,000      | ÷ | 500,000         | = | \$1.94     |
| Stock options               | <u>0</u>        |   | <u>+ 18,889</u> |   |            |
| IDEPS                       | \$ 970,000      | ÷ | 518,880         | = | \$1.87     |
| Convertible Preferred Stock | <u>+ 30,000</u> |   | <u>+ 75,000</u> |   |            |
| IDEPS                       | \$1,000,000     | ÷ | 593,880         | = | \$1.68     |
| Convertible Bond            | <u>+ 35,000</u> |   | <u>+ 10,000</u> |   |            |
| IDEPS                       | \$1,035,000     | ÷ | 603,880         | = | \$1.71     |

Note that with the addition of the convertible bond into the calculation, the Intermediate DEPS **increases**. That increase means the convertible bond is **antidilutive**, and so it is **excluded** from the calculation of DEPS. **The final DEPS is \$1.68.**

The final weighted average number of common shares used to calculate DEPS is **593,880**.

**Note:** Recall that the calculated EPS Effect of the convertible bond in the Kelly Corp. example above was 3.5. That number is greater than the Intermediate DEPS of \$1.68 that precedes it. **Whenever the calculated EPS Effect of any security is greater than the Intermediate DEPS just preceding it (or the Basic EPS, if it is the first security being evaluated), that security will be antidilutive** and it can simply be omitted from the calculation of IDEPS.

The EPS Effect for warrants and options is always zero since there is no impact on net income and zero divided by anything is zero, so warrants and options are always added first to BEPS **if they are dilutive**. However, do not automatically assume that all options and warrants are dilutive. If the purchase price the holder of the option or warrant would pay for the stock is higher than the average market price of the stock, the option or warrant is antidilutive and will be excluded.

### Table for the Calculation of the EPS Effects

The following table shows the process of calculating the EPS Effect for each of these items.

|                                                                                                                                                                                                                                                                                                             | Numerator (IAC)                                                                                                                                  | Denominator (WANCSO)                                                                                                                                                                                                                                                                                                                                                                          | EPS Effect                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Options and Warrants</b> using the <b>treasury stock</b> method. The proceeds from the exercise are used to buy back treasury shares <b>at the average market price</b> for the year, and the net new number of shares is the number of new shares issued minus the number of treasury shares purchased. | No impact on the numerator as no dividends or interest payments are related to the options or warrants.                                          | If the average market price of the stock is lower than the exercise price, the options or warrants are antidilutive and not included in the calculation.<br><br>If the average market price is higher than the exercise price, assume that the proceeds from the exercise were used to buy back shares. The difference between the shares issued and bought back is added to the denominator. | $\frac{0}{\text{Net Shares Issued in Transactions}}$<br>Net shares issued is calculated as follows:<br>Shares that would have been issued in the exercise of the options minus the number of shares repurchased at the <b>average market price</b> using the proceeds from the exercise of the options or warrants.<br>Because zero divided by anything is zero, the EPS effect of options and warrants will be zero. However, if the exercise price is higher than the market price, the net shares issued will be negative and the options/warrants are antidilutive and are excluded. |
| <b>Convertible Preferred Shares</b> using the <b>if-converted</b> method, assuming the shares had been converted.                                                                                                                                                                                           | The amount of preferred dividends that would not have been declared or earned if the shares had been converted.                                  | The number of common shares that would have been issued if the preferred shares had been converted to common shares.                                                                                                                                                                                                                                                                          | $\frac{\text{Preferred Dividends}}{\text{Common Shares Issued in Conversion}}$                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Convertible Debt</b> using the <b>if-converted</b> method, assuming the bonds had been converted.                                                                                                                                                                                                        | The amount of interest that would not have needed to be paid minus the amount of taxes that would have been paid on the resulting higher income. | The number of common shares that would have been issued if the debt had been converted.                                                                                                                                                                                                                                                                                                       | $\frac{\text{Interest Expense} \times (1 - \text{tax rate})}{\text{Common Shares Issued in Conversion}}$                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

**Note:** For the purpose of calculating DEPS, we assume that **all** of the conversions and exercises occurred at the **beginning of the first year presented** unless the options, warrants or convertible securities were actually issued at a later date. If the securities were issued at a later date, we assume they were converted on the date they were issued (and adjust WANCSO accordingly). This needs to be done so the diluted EPS in each of the periods disclosed will be comparable to that of other periods disclosed in the financial statements.

However, note that the calculation of DEPS must be done separately for each individual year. For example, if the same options were outstanding during all of the periods presented, the calculation of the number of net new shares must be made for each year individually, using the average market price of the stock for that year. We do not assume that the options were exercised at the beginning of the earliest year and then would not have been exercised again. Instead, we need to assume they were exercised each year. In some years the options may be dilutive and in other years, the same options may be antidilutive, depending upon the average share price during the year.

In reality, for calculation questions on the exam, you need to worry only about the year the question asks about. However, for presentation purposes, we assume that all of the dilutive options, warrants, and convertible securities were converted at the beginning of the first year presented and each subsequent year.

**Example:** Wally Corp.'s Basic EPS is \$3.50 (\$35,000 IAC ÷ 10,000 WANCSO). The company has convertible bonds and convertible preferred shares that have the following EPS Effects. (Note: Income and share numbers and the EPS Effects have simply been created for purposes of this example. They cannot be recalculated from the information given.)

|                                |                               |
|--------------------------------|-------------------------------|
| Convertible Bond A             | $\$1,340 \div 1,000 = \$1.34$ |
| Convertible Bond B             | $\$1,365 \div 500 = \$2.73$   |
| Convertible Preferred Shares A | $\$1,485 \div 750 = \$1.98$   |
| Convertible Preferred Shares B | $\$3,410 \div 1,000 = \$3.41$ |

The four securities are ranked as follows from the lowest EPS Effect to the highest EPS Effect:

|                                   |        |
|-----------------------------------|--------|
| 1) Convertible Bond A             | \$1.34 |
| 2) Convertible Preferred Shares A | \$1.98 |
| 3) Convertible Bond B             | \$2.73 |
| 4) Convertible Preferred Shares B | \$3.41 |

The calculation of the Intermediate DEPS for each security and the final DEPS is:

|                                      | <u>IAC</u>     | ÷ | <u>WANCSO</u>  | = | <u>EPS</u> |
|--------------------------------------|----------------|---|----------------|---|------------|
| Basic EPS (NI – Pref. Div.) ÷ WANCSO | \$35,000       |   | 10,000         |   | \$3.50     |
| 1) Convertible Bond A                | + <u>1,340</u> |   | + <u>1,000</u> |   |            |
| IDEPS                                | \$36,340 ÷     |   | 11,000         | = | \$3.30     |
| 2) Convertible Preferred Shares A    | + <u>1,485</u> |   | + <u>750</u>   |   |            |
| IDEPS                                | \$37,825 ÷     |   | 11,750         | = | \$3.22     |
| 3) Convertible Bond B                | + <u>1,365</u> |   | + <u>500</u>   |   |            |
| IDEPS                                | \$39,190 ÷     |   | 12,250         | = | \$3.20     |

Upon reaching this point we will stop in the calculation of IDEPS because the next security to be added, the Convertible Preferred Shares B, has an EPS Effect (\$3.41) that is higher than our IDEPS (\$3.20). If we were to add in the Convertible Preferred Shares B, the IDEPS would increase. Therefore, the Convertible Preferred Shares B are antidilutive and are omitted. However, they must be disclosed in the Notes to the Financial Statements because in a future year they might be dilutive.

**Therefore, DEPS in this example is \$3.20.**

## EPS Disclosures

The following disclosures about EPS are required:

- EPS figures must be presented **on the face** of the income statement for **income from continuing operations and net income**. Both basic and diluted EPS figures must be shown, and they need to be shown with equal prominence (meaning one cannot be obvious and large while the other is small and hidden).
- If the company also has a discontinued operation or extraordinary item, it must report the EPS for those items individually **either on the face of the income statement or in the notes**.
- The entity must also **disclose any potentially dilutive shares** that were not included in the calculation of DEPS in the current period.
- If there is a stock split or a stock dividend in the current year, the entity must go back and **restate EPS and DEPS for all periods presented** as if the split or dividend had occurred at the beginning of the first period presented.

## Area IV. State and Local Governments

Area IV is 5-15% of the FAR Exam.

The study material for government accounting is divided into two chapters:

- 1) Governmental funds and governmental accounting.
- 2) Government financial reporting.

We start with government fund accounting because it is the basis for reporting. You need to know the following broad topics in governmental fund accounting:

- Governmental accounting concepts (fund accounting, budgetary accounting, etc.).
- Typical items and types of transactions and events such as encumbrances, interfund activity, fund balances, etc.

Before looking at the details of these topics, we first will look at the characteristics of the governmental environment, the users of the financial information, the objectives of governmental accounting, and the characteristics of the information. This foundation will make understanding the accounting process easier.

### Group A. State and Local Government Concepts

#### Introduction to Governmental Accounting

Governments (and non-profit organizations) operate in a different way and have different objectives from for-profit businesses. Governments operate in order to provide a variety of services to the citizens of the governmental area, not to generate a profit.

A key difference between governments and for-profit businesses is that governments receive their resources from taxpayers who make involuntary payments to them. As a result of this involuntary income source, there is a greater need for accountability to the public that is served by a government to ensure that the money is spent as intended.

One of the results of this increased oversight and financial control is that the budget of allowed expenditures by the governing body is actually a legal limit. It is not possible for the government to spend more money than budgeted without legislative action.

Also, because of the types of services that are provided by governments (for example, policing, street maintenance, or snow clearing), not all of the fixed assets that governments purchase will be used in revenue-generating activities. This is another significant difference between for-profit entities and governmental entities because for-profit organizations must generate revenues with their fixed assets.

**Note:** When thinking about governmental accounting, it is generally easier to understand if you think about a city rather than a state or federal government. While the same concepts would apply for a large government, the scope of a small government makes it easier to visualize what is happening and how it is being recorded. Therefore, we will use cities as the governmental entity in the examples.

#### The Governmental Reporting Entity

The determination of the governmental entity is based on the oversight function of the governmental entity. This means that any entity over which the governmental unit exercises **financial accountability** will be included in the reporting entity. Also, if the entity is able to significantly influence operations or designate the management of the other entity, it will be included as well.

**Note:** This topic will be addressed again later when we look at separately stated and combined entities for governmental reporting.

## Users of the Financial Statements

The users of financial information include the government itself, the citizens, the media, creditors, and others. When we look at the accounting process, keep in your mind that you live in a city (or town) and you are interested in how your city tax money is being used. This makes you a user of the financial statements and other financial information of the city.

## Objectives of the Government and Governmental Information

The two main objectives of accounting information for governments are accountability and interperiod equity. Both of these items come from the basic way in which governments fund their activities – through involuntary contributions from the citizens. Because of the fact that the money was not given by choice, the government has a responsibility to spend the money in the proper way. The objectives of the government and their reporting are therefore based on spending the money correctly and demonstrating (reporting) that this has been done.

- **Accountability** is the government providing the services that it is expected to provide and the proof of this is provided through the financial reporting.
- **Interperiod equity** is the objective that the resources obtained by the government during a period should be sufficient to cover the expenditures and services provided by the government during that period. In other words, a government should not spend now and force a future generation to pay for the services that have been previously provided.

Interperiod equity is a part of accountability and fundamental to public administration. The fact that interperiod equity is important is demonstrated in the fact that a governmental entity is required to have (or at least should have) a balanced budget.

**Note:** GASB Concepts Statement No.1 states that interperiod equity is a basic component of accountability and fundamental to public administration.

In addition, the information that is provided should also assist people in assessing:

- The public **accountability** of the government and its officials,
- The **operating results** of the government, and
- The **level of services** provided by the government.

## Characteristics of Information

The characteristics of governmental accounting information are similar to the characteristics of regular accounting:

- Understandability
- Reliability
- Relevance
- Timeliness
- Consistency
- Comparability

Comparability is still an important element for governmental and non-profit accounting, even though different governments do not always perform the same services, despite being similar in name.

**Note:** Any differences that exist between reporting that causes a lack of comparability should be caused by differences in actual transactions (substantive) between the governmental units rather than by accounting policy differences.



## Governmental Accounting Standards

The accounting standards for governments are set by the **Governmental Accounting Standards Board (GASB)**. GASB is a non-profit entity similar to the FASB. Some FASB pronouncements are also applicable if there are not GASB pronouncements to the contrary.

GASB 55 establishes the hierarchy for governmental accounting standards that is used to determine the most relevant source of accounting guidance. That hierarchy is as follows:

- 1) Officially established accounting principles – **GASB Statements and Interpretations**.
- 2) **GASB Technical Bulletins** and **AICPA Industry Audit and Accounting Guides**, and **AICPA Statements of Position**, if specifically made applicable to state and local governmental entities by the American Institute of Certified Public Accountants (AICPA) and cleared by the GASB.
- 3) **AICPA Practice Bulletins** if specifically made applicable to state and local governmental entities and cleared by the GASB, as well as consensus positions of a group of accountants organized by the GASB that attempts to reach consensus positions on accounting issues applicable to state and local governmental entities.
- 4) **GASB Implementation guides** (Q&As) published by the GASB staff, as well as practices that are widely recognized and prevalent in state and local government.

## Topic 1. Conceptual Framework

The conceptual framework for financial reporting by state and local government entities is contained in the GASB's Concepts Statements. The Concepts Statements can be used as a basis for establishing consistent financial reporting standards. They are not intended to be used to prescribe financial reporting standards and thus they are not authoritative GAAP. Rather, the Concepts Statements identify the objectives and principles of financial reporting that can be used to solve accounting and reporting issues. They are used by the GASB in considering alternative approaches to financial reporting standards and they assist preparers and users to better understand the fundamental concepts underlying financial reporting standards.

The GASB has issued six Concepts Statements. Statement No. 2 as issued in 1994 has been replaced with an amended Statement No. 2 that was issued in 2008. The current Concepts Statements are as follows:

- Concepts Statement No. 1, *Objectives of Financial Reporting*, issued May 1987.
- Concepts Statement No. 2, *Service Efforts and Accomplishments Reporting as amended by GASB Concepts Statements No. 3 and 5*, issued November 2008 to replace Concepts Statement No. 2, *Service Efforts and Accomplishments Reporting*, issued April 1994.
- Concepts Statement No. 3, *Communication Methods in General Purpose External Financial Reports That Contain Basic Financial Statements*, issued April 2005.
- Concepts Statement No. 4, *Elements of Financial Statements*, issued June 2007.
- Concepts Statement No. 5, *Service Efforts and Accomplishments Reporting – an amendment of GASB Concepts Statement No. 2*, issued November 2008 (and incorporated into the amended Concepts Statement No. 2).
- Concepts Statement No. 6, *Measurement of Elements of Financial Statements*, issued March 2014.



## Concepts Statement No. 1: Objectives of Governmental Financial Reporting

The objectives of financial reporting for state and local governments are contained in GASB Concepts Statement No. 1, *Objectives of Financial Reporting* issued May 1987.

The users of state and local governmental financial reports are the **citizens, legislative and oversight bodies, and investors and creditors**.

The two main objectives of accounting information are accountability and interperiod equity. Both of these items come from the basic way in which governments fund their activities through involuntary contributions from the citizens. Because of the fact that the money was not given by choice, the government has a responsibility to spend the money in the proper way. The objectives of the government and their reporting are therefore based on spending the money correctly and demonstrating (reporting) that this has been done.

- 1) **Accountability** is the government being required to answer to the citizens, providing the services that it is expected to provide, and the proof of this is provided through its financial reporting.
- 2) **Interperiod equity** is the objective that the resources obtained by the government during a period should be sufficient to cover the expenditures and services provided by the government during that period. In other words, a government should not spend now and force a future generation to pay for the services that have been previously provided.

**Note:** GASB Concepts Statement No. 1 states that interperiod equity is a basic component of accountability and fundamental to public administration. The fact that interperiod equity is important is demonstrated in the fact that the laws of most state and local governments require a balanced budget.

The information that is provided should assist users in assessing:

- 1) The **public accountability** of the government and its officials, including whether revenues were sufficient to pay for services, whether resources were obtained and used in accordance with the entity's legally adopted budget, and in assessing the service efforts, costs, and accomplishments of the entity.
- 2) The **operating results** of the government, including information about sources and uses of financial resources, how activities were financed and cash requirements met, and whether its financial position improved or deteriorated as a result of the year's operations.
- 3) The **level of services** provided by the government and its ability to meet its obligations as they come due.

## Concepts Statement No. 3: Communication Methods in Basic Financial Statements

Concepts Statement No. 3, *Communications Methods in General Purpose External Financial Reports That Contain Basic Financial Statements*, was issued in April 2005 to clarify the relationship of basic financial statements, notes to basic financial statements, and supporting information presented with basic financial statements in external financial reporting. Its purpose is to help the GASB and, in the absence of authoritative guidance, to help preparers of financial reports determine the appropriate method to use to communicate an item. Concepts Statement No. 3 states that the principal user of the Statement is likely to be the GASB itself, in applying the concepts to its deliberations of financial reporting standards.

The **basic financial statements** and **notes to basic financial statements** are the primary means of communicating financial information to users. **Supplementary information** accompanies the basic financial statements and notes to the financial statements to place them in context.

## Concepts Statement No. 4: Elements of Governmental Financial Statements

Concepts Statement No. 4, *Elements of Financial Statements* issued June 2007, defines the elements of a government's statement of financial position and of its resource flows statement. The concept of a **resource** is central to most of the definitions, which for a government is **an item that can be drawn on to provide services to the citizenry**.

The elements of a **statement of financial position** are:

- **Assets:** Resources the government controls that have present service capacity.
- **Deferred outflow of resources:** A consumption of net assets that is applicable to a future reporting period. This is similar to an asset and is **presented after assets**. Examples are **prepaid expenses** and the gain on a sale of property that is leased back and costs to acquire the right to future revenues.
- **Liabilities:** Obligations to sacrifice resources that the government has little or no ability to avoid.
- **Deferred inflow of resources:** An acquisition of net assets that is applicable to a future reporting period. This is similar to a liability and is **presented after liabilities**. Examples are the **sale of future revenue and grants**.
- **Net position:** The residual of all the other elements presented in a statement of financial position.

The elements of a **resource flows statement** are:

- **Outflow of resources:** A consumption of net assets that is applicable to the reporting period.
- **Inflow of resources:** An acquisition of net assets that is applicable to the reporting period

## Concepts Statement No. 6: Measurement of Elements of Financial Statements

Concepts Statement No. 6, *Measurement of Elements of Financial Statements* issued March 2014, addresses approaches for measuring the elements of financial statements.

Two measurement approaches are used in government financial statements:

- 1) **Initial Transaction Date Based Measurement (Initial Amount):** The transaction price or the amount assigned to the transaction when an asset was acquired or a liability was incurred, including subsequent modifications derived from the amount at which the asset or liability was initially recorded. Initial amounts are more appropriate for assets that are directly used in providing services.
- 2) **Current Financial Statement Date Based Measurement (Remeasured Amount):** An amount assigned when an asset or liability is remeasured as of the financial statement date. Remeasured amounts are more appropriate for financial assets that will be converted to cash and for liabilities when there is uncertainty about the timing and amount of payments.

Four measurement attributes are used in financial statements:

- 1) **Historical cost:** The historical price paid to acquire an asset or the amount of a liability incurred in an actual exchange transaction.
- 2) **Fair value:** The amount that would be received to sell an asset or paid to transfer a liability in an orderly market transaction at the measurement date.
- 3) **Replacement cost:** The price that would need to be paid at the measurement date to purchase an asset with equivalent service potential in an orderly market transaction.
- 4) **Settlement amount:** The amount that would be received for an asset or the amount at which a liability could be liquidated with a counterparty other than in an active market.

## Concepts Statement No. 2 (Amended): Service Efforts and Accomplishments

Service efforts and accomplishments (SEA) as a reporting objective was originally stated in GASB Concepts Statement No. 1, *Objectives of Financial Reporting*. Concepts Statement No. 1 recognizes that government accountability is the paramount objective of financial reporting by state and local governmental entities. Inclusion of SEA as a reporting objective is based on the belief that SEA information **is necessary for users to assess accountability and to make informed decisions regarding the economy, efficiency, and effectiveness of government and may help form a basis for voting or funding decisions.**

Concepts Statement No. 2, *Service Efforts and Accomplishments Reporting*, was originally issued in April 1994. It was updated in 2005 by information contained in Concepts Statement No. 3 and again in 2008 by information contained in Concepts Statement No. 5. Concepts Statement No. 2 as amended by Concepts Statements 3 and 5 was issued in November 2008.

### Elements of SEA Reporting

Three elements measure a government's performance for reporting purposes:

- 1) Those that **measure service efforts**, or the amounts of financial and nonfinancial resources that are applied to a service. Measures of service efforts include ratios comparing financial resources such as costs to provide a service as well as nonfinancial resources such as number of employees as well as other information, for example the general population, the service population, or roadway miles.
- 2) Those that **measure service accomplishments** or what was provided and/or achieved with the resources used. Measures of accomplishments include **outputs** and **outcomes**. For example, an **output** measure might be number of miles of road repaired. An **outcome** measure is accomplishments or results that occur because of services provided, such as residents' ratings of the smoothness of the road repairs.
- 3) Those that **relate service efforts to service accomplishments**, in other words measuring the resources used per unit of output or the cost per unit of output such as the cost per lane-mile of road resurfaced.

## Topic 3. The Funds in Governmental Accounting

**Note:** Topic 2 is presented after Topic 3.

The main accounting difference between for-profit accounting and governmental accounting is the use of funds in governmental accounting.

A **fund** is both a fiscal and an accounting entity:

- A **fiscal entity** in that a fund has assets, liabilities, revenue, expenditure or expense, and either a fund balance or other "equity-like accounts."
- An **accounting entity** in that a fund has its own ledgers and contains a self-balancing set of accounts.

**Note:** A fund is not a separate legal entity. Rather, funds are the mechanism the government uses for its accounting and reporting.

Funds are used when there is a need to separate out monies that are intended for a specific use from other monies that are to be used for other purposes. The government uses funds to **demonstrate its compliance with the applicable financial controls and legal restrictions in place.**

One of the main areas you need to understand for the CPA exam is funds as funds will be tested either directly, or indirectly or in both ways. You need to know what are the different types and classes of funds, and what each of the different types of funds is used for. If you know the funds, their functions, and their

ways of accounting, you will be able to answer some of the questions very quickly, which will leave you with more time to solve the more difficult questions.

By definition, a fund is:

“a fiscal and accounting entity with a self-balancing set of accounts recording cash and other financial resources, together with related liabilities and residual equities and balances, and changes therein, which are **segregated for the purpose of carrying on specific activities or attaining certain objectives** in accordance with special regulations, restrictions or limitations.”

Within Governmental Accounting there are **three categories of funds**:

- 1) **Government Funds**
  - General Fund
  - Special Revenue Fund
  - Capital Projects Fund
  - Debt Service Fund
  - Permanent Trust Fund
- 2) **Proprietary Funds**
  - Enterprise Funds
  - Internal Service Funds
- 3) **Fiduciary Funds**
  - Pension Trust Fund
  - Investment Trust Fund
  - Private-Purpose Trust Fund
  - Agency Funds

It is within these funds that accounting and reporting takes place, and through them that a governmental entity will produce its reporting. The primary measurement focus for this reporting for governmental fund types is the **flows and balances of current financial resources**, in contrast to profit organizations (businesses) whose primary measurement focus is income determination.

**Note:** You need to be certain that you know automatically which funds are included in which category and also what type of accounting is used by each of the individual funds.

## How to Visualize the Funds

Having looked at the technical definition of a fund and the list of types of funds, we will now look at funds in a more visual way. You can look at each individual fund as a binder and within that binder is all of the accounting information for that individual fund. Remember that a fund is self-balancing, which means that each binder itself will balance and produce its own financial statements. Some of the funds are much smaller and have very little activity in them, but each fund (binder) will balance and have its own financial statements.

In addition to individual funds (binders), there are also the three categories of funds. You can look at each of these categories of funds as a shelf on a bookshelf. Like each individual binder is balanced, each shelf will also balance and one could prepare financial statements for that category of fund.

On one shelf are the governmental funds, on the second shelf are the proprietary funds and on the third shelf are the fiduciary funds. So, the government reporting bookshelf looks like this:

| Category of Fund            | Types of Funds                                         |                               |                                    |                           |                              |
|-----------------------------|--------------------------------------------------------|-------------------------------|------------------------------------|---------------------------|------------------------------|
| <b>GOVERNMENTAL Shelf</b>   | <b>General Funds</b><br>(see Note below)               | <b>Special Revenue Funds</b>  | <b>Capital Projects Funds</b>      | <b>Debt Service Funds</b> | <b>Permanent Trust Funds</b> |
| <b>PROPRIETARY Shelf</b>    | <b>Enterprise Funds</b>                                | <b>Internal Service Funds</b> |                                    |                           |                              |
| <b>FIDUCIARY Shelf</b>      | <b>Pension Trust Funds</b>                             | <b>Investment Trust Funds</b> | <b>Private Purpose Trust Funds</b> | <b>Agency Funds</b>       |                              |
| <b>ACCOUNT GROUPS Shelf</b> | This shelf is currently empty, but will be used later. |                               |                                    |                           |                              |

**Note:** So far, we have implied that there is **one general fund**, one special revenue fund, etc. For the purposes of the exam, that will be the case. However, in reality there will probably be a number of binders for the general fund, one for each "service" that they provide. For example, a city might have general funds for:

- City parks
- Library
- Snow Removal
- Police department
- Fire department, etc.

We will now look in more detail at each type of fund, at specific accounting issues for fund accounting, and finally we will bring all of it together in two examples.

## 1. Governmental Funds

These are the "standard" funds of the government. Within these funds the government will account for its "governmental activities." We can summarize these activities by saying that these are the activities that the government provides for its citizens because it is the government. Therefore, if the government did not provide these services, the city would have difficulty functioning in the way we think a city should function.

The accounting equation for most governmental funds is:

$$\text{Current assets} - \text{current liabilities} = \text{fund balance}$$

This equation is consistent with the **emphasis of governmental funds on cash flows and balances of financial resources**. This equation is important because you see that a fund balance is calculated. Sometimes questions ask about funds and balances – remember that government funds have a fund balance.

There are five types of governmental funds:

- 1) **General Fund** – This fund is used to account for the day-to-day operations of the governmental unit covering all financial resources **except those required to be accounted for in another fund**.

It is within the general fund that the city will keep the different binders for snow removal, the parks, police department, fire department, library, etc. All of the services that are provided by the government to its citizens. Remember that each individual fund (binder) balances and has its own financial statements and all of the general funds together will also balance.

- 2) **Special Revenue Fund** – This fund is used to account for **specific revenues** (such as a gasoline tax) that both:

- **Has been legally restricted for a specific purpose** (such as highway repairs or sidewalk construction), and
- Does not have a more appropriate fund to use to account for the item.

If general funds of the government are to be used to pay for something, then a special revenue fund cannot be used to account for this money because it is not a specific revenue. Similarly, if there is a specific revenue that is able to be used for more than one expenditure, a special revenue fund may not be used because it is not a specific expenditure.

In the situation where there is a specific revenue that is used for the construction of a building, the special revenue fund will not be used because the Capital Projects Fund (covered next) would be more appropriate since the building of the building is a capital project and that is the actual activity that the government is engaged in.

**Example:** As discussed above, Special Revenue Funds are used to account for specific revenues that have been legally restricted as to the type of expenditure, except for major capital projects or expendable trusts. Several examples of revenues that fall under this heading are: (1) a state gasoline tax collected in order to maintain streets, (2) proceeds from parking meters that finance the local traffic court, and (3) state juvenile rehabilitation grants used to operate and maintain juvenile rehabilitation centers.

In each of these cases, a service is provided, but the funding comes from a specific revenue source rather than from general property taxes or any other general revenues.

If the revenues are restricted for use in a capital project, then those revenues will be accounted for in the Capital Project Fund, rather than here in the Special Revenue Fund.

- 3) **Capital Projects Fund** – This fund is used to account for the **construction of major capital assets** such as a library, swimming pool, or new city hall. Only the construction of it is accounted for here; the fixed asset itself is accounted for elsewhere. A capital projects fund is also used to account for the receipt of financial resources to be used for the construction or acquisition of capital assets, except for those to be financed by proprietary funds or trust funds.

- 4) **Debt Service Fund** – This fund is used to accumulate money that will be used to **pay interest and principal** on general long-term debt **of the main government** (governmental funds) that the government uses to finance its governmental activities. Debt service expenditures (both the interest and principle) are usually not accrued at year-end but are recorded as expenditures only when they are actually due and payable.

The debt for proprietary fund activities and other business-type funds will be accounted for within that fund itself.

**Note: Bond issue costs are not amortized**, rather they are **expensed in the period** in which they are incurred. Examples of bond (and in general, debt) issuance costs are: insurance costs, financing costs, printing, legal, and administrative costs.

- 5) **Permanent Fund** – This fund is used to account for resources in which the principal is legally restricted. This means that only the earnings can be spent and only for purposes that support the government's programs.

**Example:** This fund would be used when a citizen makes a large donation to the government and asks that the interest from the gift be used for a specific and limited purpose, for example, to maintain or operate the library. The gift itself is not able to be spent to maintain the library, but the interest from it is able to be used for library expenses, and only library expenses.

### Notes About Governmental Funds

Some characteristics of governmental funds are:

- All of them use **modified accruals accounting** (discussed later).
- **None of the governmental funds carry completed fixed assets.** This means that none of these funds will have fixed assets on their balance sheets, nor will there be any depreciation expense or accumulated depreciation in any of these funds. When one of these funds acquires fixed assets, the journal entry is a debit to an expense account for the cost of the asset. The fixed asset itself will usually be carried in the General Fixed Asset Account Group (discussed later). This may seem strange, but remember that the fixed assets that a government purchases are not bought to generate revenue. Therefore, governments do not have the matching issue that businesses have in respect to fixed assets.
- **None of the governmental funds carry long-term debt.** Only the Debt Service Fund can service long-term debt (and even it does not carry the debt). This means that none of these funds will have a bonds payable account and only the Debt Service Fund will recognize any interest expense. General long-term debt of the government will be accounted for in the General Long-Term Debt Account Group (discussed later).
- All of them use the **"flow of resources"** concept of reporting and have as their measurement focus the flow of resources and financial position.

## 2. Proprietary Funds

Proprietary funds are used to account for activities within the government that are carried out in a manner similar to a for-profit organization. These are also called **business-type activities**.

- 1) **Enterprise Funds** – This fund is used to account for governmental activities when the government acts like a private industry with a **profit motive** and the **"revenues" come from the public**. It uses **regular accruals** accounting.

An example of an enterprise fund is when the government operates a public utility (gas, water, or electricity) and charges the public a fee to use it so as to cover the costs of operations. Other examples may be a city swimming pool, a city bus system, a city- or state-run hospital, a state-run lottery, or other services that the citizens pay the government to provide to them.

It does not matter if the government is actually profitable in this business, but simply that they are charging the users and would like to get to break even, if possible. In fact, if the government actually makes a profit that means that they are charging their citizens too much for the services. In some cases, the government may use profits from one service to subsidize (support) another service that is not profitable, but necessary for the city.

- 2) **Internal Service Fund** – This fund is used to account for governmental activities that are operated like a business, but that provide its services to other governmental agencies. An example of this would be a central printing house or a central motor pool. It uses **regular accruals** accounting and will never have a fund balance (instead it has assets and liabilities).



The accounting equation for proprietary funds is:

$$\text{current assets} + \text{fixed assets} + \text{other assets} = \text{current liabilities} + \text{long-term debt} + \text{net assets}$$

### Notes About Proprietary Funds

- The focus on reporting for Proprietary Funds is on **income measurement**.
- These funds use **regular accruals accounting**.
- As a result of the fact that these entities are acting like a for-profit business, these funds are allowed to:
  - Carry their own fixed assets and depreciate them,
  - Carry their own long-term debt,
  - Service their own long-term debt, and
  - Use GAAP and regular accruals accounting.

**Note:** On the exam it is unlikely that you will get a question about how a proprietary fund accounts for something. If you do, just remember that all of the other topics in FAR cover how a proprietary fund would account for a specific event.

### 3. Fiduciary Funds

Fiduciary funds are used when the government is holding monies for other parties and the government has a fiduciary responsibility to these other parties. These other parties may be employees, the public, or other governmental entities.

**Note:** The **fiduciary funds are not included in the Government-Wide Financial Statements** (covered later in the section on reporting) because they are basically funds where money that does not really belong to the government is reported. However, they will be reported in the fund financial statements. This is discussed in greater detail in the section on reporting.

- 1) **Pension Trust Funds** – This type of fund is used to account for a pension fund, and it uses **regular accruals** accounts.

**Note:** All contributions to and earnings of the pension fund are considered to be revenue and are accounted for as revenue within this fund.

- 2) **Investment Trust Funds** – These are used to report the **external** portion of investment pools reported by the sponsoring government. GASB requires the use of an Investment Trust Fund to record and report for investment pools when it includes external participants. It uses **regular accruals** accounts. They may pool all the cash available from all the different accounting funds, irrespective of whether or not they are restricted or unrestricted funds. Thereafter, realized and unrealized gains and losses from these investments must be equitably allocated among the participating funds.
- 3) **Private-Purpose Trust Funds** – These are used to report trust agreements under which the principal and income benefit individuals, private organizations, or other governments. It uses **regular accruals** accounts.

A Private-Purpose Trust Fund may be either expendable or nonexpendable.

- It is **expendable** if the principal of the trust gift, as well as the earnings, is expendable.
- A **nonexpendable** private-purpose trust occurs when the principal must be maintained intact and only the earnings are expendable, or neither the principal nor the earnings are expendable (e.g., loan funds).



Private-Purpose Trust Funds report all changes in net assets as either additions or deductions in net assets (not as expenses or expenditures).

- 4) **Agency Funds** – An agency fund is simply when the governmental entity collects money on behalf of another party and then remits that money to the other party. It uses **regular accruals** accounts.

The agency fund should also be used for debt that the government is accounting for, but is not financially liable for. An example of this would be a large city government collecting taxes for a number of different school districts and then remitting that money to each individual school district.

When the governmental entity receives a fee for having the money go through its accounts and records, this fee is simply recorded as a payable to the governmental fund receiving the money. It is not recorded as revenue. Money that is collected and owed to the government organization that collected it should be recorded as both an asset and a liability in the agency fund.

The accounting for an Agency Fund is very straightforward, making the following entries.

Dr Cash..... X  
 Cr Payable to \_\_\_\_\_ X

*This is the entry when the monies are collected.*

Dr Payable to \_\_\_\_\_ X  
 Cr Cash..... X

*This is the entry that is made when the monies are remitted.*

**Note:** As a result of the way in which the journal entries operate, an Agency Fund will never have a fund balance (similar to retained earnings) because the only asset that it has is cash and this amount is exactly offset by a corresponding liability of the same amount.

The accounting equation for an agency fund is:

Current assets = current liabilities

As we have covered above, none of the governmental funds account for fixed assets or long-term debt. However, we all know that a governmental entity has some fixed assets and probably long-term debt in the form of bonds outstanding. Therefore, these items need to be accounted for somewhere.

Long-term assets and long-term debt are accounted for in what are called **Account Groups**. These are not funds, but will operate as a holding place for the fixed assets and the long-term debt. We will see how these Account Groups work in our larger examples later.

## 4. The Account Groups

**Note:** These account groups are on the bottom shelf of the bookcase that we showed earlier.

The GASB 34 reporting model does not require the use of account groups to report capital assets or long-term debt of governmental funds. This approach in GASB 34 is a change versus previous standards. However, it is a common practice to use these accounts for accounting purposes and then to adjust the financial statements according to GASB 34 for external reporting purposes. For this reason, the exam may still include questions on account groups.

There are two account groups that you need to be familiar with. These are:

- 1) **The General Fixed Assets Accounts Group** – These are accounts for the existence of the fixed asset of the government that are not included in any other funds (remember that only some of the funds can carry their own fixed assets).
- 2) **The General Long-term Debt Accounts Group** – This account simply accounts for the fact that the government has a liability that is related to long-term debt and it will also account for the saving of money to repay this amount.

**Note:** A capital lease is also accounted for in the general long-term debt account group. This means that an asset acquired through a capital lease will be on both account groups and will result in both an expenditure (from the purchase of the fixed asset) and other financing source.

A few notes about Account Groups:

- Account groups **do not account for or have cash as a journal entry**. Rather, they simply account for the existence of these two sets of items.
- Remember that long-term debt directly related to and expected to be paid from **proprietary** funds should be included in the accounts of such funds and not in the general long-term debt accounts group.
- Also, keep in mind that account groups **are not funds**. This is because they do not have any fiduciary responsibility and therefore these two account groups are different from the funds that we have already looked at.

## Topic 2. Measurement Focus and Basis of Accounting

### Modified Accruals Accounting and Fund Transactions

**Note:** Modified accruals accounting and fund transactions are two of the main items that makes fund accounting different from normal GAAP accounting. Both are heavily tested on the exam.

Governmental accounting **focuses on cash flow instead of profit and loss**. Therefore, many funds, but not all funds, use an approach called **modified accruals accounting** to maintain their accounting records.

There are three general types of journal entries in governmental fund accounting:

- 1) To record and close the **budget**,
- 2) To record and close **encumbrances** (commitments to spend money) and the expenditure of money, and
- 3) To record and close **actual fund activity**.

As we go through the transaction types, we will see the ways in which modified accruals is different from regular accruals accounting. The main differences are in the following areas:

- The budget journal entries.
- Journal entries for the expenditure of money.
- Specific fund transactions and activities (each specific area that is relevant is discussed below).

#### 1. Budget Journal Entries

**Note:** This item is listed in the syllabus in Area IV, Group D, Topic 9. It is presented here as part of the general discussion of Governmental Accounting.

Budgetary accounting is used to account for the general government activities. The budget for a governmental entity is a legal limit on its spending, and it is also incorporated into the accounting records through journal entries. This is done by recording the budget at the beginning of the year in a journal entry and then exactly and completely reversing this journal entry at the end of the year. The most important thing to remember about this budget journal entry is that the entry is made backwards. This means that when we set up the budget with a journal entry **the expected revenues are going to be recorded as a debit, and the expected expenses as a credit**. The standard journal entry is:

|    |                                                 |   |
|----|-------------------------------------------------|---|
| Dr | Estimated revenue control .....                 | a |
| Dr | Estimated other financing sources control ..... | b |
|    | Cr Appropriations control .....                 | c |
|    | Cr Estimated other financing uses control ..... | d |
|    | Cr Budgetary fund balance .....                 | e |

a = The estimated revenue that is expected.

b = Other expected cash inflows. This account is covered in more detail later.

c = The expected expenditures for the year.

d = The expected cash outflows to other governmental entities. (Discussed in more detail later.)

e = The balancing figure. This is essentially the expected retained earnings balance for the year, but since governments do not have retained earnings, it is called Budgetary Fund Balance. If the budget were in a negative position, this would be a debit rather than a credit, and it would be called a deficit.

At the end of the year, **the budget entry is closed by simply reversing it**. All of the amounts in each of the lines are kept the same as the entry that had been made at the beginning of the year.

|    |                                                 |   |
|----|-------------------------------------------------|---|
| Dr | Appropriations control .....                    | c |
| Dr | Estimated other financing uses control .....    | d |
| Dr | Budgetary fund balance.....                     | e |
| Cr | Estimated revenue control .....                 | a |
| Cr | Estimated other financing sources control ..... | b |

**Note:** GASB recommend that budgets be prepared on the modified accruals basis.

## 2. Encumbrances and the Expenditure of Money

**Note:** This item is listed in the syllabus in Area IV, Group D, Topic 7. It is presented here as part of the general discussion of Governmental Accounting.

The journal entries for the expenditure of money are very likely to be tested. As long as you remember the fundamental journal entries involved, you will not have any problem answering these questions.

There are three required journal entries when a governmental entity expends money. The need for the three journal entries is because the amount of money that the government can spend is legally limited. As a result of this limitation, the government must keep track not only of money that has actually been spent, but also the amount of money that it has promised to spend. This “promise to spend” arises when the government fills out a purchase order, which may happen months before the cash is paid.

The three journal entries are:

- 1) The promise to spend money (the encumbrance).
- 2) The reversal of the promise to spend money when the items ordered are received and the promise to spend becomes a legal liability.
- 3) The actual booking of the expenditure.

**Note:** We refer to **encumbrance accounting** as the name for the process of **recording the future obligations to spend money**.

The amount of money already spent plus the amount of purchase orders outstanding may not exceed the budgeted limitations.

### 1. Set up the Encumbrance

The first journal entry will be made when the governmental entity **fills out a purchase order**. This is done to record the amount of money promised:

|    |                                              |   |
|----|----------------------------------------------|---|
| Dr | Encumbrances control .....                   | E |
| Cr | Fund balance reserved for encumbrances ..... | E |

*E = the amount of the purchase order. This is the amount that we expect that the purchase will cost and is therefore essentially an **estimated amount**.*

**Note:** The Encumbrances Control account functions as a counter to keep track of the amount **“promised” to be spent**.

The Fund Balance Reserved for Encumbrances is functioning essentially as a liability account. It is not actually a liability account because at this point the government does not owe any money. However, by reserving some of the fund balance, it operates in that manner.

At the end of the period, any balance in this account at year-end will be reported in the equity section of the balance sheet.

## 2. Reverse the Encumbrance

When the ordered items are actually received and an invoice is received, the governmental entity is going to reverse the encumbrance entry:

|    |                                             |   |
|----|---------------------------------------------|---|
| Dr | Fund balance reserved for encumbrances..... | E |
|    | Cr Encumbrances control .....               | E |

You will notice that this is a complete and exact reversal of the previous journal entry, because the government now has an actual liability instead of just a promise to spend money.

## 3. Recognize the Expense and Record the Liability

When the items are received and the invoice is received, the government must recognize the expense and record the liability. This part of the process is like a for-profit business except for the fact that for a government all of the expenses are recorded in one account: expenditure control. This entry is made at the actual amount that will need to be paid.

|    |                           |   |
|----|---------------------------|---|
| Dr | Expenditure control ..... | A |
|    | Cr Accounts payable.....  | A |

Where A is equal to the **actual amount** of the liability that is due. We will see this a number of times as we go through the illustrative examples, but it is critical that you remember this three-step process.

**Note:** The expense account that was debited is called Expenditure Control. **All expenses for the governmental entity go to this account.** For the CPA exam, there are not individual, differently named expense accounts.

You should also note that the Expenditure Control plus the Encumbrances Control should not exceed the budgeted expenditures amount. This is because these two accounts represent what has already been spent and what is promised to be spent. This may not exceed the authorized amount for expenditures.

$$\text{Encumbrances control} + \text{Expenditure Control} \leq \text{Appropriations Control}$$

**Note:** The unencumbered balance of the **appropriations** account is the amount of uncommitted spending funds available for expenditure. It is calculated as:

$$\text{Unencumbered Appropriations} = \text{Appropriations} - (\text{Outstanding Encumbrances} + \text{Expenditures})$$

At the end of the year, any committed appropriations that had not been expended as of year-end are reported as a fund balance reserved for encumbrances (because the money will be spent in the next year based upon the current year's commitment).

**Note:** If the government makes an expenditure that will benefit more than one period (such as for insurance), it may either expense it immediately or capitalize it.

**Exception: Common expenditures**, such as payroll or rent, do not need to be done through the encumbrances process. Instead they require only one entry directly to expenditures control.

If funds are transferred into or out of a governmental fund to another fund, this flow is classified as “other financing sources/uses” (not expenditures) and are reported in the fund financial statements after revenues and expenditures. These flows affect operating results, but they are not considered to be an expenditure.

**3. Actual Fund Transactions and Activity**

There are eight categories of transactions that you need to know.

- A. Revenue Recognition
- B. Bond Anticipation Notes
- C. Cash Grants and Other Types of Financial Assistance
- D. Depreciation
- E. Inventory Accounting
- F. Leases
- G. Interfund Transactions
- H. Non-Exchange Transactions

**3A. Revenue Recognition**

In normal accruals accounting, revenue is recognized when it is earned. However, for governmental accounting this concept will not work. The reason for this is that most of the government’s revenue comes from various taxes and fees imposed on the citizens (income taxes, property taxes, fees, licenses, etc.), and the government does not “earn” this money. If they do not earn it, it could only be recognized when it is received. However, we know that the government is owed money when the taxes are levied.

Therefore, for government purposes, revenue is recognized when it is **measurable and available for use** for current expenditures. The government will recognize tax income as revenue even before it is actually collected when the following two conditions are met:

- 1) The tax is **one of these** taxes:
  - Property and real estate taxes,
  - Income taxes,
  - Sales taxes, or
  - Taxes that are receivable from another governmental body.
- 2) The taxes were assessed for the current year are collectible **either**
  - Within the **current year**, or
  - **Within 60 days** into the next fiscal year.

This means that when the government assess taxes that will be collectible within the time frames as outlined above, the credit will be to Revenue, not to Estimated Revenues. The entry is as follows:

|    |                                           |        |
|----|-------------------------------------------|--------|
| Dr | Taxes receivable .....                    | X      |
|    | Cr Revenue control .....                  | X      |
|    | Cr Allowance for uncollectible taxes..... | if any |

However, if the taxes are **recognized or received before they are actually levied** (billed to the taxpayer) they must be recorded as deferred revenue until the time of the actual assessment.

**Note:** Other taxes and sources of income (fees, fines, licenses, penalties, etc.) are recognized on the **cash basis**.

Other important revenue recognition and reporting issues for government fund accounting are:

- An **enterprise fund** should recognize operating revenues from its normal, ongoing activities.
- **Shared revenues** are revenues levied by one governmental unit but shared on a predetermined basis with another governmental unit. Since shared revenues are not the result of the on-going activities of the fund, they should not be classified as operating revenues.
- Shared revenues **received by a proprietary fund for operating purposes** should be recorded as non-operating revenues in the period in which they are earned and become measurable.
- **Agency Funds do not have revenue.** Agency funds act as intermediaries in the process of disbursing monies from one governmental entity to another. The government has no claim on the resources in the agency fund and does not recognize revenues when it receives the funds.
- Annual contributions made by employers and employees to a defined pension benefit plan maintained by a pension trust fund, as well as the earnings on the fund's assets related to the plan, are recorded as **revenues by the pension trust fund.**
- **Gifts received** by a private-purpose trust fund are accounted for as additions to the fund (not revenue).
- **Permanent funds** account for the receipt of endowment principal that is donated to a government and is to be held in trust for the benefit of the government (or of its citizens) as revenue. The value of the revenue is based upon fair value and the assets should be reported at fair value.

### Revenue in Each Fund

Each of the main funds that are used by the government have multiple sources of cash. As we will see in more detail in the examples, these inflows are classified as either revenue or other financing sources. Other financing sources are like revenue, but are reported separately in the government financial reporting. The table below shows which cash inflows are classified as revenue in each fund.

Similarly, some cash outflows are classified as other financing uses, instead of expenditures. Generally, if one fund is recording a receipt as other financing sources, the fund that is sending the money will record the transfer as other financing uses.

### 3B. Bond Anticipation Notes

Financial resources for project funds typically are provided by bond issue proceeds, other funds, and interest earnings. However interim financing is often needed during the early stages of the capital projects to pay for expenditures incurred before the bond issue proceeds (or other resources) are received. The interim financing may be obtained from funds of other governmental units, **bond anticipation notes (BANS)**, or borrowings from local banks.

Interim borrowing, if short-term, is a current liability of the Capital Projects Fund and is credited to "Notes Payable".

Certain BANS are an exception to the rule if: (1) all legal steps have been taken to refinance the bond anticipation notes, and (2) the intent is supported by an ability to actually refinance the short-term note on a long-term basis in accordance with the criteria set forth in FASB ASC 470. These types of notes will be accounted **as long-term obligations** through the Long-Term Debt Account Group.

### 3C. Cash Grants and Other Types of Financial Assistance

It is common that lower levels of government receive money from higher levels of government (usually the federal government gives money to state and local governments) for a specific purpose. These cash flows are called grants or other types of financial assistance. Examples include food stamps (money from the federal government for people to buy food that is distributed by local governments), reimbursement for fringe benefits and salaries, and other types of one-time payments made for a specifically defined purpose.

Normally these payments are included in the trust funds since the recipient government is simply passing the funds onward on behalf of another governmental entity. However, there are situations in which the recipient government has some influence and decision-making possibilities regarding the distribution and use of the funds. For example, the recipient government may be able to determine who is eligible to receive the funds, it may monitor and control the people who receive the money, or it may have discretion regarding the distribution.

**If this type of decision-making authority exists**, then the grants and other types of financial assistance are included in the governmental, proprietary, or trust funds, wherever appropriate. The monies from these grants are recognized as the funds are spent.

Examples include:

- A city's capital projects fund that receives a state grant for a new city courthouse will record the grant as revenue.
- State governments must recognize revenue and expenditures for food stamps that are distributed by the state government (or its agents) to their residents.
- If the state or local government is not legally liable for a fringe benefit to its employees, then the state or local government recognizes revenues and expenditures based upon the funds paid by the grantor to cover these fringe benefits.

**Note:** The same rules regarding recognition of revenue (available and measurable, receipt within 60 days after the fiscal year end, etc.) apply to the recognition of grants.

### 3D. Depreciation

Funds using modified accruals accounting do not carry their own fixed assets. In addition, depreciation is optional under modified accruals accounting. The government can choose to depreciate or not depreciate its fixed assets. In governmental funds the acquisition of the fixed asset will be recorded as an expenditure for the entire amount.

**Note:** This optional status regarding depreciation exists because in governmental operations, some fixed assets are **not expected to generate future revenues**. This means that there is no need to match the revenues and expenses of the fixed assets.



### 3E. Inventory Accounting

GASB provides two possible methods of inventory accounting.

- 1) **Purchases method** – in this method:
  - Inventories are **recorded as an expenditure when acquired**, and
  - Significant inventories on hand at year end are reflected in the assets section of the balance sheet and are **fully reserved** in the equity section with the account named “Reserved for supplies inventory.”
- 2) **Consumption method** – in this method:
  - Inventory acquisitions are **recorded in inventory** accounts initially and **recorded as an expenditure only when used**, and
  - An equity reserve for inventories is not established unless minimum amounts of inventory must be maintained and thus are not available for use.

### 3F. Leases

The criteria to determine whether a lease is an operating lease or a capital lease is the same for governments as it is for businesses. If a lease is an operating lease, then the lease payment is recorded as an expenditure in the governmental fund or as an expense in proprietary funds. If a lease is classified as a capital lease, then the accounting for the lease depends upon whether the fund is a governmental fund or a proprietary fund.

#### Governmental fund – Capital Lease:

In governmental funds, the accounting is essentially as if the government issued debt in order to buy the asset and then will repay the debt with the annual lease payment that is made. This is consistent with the way in which the government funds expense other fixed assets when they are purchased.

- The **lease inception** is recorded in the governmental fund as an **expenditure** and an **“Other Financing Source,”** as if the fixed asset had been constructed or purchased from debt issuance proceeds. The amount to record is the **lesser of the total present value** of the minimum lease payments or the **total fair value of the leased property**. The journal entry is:

|    |                                                  |     |
|----|--------------------------------------------------|-----|
| Dr | Expenditures .....                               | xxx |
|    | Cr Other Financing Sources – Capital Leases..... | xxx |

- The **lease repayment** is recorded in the debt services fund because the annual payments are considered to be installments of general long-term debt. The full amount of the annual payment (for both interest and principle) is recorded as an expenditure. Only the detailed memo records of the debt service fund would show the separation between interest and principle.

|     |                                                  |     |
|-----|--------------------------------------------------|-----|
| Dr. | Expenditures (both principles and interest)..... | xxx |
|     | Cr Cash.....                                     | xxx |

#### Proprietary fund – Capital Lease:

Assets acquired by lease by a proprietary fund are accounted for in the same way that a regular business accounts for lease (the fixed asset is recorded in the books, depreciation is recorded, capital lease obligation is recorded, interest is recognized as payment is made).

### 3G. Interfund Transactions (Transfers, Revenues and Reporting)

**Note:** This item is listed in the syllabus in Area IV, Group D, Topic 5. It is presented here as part of the general discussion of Governmental Accounting.

An interfund transaction is a transaction that affects two or more funds at the same time. There are three types of transfers identified in GASB 34 and you need to be familiar with the way in which these transfers are accounted for. We will also address interfund revenues and interfund balance reporting.

#### 1. Quasi-External Transfers

Quasi-external transfers arise from transactions that would have given rise to a revenue or an expense if the transaction had been undertaken with anyone other than a governmental entity. These transfers **give rise to a revenue or expense in governmental accounting** and are therefore essentially treated as a regular transaction.

**Example:** If the parks fund (a governmental fund) makes a payment to the printing fund (an internal service fund) for printing services, the event would have been an expense for the park fund if they had made the purchase from a nongovernmental printing company. Similarly, if the printing fund had provided these services to a nongovernmental entity, it would have recognized revenue. Because this is a commercial transaction, the parks fund will recognize an expense and the printing fund will recognize revenue.

Quasi-external transfers are reported in the operating statements of the affected funds as a revenue or an expenditure.

#### 2. Reimbursements

These are transfers that are made to reimburse a fund for an expense that was originally recorded in one fund, but should have been in another. The result of this type of transfer **is an expense for the fund that makes the transfer and a reduction of expense for the fund that receives the transfer.**

**Example:** The general fund makes a payment for equipment that belongs to the park fund. When the parks fund transfers the money to the general fund, the parks fund will recognize this as an expense. The general fund will treat this transfer as a reduction of the expense that they recognized when the equipment was purchased. The effect of this accounting process is that the expense is recognized in the park fund, as it should be, even though the park fund did not make payment to an external supplier.

#### 3. Permanent Transfers

When a fund (the General Fund, for example) makes a **permanent transfer** to another fund, it is reported in the government financial statements as follows:

- Other Financing **Uses** for the fund making the transfer
- Other Financing **Sources** for the fund receiving the transfer

As we have seen, these transfers are not revenue or recorded in a revenue account, but they are treated as a source of income for reporting purposes. Again, it bears repeating that even though the receipt of these interfund transfers appears on the income statement, this is not classified or considered as revenue.

**Note:** If the fund is a proprietary or trust fund, the transfer will be classified as a transfer because these funds use full accruals accounting and there are no other financing uses/sources in accruals accounting.

**Example:** A transfer from the General fund to the Debt service fund to provide for the servicing of debt is an example of a regular, routine, reoccurring transfer of resources between funds to subsidize current activities. This is classified as an operating transfer (not revenue) in the accounting records.

**Note:** Sometimes short term interfund loans (**temporary transfers**) are made between funds. When the transfer is temporary and will be repaid, the loan is recorded in the accounts titled "Due from" (receivable) and "Due to" (payable).

## Interfund Revenue Recognition (Enterprise and Internal Service Funds)

When an **enterprise or internal service fund provides services** to another government body, it will be treated as revenue. This is because this service would have been recorded as revenue had the sale been to an outside party. These enterprise and internal service funds use accruals accounting and, to them, this is revenue, so it is recorded as such.

## Interfund Receivable/Payable Balance Reporting

When a fund has both Interfund Payables and Interfund Receivables, the **two amounts should be reported separately** in their reports and not netted together. They may be eliminated in the Government Wide Financial Statements, but if they are eliminated, the elimination should be clear from the titles and headings used.

## 3H. Nonexchange Transactions

As the name indicates, these are transactions in which money is paid, but nothing specific is received in return. Perhaps the best example of this is income taxes paid to the government. The citizens who pay the taxes do not receive anything specific in return for the payment of taxes. (What the citizens receive are all of the services provided by the government, but there is no way to match the payment of taxes to a specific service that is used by that individual taxpayer.)

There are **four types of non-exchange transactions** that you should know:

### 1. Derived Nonexchange Transactions

Tax revenues are a derived revenue because they are based on (or derived from) something else. Examples of derived non-exchange transactions include **sales taxes** (the amount of which is derived from the purchase price), taxes related to a **specific activity** such as hotel charges, and **income taxes** (the amount of income tax is derived from the income of the taxpayer).

### 2. Imposed Nonexchange Transactions

Imposed nonexchange revenues represent assessments imposed on non-governmental entities and include **property taxes, and fines or forfeitures**.

**Revenues are usually recognized** in the period when the resources are available and the use of the resources is required or first permitted. "Available" means that the taxes are due, or past due and receivable within the current period, and collected within the current period or expected to be collected soon enough after the end of the period (60 days is the standard) to be used to pay liabilities of the current period.

Assets are recognized by the government when the government has an enforceable legal claim to the resources.

**Note:** Property taxes that are levied are **recognized as revenue in the period in which they are levied**, no matter when they will actually be collected. The amount recognized as revenue is the net amount that is expected to be collected.

Receivables and deferred revenues are recognized as soon as the government has an enforceable legal claim to the provider's resources. This is modified accrual accounting.

Revenue is not recognized for any value that is estimated to be uncollectable.

**Example:** During the current year Knox County levied property taxes of \$2,000,000 of which 1% is expected to be uncollectible. The following amounts were collected during the current year:

- Prior year taxes collected within the 60 days of the current year \$170,000
- Current taxes collected in the current year \$1,800,000
- Current taxes collected within the first 60 days of the subsequent year \$80,000

Property taxes net of the estimated uncollectible taxes will be recognized as revenue in the year for which they were levied, regardless of when cash is actually collected. Therefore, the revenue for the period is \$1,880,000. The cash collected in the first 60 days of the current year would have been recognized as revenue in the previous period when the tax was levied.

### 3. Government-Mandated Nonexchange Transactions

Government-mandated nonexchange transactions occur when a government at one level (the state, for example) provides resources to a government at another level (a city in that state, for example), and requires that lower government to use the resources for a specific purpose. **Intergovernmental grants** are the best example of this category of nonexchange transactions.

The recipient government recognizes **revenue when the amount is measurable and available** (it may have to be spent in order for the amount to be measurable). The asset is recognized by the recipient when all eligibility requirements for the grant have been met.

Purpose restrictions (meaning that the funds can be used for only specific purposes) result in the received assets (usually cash) being classified as restricted until the resources are used for the specified purpose.

The providing government **recognizes liabilities and expenses** using the same criteria. Eligibility requirements include time requirements.

**Note:** Noncompliance with time criteria cancels the transaction. Neither the provider nor the recipient recognizes liabilities (or assets) or expenses (or revenues) until all eligibility requirements have been met.

### 4. Voluntary Nonexchange Transactions

Voluntary nonexchange transactions result from legislative or contractual agreements, but do not involve an exchange of equal value. Certain grants, entitlements, and donations are classified as voluntary nonexchange transactions. Both parties may or may not be governmental entities. Specific recognition criteria are the same as those for government-mandated nonexchange transactions.

**Note:** Fixed assets donated to a government unit should be recorded in the fund to which they relate or in the general fixed asset account group, as appropriate, at their estimated fair value when received.