Prerequisite Reading 16: Balance Sheets

While the income statement presents a picture of a firm's economic activities over a period of time, its balance sheet is a snapshot of its financial and physical assets and its liabilities at a point in time. None of the LOS in this prerequisite reading are repeated, however the content covered is important as we move on to the main reading Analyzing Balance Sheets which will cover other types of assets and liabilities. Focus on understanding the definitions of current vs non-current assets and liabilities. The examples given of assets, liabilities and equity will be helpful as you cover the later prerequisite readings on Inventories (an asset), Long Lived Assets, Income Taxes (both assets and liabilities) and Non-Current Liabilities.

MODULE 16.1: BALANCE SHEET INTRODUCTION

LOS 16.a: Describe the elements of the balance sheet: assets, liabilities, and equity.

The **balance sheet** (also known as the statement of financial position or statement of financial condition) reports the firm's financial position at a point in time. The balance sheet consists of assets, liabilities, and equity.

Assets: Resources controlled as a result of past transactions that are expected to provide future economic benefits.

Liabilities: Obligations as a result of past events that are expected to require an outflow of economic resources.

Equity: The owners' residual interest in the assets after deducting the liabilities. Equity is also referred to as stockholders' equity, shareholders' equity, or owners' equity. Analysts sometimes refer to equity as "net assets."

A financial statement item should be recognized if a future economic benefit from the item (flowing to or from the firm) is *probable* and the item's value or cost can be measured reliably.

MODULE 16.2: ASSETS AND LIABILITIES

LOS 16.b: Describe uses and limitations of the balance sheet in financial analysis.

The balance sheet can be used to assess a firm's liquidity, solvency, and ability to make distributions to shareholders. From the firm's perspective, **liquidity** is the ability to meet short-term obligations and **solvency** is the ability to meet long-term obligations.

The balance sheet elements (assets, liabilities, and equity) should not be interpreted as market value or intrinsic value. For most firms, the balance sheet consists of a mixture of values. For example, some assets are reported at historical cost, some are reported at amortized cost, and others may be reported at fair value. There are numerous valuation bases. Even if the balance sheet was reported at fair value, the value may have changed since the balance sheet date. Also, there are a number of assets and liabilities that do not appear on the balance sheet but certainly have value. For example, the value of a firm's employees and reputation is not reported on the balance sheet.

LOS 16.c: Describe alternative formats of the balance sheet presentation.

Both IFRS and U.S. GAAP require firms to separately report their current assets and noncurrent assets and current and noncurrent liabilities. The current/noncurrent format is known as a **classified balance sheet** and is useful in evaluating liquidity.

Under IFRS, firms can choose to use a **liquidity-based format** if the presentation is more relevant and reliable. Liquidity-based presentations, which are often used in the banking industry, present assets and liabilities in the order of liquidity.

MODULE QUIZZES 16.1, AND 16.2

1. Which of the following is *most likely* an essential characteristic of an asset?
   A. An asset is tangible.
   B. An asset is obtained at a cost.
   C. An asset provides future benefits.

2. Which of the following statements about analyzing the balance sheet is *most accurate*?
   A. The value of the firm's reputation is reported on the balance sheet at amortized cost.
   B. Shareholders' equity is equal to the intrinsic value of the firm.
   C. The balance sheet can be used to measure the firm's capital structure.

3. Century Company's balance sheet follows:

Century Company Balance Sheet (in millions)		
	20X7	20X6
Current assets	$340	$280
Noncurrent assets	660	630
Total assets	$1,000	$910
Current liabilities	$170	$110
Noncurrent liabilities	50	50
Total liabilities	$220	$160
Equity	$780	$750
Total liabilities and equity	$1,000	$910

Century's balance sheet presentation is known as a(n):

A. classified balance sheet.
B. liquidity-based balance sheet.
C. account form balance sheet.

MODULE 16.3: CURRENT ASSETS AND LIABILITIES

LOS 16.d: Contrast current and non-current assets and current and non-current liabilities.

Current assets include cash and other assets that will likely be converted into cash or used up within one year or one operating cycle, whichever is greater. The **operating cycle** is the time it takes to produce or purchase inventory, sell the product, and collect the cash. Current assets are usually presented in the order of their liquidity, with cash being the most liquid. Current assets reveal information about the operating activities of the firm.

Current liabilities are obligations that will be satisfied within one year or one operating cycle, whichever is greater. More specifically, a liability that meets any of the following criteria is considered current:

- Settlement is expected during the normal operating cycle.
- Settlement is expected within one year.
- Held primarily for trading purposes.
- There is not an unconditional right to defer settlement for more than one year.

Current assets minus current liabilities equals **working capital**. Not enough working capital may indicate liquidity problems. Too much working capital may be an indication of inefficient use of assets.

Noncurrent assets do not meet the definition of current assets because they will not be converted into cash or used up within one year or operating cycle. Noncurrent assets provide information about the firm's investing activities, which form the foundation upon which the firm operates.

Noncurrent liabilities do not meet the criteria of current liabilities. Noncurrent liabilities provide information about the firm's long-term financing activities.

PROFESSOR'S NOTE

The following sections provide examples of various assets and liabilities. You may notice there is no mention of noncurrent liabilities – these are covered in further detail in Analyzing Balance Sheets.

LOS 16.e: Describe different types of assets and liabilities and the measurement bases of each.

Current Assets

Current assets include cash and other assets that will be converted into cash or used up within one year or operating cycle, whichever is greater.

Cash and cash equivalents. Cash equivalents are short-term, highly liquid investments that are readily convertible to cash and near enough to maturity that interest rate risk is insignificant. Examples of cash equivalents include Treasury bills, commercial paper, and money market funds. Cash and equivalents are considered financial assets. Generally, financial assets are reported on the balance sheet at amortized cost or fair value. For cash equivalents, either measurement base should result in about the same value.

Marketable securities. Marketable securities are financial assets that are traded in a public market and whose value can be readily determined. Examples include Treasury bills, notes, bonds, and equity securities. Details of the investment are disclosed in the financial footnotes.

Accounts receivable. Accounts receivable (also known as trade receivables) are financial assets that represent amounts owed to the firm by customers for goods or services sold on credit. Accounts receivable are reported at **net realizable value**, which is based on estimated **bad debt expense**. Bad debt expense increases the **allowance for doubtful accounts**, a contra-asset account. A **contra account** is used to reduce the value of its controlling account. Thus, gross receivables less the allowance for doubtful accounts is equal to accounts receivable at net realizable value, the amount the firm expects to collect. When receivables are "written off" (removed from the balance sheet because they are uncollectible), both gross receivables and the allowance account are reduced.

Firms are required to disclose significant concentrations of credit risk, including customer, geographic, and industry concentrations.

Analyzing receivables relative to sales can reveal collection problems. The allowance for doubtful accounts should also be considered relative to the level and growth rate of sales. Firms can underestimate bad debt expense, thereby increasing reported earnings.

PROFESSOR'S NOTE

Analyzing Balance Sheets will introduce some other current and non-current assets: intangible assets; goodwill; and financial instruments. Understanding what an asset is will help you get to grips with these more complex examples.

Current Liabilities

Current liabilities are obligations that will be satisfied within one year or operating cycle, whichever is greater.

Accounts payable. Accounts payable (also known as trade payables) are amounts the firm owes to suppliers for goods or services purchased on credit. Analyzing payables relative to purchases can signal credit problems with suppliers.

Notes payable and current portion of long-term debt. Notes payable are obligations in the form of promissory notes owed to creditors and lenders. Notes payable can also be reported as noncurrent liabilities if their maturities are greater than one year. The current portion of long-term debt is the principal portion of debt due within one year or operating cycle, whichever is greater.

Accrued liabilities. Accrued liabilities (accrued expenses) are expenses that have been recognized in the income statement but are not yet contractually due. Accrued liabilities result from the accrual method of accounting, under which expenses are recognized as incurred. For example, consider a firm that is required to make annual year-end interest payments of $100,000 on an outstanding bank loan. At the end of March, the firm would recognize one-quarter ($25,000) of the total interest expense in its income statement and an accrued liability would be increased by the same amount, even though the liability is not actually due until the end of the year.

Some firms include income tax payable as an accrued liability. **Taxes payable** are current taxes that have been recognized in the income statement but have not yet been paid. Other examples of accrued liabilities include interest payable, wages payable, and accrued warranty expense.

Unearned revenue. Unearned revenue (also known as unearned income, deferred revenue, or deferred income) is cash collected in advance of providing goods and services. For example, a magazine publisher receives subscription payments in advance of delivery. When payment is received, assets (cash) and liabilities (unearned revenue) increase by the same amount. As the magazines are delivered, the publisher recognizes revenue in the income statement and reduces the liability.

When analyzing liquidity, keep in mind that unearned revenue does not require a future outflow of cash like accounts payable. Also, unearned revenue may be an indication of future growth as the revenue will ultimately be recognized in the income statement.

MODULE 16.4: NONCURRENT ASSETS

Property, plant, and equipment. Property, plant, and equipment (PP&E) are tangible assets used in the production of goods and services. PP&E includes land and buildings, machinery and equipment, furniture, and natural resources. Under IFRS, PP&E can be reported using the **cost model** or the **revaluation model**. Under U.S. GAAP, only the cost model is allowed.

Under the cost model, PP&E other than land is reported at amortized cost (historical cost minus accumulated depreciation, amortization, depletion, and impairment losses). Land is not depreciated because it has an indefinite life. **Historical cost** includes the purchase price plus any cost necessary to get the asset ready for use, such as delivery and installation costs. As discussed in the reading on Understanding Income Statements, there are several depreciation methods (e.g., straight-line and declining balance methods) used to allocate the cost to the income statement over time. Thus, the balance sheet and income statement are affected by the depreciation method and related estimates (i.e., salvage value and useful life of assets).

Also under the cost model, PP&E must be tested for **impairment**. An asset is impaired if its carrying value exceeds the **recoverable amount**. Under IFRS, the recoverable amount of an asset is the greater of fair value less any selling costs, or the asset's **value in use**. Value in use is the present value of the asset's future cash flow stream. If impaired, the asset is written down to its recoverable amount and a loss is recognized in the income statement. Loss recoveries are allowed under IFRS but not under U.S. GAAP.

Under the revaluation model, PP&E is reported at fair value less any accumulated depreciation. Changes in fair value are reflected in shareholders' equity and may be recognized in the income statement in certain circumstances.

PROFESSOR'S NOTE

PP&E is an important part of your prerequisite understanding. Depreciation expense was introduced in Introduction to Income Statements; the balance sheet impact has been covered above; and a whole prerequisite reading is dedicated to looking at Long Lived Assets in further detail. It's important you feel comfortable with this area.

Investment property. Under IFRS, investment property includes assets that generate rental income or capital appreciation. U.S. GAAP does not have a specific definition of investment property. Under IFRS, investment property can either be reported at amortized cost (just like PP&E) or fair value. Under the **fair value model**, any change in fair value is recognized in the income statement.

Deferred tax assets. As we will discuss in our prerequisite reading on Income Taxes, deferred taxes are the result of temporary differences between financial reporting income and tax reporting income. **Deferred tax assets** are created when the amount of taxes payable exceeds the amount of income tax expense recognized in the income statement. This can occur when expenses or losses are recognized in the income statement before they are tax deductible, or when revenues or gains are taxable before they are recognized in the income statement. Eventually, the deferred tax asset will reverse when the expense is deducted for tax purposes or the revenue is recognized in the income statement. Deferred tax assets can also be created by unused tax losses from prior periods, which have value because they can be used to reduce taxes in subsequent periods.

MODULE QUIZZES 16.3, AND 16.4

1. Which of the following would *most likely* result in a current liability?
   A. Possible warranty claims.
   B. Recognizing impairment of PP&E.
   C. Estimated income taxes for the current year.

2. How should the proceeds received from the advance sale of tickets to a sporting event be treated by the seller, assuming the tickets are nonrefundable?
   A. Unearned revenue is recognized to the extent that costs have been incurred.
   B. Revenue is recognized to the extent that costs have been incurred.
   C. Revenue is deferred until the sporting event is held.

3. Under IFRS, a firm may report the value of property, plant, and equipment using:
   A. only the cost model.
   B. the cost model or the fair value model.
   C. the cost model or the revaluation model.

MODULE 16.5: SHAREHOLDERS' EQUITY AND RATIOS

LOS 16.f: Describe the components of shareholders' equity.

Owners' equity is the residual interest in assets that remains after subtracting an entity's liabilities, and represents the company's book value. Owners' equity includes contributed capital, preferred stock, treasury stock, retained earnings, non-controlling interest, and accumulated other comprehensive income.

Contributed capital (also known as issued capital) is the amount contributed by equity shareholders.

The **par value** of common stock is a stated or legal value. Par value has no relationship to fair value. Some common shares are even issued without a par value. When par value exists, it is reported separately in stockholders' equity. In that case, the total proceeds from issuing an equity security are the par value of the issued shares plus "additional paid-in capital."

Also disclosed is the number of common shares that are authorized, issued, and outstanding. **Authorized shares** are the number of shares that may be sold under the firm's articles of incorporation. **Issued shares** are the number of shares that have actually been sold to shareholders. The number of **outstanding shares** is equal to the issued shares less shares that have been reacquired by the firm (i.e., treasury stock).

Preferred stock has certain rights and privileges not conferred by common stock. For example, preferred shareholders are paid dividends at a specified rate, usually expressed as a percentage of par value, and have priority over the claims of the common shareholders in the event of liquidation.

Preferred stock can be classified as debt or equity, depending on the terms. For example, perpetual preferred stock that is non-redeemable is considered equity. However, preferred stock that calls for *mandatory redemption* in fixed amounts is considered a financial liability.

Noncontrolling interest (minority interest) is the minority shareholders' pro-rata share of the net assets (equity) of a subsidiary that is not wholly owned by the parent.

Retained earnings are the undistributed earnings (net income) of the firm since inception, the cumulative earnings that have not been paid out to shareholders as dividends.

Treasury stock is stock that has been reacquired by the issuing firm but not yet retired. Treasury stock reduces stockholders' equity. It does not represent an investment in the firm. Treasury stock has no voting rights and does not receive dividends.

Accumulated other comprehensive income includes all changes in stockholders' equity except for transactions recognized in the income statement (net income) and transactions with shareholders, such as issuing stock, reacquiring stock, and paying dividends.

As discussed in the reading on Understanding Income Statements, comprehensive income aggregates net income and certain special transactions that are not reported in the income statement but that affect stockholders' equity. These special transactions comprise what is known as "other comprehensive income." Comprehensive income is equal to net income plus other comprehensive income.

PROFESSOR'S NOTE

It is easy to confuse the two terms "comprehensive income" and "accumulated other comprehensive income." Comprehensive income is an income measure over a period of time. It includes net income and other comprehensive income for the period. Accumulated other comprehensive income does not include net income but is a component of stockholders' equity at a point in time.

The **statement of changes in stockholders' equity** summarizes all transactions that increase or decrease the equity accounts for the period. The statement includes transactions with shareholders and reconciles the beginning and ending balance of each equity account, including capital stock, additional paid-in-capital, retained earnings, and accumulated other comprehensive income. In addition, the components of accumulated other comprehensive income are disclosed (i.e., unrealized gains and losses from available-for-sale securities, cash flow hedging derivatives, foreign currency translation, and adjustments for minimum pension liability).

A statement of changes in stockholders' equity is illustrated in Figure 16.1.

Figure 16.1: Sample Statement of Changes in Stockholders' Equity

	Common Stock	Retained Earnings (in thousands)	Accumulated Other Comprehensive Income (loss)	Total
Beginning balance	$49,234	$26,664	($406)	$75,492
Net income		6,994		6,994
Net unrealized loss on available-for-sale securities			(40)	(40)
Net unrealized loss on cash flow hedges			(56)	(56)
Minimum pension liability			(26)	(26)
Cumulative translation adjustment			42	42
Comprehensive income				6,914
Issuance of common stock	1,282			1,282
Repurchases of common stock	(6,200)			(6,200)
Dividends		(2,360)		(2,360)
Ending balance	$44,316	$31,298	($486)	$75,128

MODULE QUIZ 16.5

1. Miller Corporation has 160,000 shares of common stock authorized. There are 92,000 shares issued and 84,000 shares outstanding. How many shares of treasury stock does Miller own?
   A. 8,000.
   B. 68,000.
   C. 76,000.

2. Selected data from Alpha Company's balance sheet at the end of the year follows:

Investment in Beta Company, at fair value	$150,000
Deferred taxes	$86,000
Common stock, $1 par value	$550,000
Preferred stock, $100 par value	$175,000
Retained earnings	$893,000
Accumulated other comprehensive income	$46,000

   The investment in Beta Company had an original cost of $120,000. Assuming the investment in Beta is classified as available-for-sale, Alpha's total owners' equity at year-end is *closest* to:
   A. $1,618,000.
   B. $1,664,000.
   C. $1,714,000.

Key Concepts

LOS 16.a

Assets are resources controlled as result of past transactions that are expected to provide future economic benefits. Liabilities are obligations as a result of past events that are expected to require an outflow of economic resources. Equity is the owners' residual interest in the assets after deducting the liabilities.

A financial statement item should be recognized if a future economic benefit to or from the firm is probable and the item's value or cost can be measured reliably.

LOS 16.b

The balance sheet can be used to assess a firm's liquidity, solvency, and ability to pay dividends to shareholders.

Balance sheet assets, liabilities, and equity should not be interpreted as market value or intrinsic value. For most firms, the balance sheet consists of a mixture of values including historical cost, amortized cost, and fair value.

Some assets and liabilities are difficult to quantify and are not reported on the balance sheet.

LOS 16.c

A classified balance sheet separately reports current and noncurrent assets and current and noncurrent liabilities. Alternatively, liquidity-based presentations, often used in the banking industry, present assets and liabilities in order of liquidity.

LOS 16.d

Current (noncurrent) assets are those expected to be used up or converted to cash in less than (more than) one year or the firm's operating cycle, whichever is greater.

Current (noncurrent) liabilities are those the firm expects to satisfy in less than (more than) one year or the firm's operating cycle, whichever is greater.

LOS 16.e

Cash equivalents are short-term, highly liquid financial assets that are readily convertible to cash. Their balance sheet values are generally close to identical using either amortized cost or fair value.

Accounts receivable are reported at net realizable value by estimating bad debt expense.

Property, plant, and equipment (PP&E) can be reported using the cost model or the revaluation model under IFRS. Under U.S. GAAP, only the cost model is allowed. PP&E is impaired if its carrying value exceeds the recoverable amount. Recoveries of impairment losses are allowed under IFRS but not U.S. GAAP.

Accounts payable are amounts owed to suppliers for goods or services purchased on credit. Accrued liabilities are expenses that have been recognized in the income statement but are not yet contractually due. Unearned revenue is cash collected in advance of providing goods and services.

LOS 16.f

Owners' equity includes:

- Contributed capital—the amount paid in by common shareholders.
- Preferred stock—capital stock that has certain rights and privileges not possessed by the common shareholders. Classified as debt if mandatorily redeemable.
- Treasury stock—issued common stock that has been repurchased by the firm.
- Retained earnings—the cumulative undistributed earnings of the firm since inception.
- Noncontrolling (minority) interest—the portion of a subsidiary that is not owned by the parent.
- Accumulated other comprehensive income—includes all changes to equity from sources other than net income and transactions with shareholders.

The statement of changes in stockholders' equity summarizes the transactions during a period that increase or decrease equity, including transactions with shareholders.

Module Quiz Answers

Module Quiz 16.1, 16.2

1. **c** An asset is a future economic benefit obtained or controlled as a result of past transactions. Some assets are intangible (e.g., goodwill), and others may be donated. (Module 16.1, LOS 16.a)

2. **c** The balance sheet lists the firm's assets, liabilities, and equity. The capital structure is measured by the mix of debt and equity used to finance the business. (Module 16.2, LOS 16.b)

3. **a** A classified balance sheet groups together similar items (e.g., current and noncurrent assets and liabilities) to arrive at significant subtotals. (Module 16.2, LOS 16.c)

Module Quiz 16.3, 16.4

1. **c** Estimated income taxes for the current year are likely reported as a current liability. To recognize the warranty expense, it must be probable, not just possible. Recognizing impairment of PP&E does not create a liability. (Module 16.3, LOS 16.d)

2. **c** The ticket revenue should not be recognized until it is earned. Even though the tickets are nonrefundable, the seller is still obligated to hold the event. (Module 16.3, LOS 16.e)

3. **c** IFRS permits either the cost model or the revaluation model for property, plant, and equipment. (Module 16.4, LOS 16.e)

Module Quiz 16.5

1. **a** The difference between the issued shares and the outstanding shares is the treasury shares. (Module 16.5, LOS 16.f)

2. **b** Total stockholders' equity consists of common stock of $550,000, preferred stock of $175,000, retained earnings of $893,000, and accumulated other comprehensive income of $46,000, for a total of $1,664,000. The $30,000 unrealized gain from the investment in Beta is already included in accumulated other comprehensive income. (Module 16.5, LOS 16.f)