

Module 2

Introducing Financial Statements

Learning Objectives

- LO1** Examine and interpret a balance sheet. (p. 2-3)
- LO2** Examine and interpret an income statement. (p. 2-12)
- LO3** Examine and interpret a statement of stockholders' equity. (p. 2-16)
- LO4** Describe a statement of cash flows. (p. 2-17)
- LO5** Construct and apply linkages among the four financial statements. (p. 2-19)
- LO6** Locate and use additional financial information from public sources. (p. 2-21)



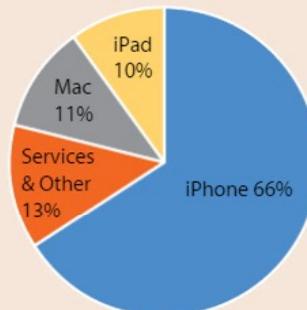
Apple Inc. recently reported sales of over \$233 billion and net income exceeding \$53 billion. It generated net cash from operating activities of over \$81 billion and, at year-end, reported cash and marketable securities on its balance sheet of over \$205 billion, which accounts for 70% of its total assets. Its market capitalization was \$640 billion, greater than that of several major companies, including Microsoft, Exxon, Facebook, and General Electric.

Driven by the popularity and high profits of its products, including iPads and iPhones, Apple's income statement reported over \$71 billion of operating income. This is impressive given that Apple spends over \$8 billion each year on research and development and runs expensive advertising campaigns. Yet companies cannot live by profits alone. It is cash that pays bills. Profits and cash flow reflect two different measurement concepts of company performance. Apple's statement of cash flows reported that, while the company generated over \$81 billion of cash flow from operations, it also paid out over \$11 billion in dividends and issued common stock to executives in its stock option program.

With cash and investments of over \$205 billion on its balance sheet, Apple is exceedingly liquid. Liquidity is important for companies like Apple that must react quickly to opportunities and changing market conditions. Like other technology companies, much of Apple's production is subcontracted. Consequently, Apple's property, plant, and equipment make up only 8% of its assets. On the financing side of its balance sheet, about 40% of Apple's resources come from owner financing—from common stock sold to shareholders and from past profits that have been reinvested. Apple's nonowner financing consists of low-cost credit from suppliers (accounts payable), unpaid overhead expenses (accrued liabilities), and fairly low levels of borrowed money.

It is also important to know what is *not* reported in financial statements. Apple's patents, copyrights, and other intellectual property, along with its brand name, create huge barriers to competition that allow the company to earn above-average profits. But while these "intangible assets" create a competitive advantage, few are reported on Apple's balance sheet. As another example, Apple's software engineers write code and create software that generate future profits for Apple. While this is a valuable resource to Apple, it is not reported on its balance sheet because Apple expenses the software engineers' salaries as the code is written. We discuss these and other issues relating to asset recognition and measurement in this module. [Source: Apple, 2015 10-K report.]

Net Sales by Product





Road Map

LO	Learning Objective Topics	Page	eLecture	Guided Example	Assignments
2-1	Examine and interpret a balance sheet. Cost Flows :: Assets :: Liabilities :: Equity	2-3	e2-1	Review 2-1	1, 3, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 19, 20, 22, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 41, 43, 44
2-2	Examine and interpret an income statement. Statement Format :: Revenue and Expense Recognition :: Analysis	2-12	e2-2	Review 2-2	2, 3, 4, 19, 20, 25, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 39, 41, 42, 43, 45
2-3	Examine and interpret a statement of stockholders' equity. Statement Format :: Interpretation	2-16	e2-3	Review 2-3	5, 17, 23, 24, 29, 30, 37
2-4	Describe a statement of cash flows. Statement Format :: Operating :: Investing :: Financing	2-17	e2-4	Review 2-4	6, 18, 29, 30, 37, 42, 44
2-5	Construct and apply linkages among the four financial statements. Retained Earnings :: Linkages :: Articulation	2-19	e2-5	Review 2-5	7, 18, 29, 30, 37, 39
2-6	Locate and use additional financial information from public sources. Forms 10-K, 20-F, 40-F and 8-K :: Analyst Reports :: Credit and Data Services	2-21	e2-6	Review 2-6	21, 25, 26, 39, 40

Financial Statements	Articulation of Financial Statements
<ul style="list-style-type: none">■ Balance Sheet■ Income Statement■ Statement of Stockholders' Equity■ Statement of Cash Flows	<ul style="list-style-type: none">■ Retained Earnings Reconciliation■ Financial Statement Linkages■ Additional Information Sources

Balance Sheet



The balance sheet is divided into three sections: assets, liabilities, and stockholders' equity. It provides information about the resources available to management and the claims against those resources by creditors and stockholders. The balance sheet reports the assets, liabilities, and equity at a *point* in time. Balance sheet accounts are called "permanent accounts" in that they carry over from period to period; that is, the ending balance from one period becomes the beginning balance for the next.

Balance Sheet and the Flow of Costs

Companies incur costs to acquire resources that will be used in operations. Every cost creates either an immediate or a future economic benefit. Determining when the company will realize the benefit from a cost is important.

- When a cost creates an *immediate* benefit, such as gasoline used in delivery vehicles, the company records the cost in the income statement as an expense.
- When a cost creates a *future* economic benefit, such as inventory to be resold or equipment to be later used for manufacturing, the company capitalizes the cost (i.e., adds it to the balance sheet as an asset). An asset remains on the company's balance sheet until it is used up. When an asset is used up, the company realizes the economic benefit from the asset; that is, there is no future economic benefit left, so there is no asset left. Then, the asset's cost is transferred from the balance sheet to the income statement, where it is recognized as an expense.

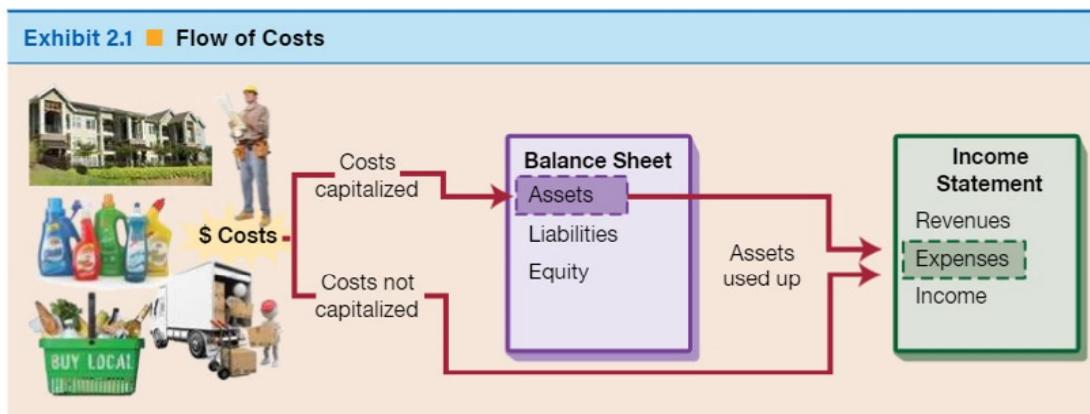
Two examples illustrate how asset costs are transferred from the balance sheet to the income statement.

- Inventory—when a company purchases or manufactures goods for resale, the cost is recorded on the balance sheet as an asset called *inventories*. When inventories are sold, they no longer have an economic benefit to the company, and their cost is transferred to the income statement in an expense called *cost of goods sold*.
- Equipment—when a company acquires equipment, the cost is recorded on the balance sheet in an asset called *equipment* (often included in the general category of property, plant, and equipment, or PPE). As the equipment is used in operations, a portion of the acquisition cost is transferred to the income statement as an expense. To illustrate, if an asset costs \$100,000, and 10% is used up during the period in operating activities, then 10% of the asset's cost (\$10,000) is transferred from the balance sheet to the income statement. This systematic allocation process is called *depreciation*.

Sometimes, however, companies immediately expense costs that are expected to provide future benefits because their future economic benefits cannot be reliably measured. Advertising and salary costs are examples. We expect, for example, that advertising will produce future benefits in the form of increased sales, but we cannot reliably measure those uncertain benefits. For that reason, we do not recognize an advertising asset; we expense that cost immediately. We immediately expense salaries for the same reason.

The point is that all costs are eventually recognized in the income statement as an expense. Those that create an immediate benefit are recognized as an expense immediately, and those that create a future benefit are added to the balance sheet as an asset (capitalized) and recognized as an expense in the future as the benefit is realized.

Exhibit 2.1 illustrates how costs flow from the balance sheet to the income statement.



Assets

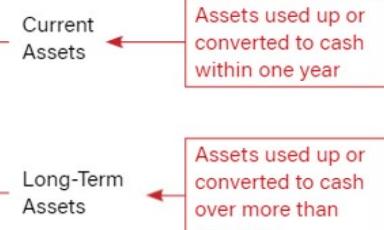
Companies acquire assets to yield a return for their shareholders. Assets are expected to produce economic benefits in the form of revenues, either directly, such as with inventory, or indirectly, such as with a manufacturing plant that produces inventories for sale. To create stockholder value, assets must yield income that is in excess of the cost of the funds used to acquire the assets.

The asset section of the **Apple** balance sheet is shown in Exhibit 2.2. Apple reports \$290,479 million in total assets as of September 26, 2015, its year-end. Amounts reported on the balance sheet are at a *point in time*—that is, the close of business on the day of the report. An asset must possess two characteristics to be reported on the balance sheet.

1. It must be owned (or controlled) by the company.
2. It must confer expected future economic benefits that result from a past transaction or event.

Exhibit 2.2 ■ Asset Section of Apple's Balance Sheet (\$ millions)

APPLE INC. Balance Sheet September 26, 2015	
Assets	
Current assets	
Cash and cash equivalents	\$ 21,120
Short-term marketable securities	20,481
Accounts receivable, net	16,849
Inventories	2,349
Other current assets	28,579
Total current assets	89,378
Long-term assets	
Property, plant, and equipment, net	22,471
Other long-term assets.....	178,630*
Total assets.....	\$290,479



*Includes \$164,065 million of long-term marketable securities

The first requirement, owning or controlling an asset, implies that a company has legal title to the asset, such as the title to property, or has the unrestricted right to use the asset, such as a lease on the property. The second requirement implies that a company expects to realize a benefit from the asset. Benefits can be cash inflows from the sale of an asset or from sales of products produced by the asset. Benefits also can refer to the receipt of other assets, such as an account receivable from a credit sale; or benefits can arise from future services the company will receive, such as prepaying for a year-long insurance policy.

Current Assets

The balance sheet lists assets in order of decreasing **liquidity**, which refers to the ease of converting noncash assets into cash. The most liquid assets are called **current assets**, and they are listed first. A company expects to convert its current assets into cash or use those assets in operations within the coming fiscal year. Typical examples of current assets follow.

Cash—currency, bank deposits, and investments with an original maturity of 90 days or less (called *cash equivalents*).

Short-term investments—marketable securities and other investments the company expects to dispose of in the short run.

Accounts receivable, net—amounts due to the company from customers arising from the sale of products and services on credit (“net” refers to the subtraction of uncollectible accounts).

Inventories—goods purchased or produced for sale to customers.

Prepaid expenses—costs paid in advance for rent, insurance, advertising, and other services.

Apple reports current assets of \$89,378 million in 2015, which is 31% of its total assets. The amount of current assets is an important measure of liquidity, which relates to a company’s ability to make short-term payments. Companies require a degree of liquidity to operate effectively, as they must be able to respond to changing market conditions and take advantage of opportunities. However, current assets such as receivables and inventories are expensive to hold (they must be stored, insured, monitored, financed, and so forth)—and they typically generate relatively low returns. As a result, companies seek to maintain only just enough current assets to cover liquidity needs, but not so much to unnecessarily reduce income.

Long-Term Assets

The second section of the balance sheet reports long-term (noncurrent) assets. Long-term assets include the following.

Property, plant, and equipment (PPE), net—land, factory buildings, warehouses, office buildings, machinery, motor vehicles, office equipment, and other items used in operating activities (“net” refers to the subtraction of accumulated depreciation, the portion of the assets’ cost that has been expensed).

Long-term investments—investments the company does not intend to sell in the near future.

Intangible and other assets—assets without physical substance, including patents, trademarks, franchise rights, goodwill, and other costs the company incurred that provide future benefits.

Long-term assets are not expected to be converted into cash for some time and are, therefore, listed after current assets.

Measuring Assets

Most assets are reported at their original acquisition costs, or **historical costs**, and not at their current market values. When inventories are purchased or manufactured, for example, we know their cost and the expected retail selling price, which is a reasonable estimate of their current market value. But the actual selling price cannot be measured reliably (it is only an expectation). Consequently, we report inventories on the balance sheet at their cost and recognize the gross profit

(selling price less cost) when the inventories are sold and the sale price is ultimately determined in a market transaction.¹

It is important to realize balance sheets only include items that can be reliably measured. If a company cannot value an asset with relative certainty, it does not recognize an asset on the balance sheet. This means that sizable “assets” are *not* reflected on a balance sheet. For example, the well-known apple image is not among the assets listed on Apple’s balance sheet. This image is called an “unrecognized intangible asset.” While Apple owns the image and expects to realize future benefits from it, its value is not reliably measured. Other intangible assets missing from companies’ balance sheets include the Coke bottle silhouette, the iPhone brand name, and the Nike swoosh. Companies only report intangible assets on the balance sheet when the assets are *purchased*. Any *internally created* intangible assets are not reported on a balance sheet.

Excluded intangible assets often relate to *knowledge-based* (intellectual) assets, such as a strong management team, a well-designed supply chain, or superior technology. Although these intangible assets confer a competitive advantage to the company and yield above-normal income (and clear economic benefits to those companies), they cannot be reliably measured. This is one reason why companies in knowledge-based industries are so difficult to analyze and value.

Presumably, however, companies’ market values reflect these excluded intangible assets. This can yield a large difference between the market value of a company and the reported amount (book value) of stockholders’ equity. This is illustrated in the following ratios of market value to book value (averages from fiscal 2015 year-ends): **Apple** is 5.4 (computed as \$639,939 million/\$119,355 million), and **Target** is 3.4 (computed as \$44,150 million /\$12,957 million). These market-to-book values (ratios) are greater for companies with large knowledge-based assets that are not reported on the balance sheet but are reflected in company market value (such as with Apple). Companies such as Target have fewer of these assets. Hence, their balance sheets usually reflect a greater portion of company value.

Liabilities and Equity

Liabilities and stockholders’ equity (also called shareholders’ equity) represent the sources of capital the company uses to finance the acquisition of assets.

- Liabilities represent a company’s future economic sacrifices. Liabilities are borrowed funds, such as accounts payable and obligations to lenders. They can be interest-bearing or non-interest-bearing.
- Stockholders’ equity represents capital that has been invested by the stockholders, either directly via the purchase of stock, or indirectly in the form of *retained earnings* that reflect earnings that are reinvested in the business and not paid out as dividends.

The liabilities and stockholders’ equity sections of the Apple balance sheet are reproduced in Exhibit 2.3. Apple reports \$171,124 million of total liabilities and \$119,355 million of stockholders’ equity as of its 2015 year-end.

Why would Apple obtain capital from both borrowed funds and stockholders? Why not just one or the other? The answer lies in their relative costs and the contractual agreements Apple has with each.

Creditors have the first claim on the assets of the company. As a result, their position is not as risky and, accordingly, their expected return on investment is less than that required by stockholders. Also, interest is tax deductible, whereas dividends are not. This makes debt a less expensive source of capital than equity. So, then, why should a company not finance itself entirely with borrowed funds? The reason is that companies must repay the principal and interest on the debt. If a company cannot make these payments when they come due, creditors can force the company into bankruptcy and potentially put the company out of business. Stockholders, in contrast, cannot require a company to repurchase its stock or even to pay dividends. Thus, companies take on a level of debt they can comfortably repay at reasonable interest costs. The remaining balance required to fund business activities is financed with more costly equity capital.

¹ However, one class of assets, marketable securities, is reported on the balance sheet at fair (market) value if the securities are frequently traded in organized markets with sufficient liquidity. Under those conditions, the fair value can be reliably measured. We discuss accounting for marketable securities in a later module.

Exhibit 2.3 ■ Liabilities and Equity Sections of Apple's Balance Sheet (\$ millions)

APPLE INC. Balance Sheet September 26, 2015		
Liabilities and Shareholders' Equity		
Liabilities	Current liabilities	
	Accounts payable	\$ 35,490
	Accrued expenses (liabilities)	25,181
	Other current liabilities.....	19,939
	Total current liabilities	80,610
	Long-term liabilities	90,514
	Total liabilities	171,124
Shareholders' Equity	Shareholders' equity	
	Common stock and additional paid-in capital, \$ 0.00001 par value: 12,600,000,000 shares authorized; 5,578,753,000 shares issued and outstanding.....	27,416
	Retained earnings.....	92,284
	Other shareholders' equity.....	(345)
	Total shareholders' equity.....	119,355
	Total liabilities and shareholders' equity.....	\$290,479

Current Liabilities

The balance sheet lists liabilities in order of maturity. Obligations that must be settled within one year are called **current liabilities**. Examples of common current liabilities follow.

Accounts payable—amounts owed to suppliers for goods and services purchased on credit.

Accrued liabilities—obligations for expenses that have been incurred but not yet paid; examples are accrued wages payable (wages earned by employees but not yet paid), accrued interest payable (interest that is owing but has not been paid), and accrued income taxes (taxes due); also called accrued expenses.

Unearned revenues—obligations created when the company accepts payment in advance for goods or services it will deliver in the future; also called advances from customers, customer deposits, or deferred revenues.

Short-term notes payable—short-term debt payable to banks or other creditors.

Current maturities of long-term debt—principal portion of long-term debt that is due to be paid within one year.

Apple reports current liabilities of \$80,610 million on its 2015 balance sheet.

Accounts payable arise when one company purchases goods or services from another company. Typically, sellers offer credit terms when selling to other companies rather than expecting cash on delivery. The seller records an account receivable, and the buyer records an account payable. Apple reports accounts payable of \$35,490 million as of the balance sheet date. Accounts payable are relatively uncomplicated liabilities. A transaction (say, an inventory purchase) occurs, a bill is sent, and the amount owed is reported on the balance sheet as a liability.

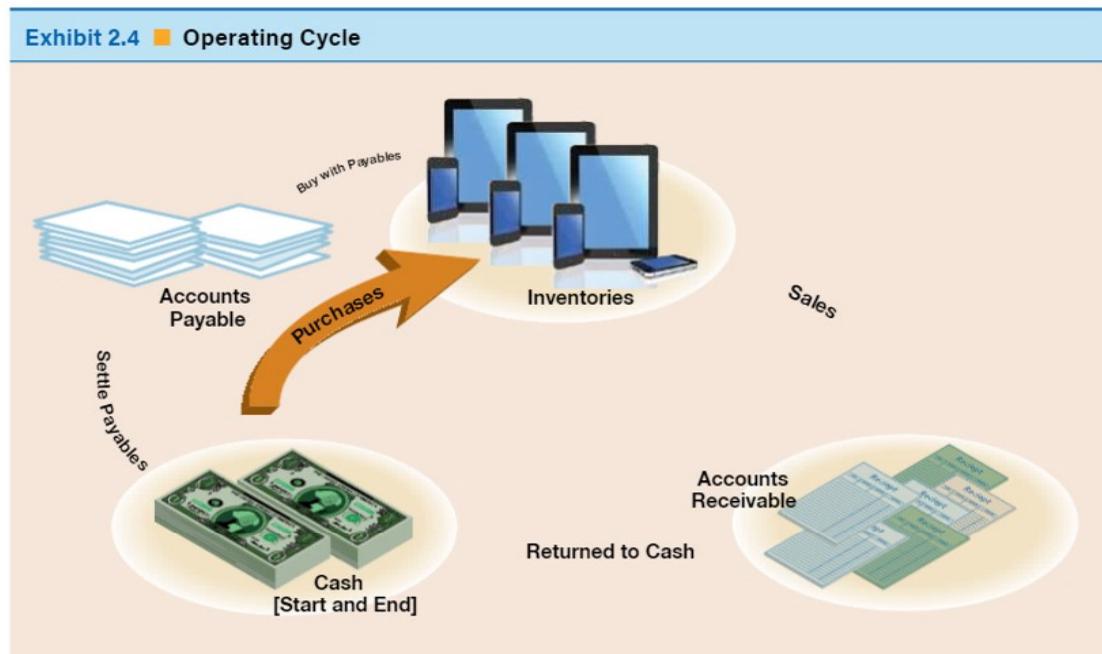
Apple's accrued liabilities total \$25,181 million. Accrued liabilities refer to incomplete transactions. For example, employees work and earn wages but usually are not paid until later, such as several days after the period-end. Wages must be reported as expense in the period employees earn them because those wages payable are obligations of the company, and a liability (wages payable) must be set up on the balance sheet. This is an *accrual*. Other common accruals include the recording of liabilities such as rent and utilities payable, taxes payable, and interest payable on borrowings. All of these accruals involve recognition of expense in the income statement and a liability on the balance sheet.

Net working capital, or simply working capital, reflects the difference between current assets and current liabilities and is defined as follows.

$$\text{Net working capital} = \text{Current assets} - \text{Current liabilities}$$

We usually prefer to see more current assets than current liabilities to ensure that companies are liquid. That is, companies should have sufficient funds to pay their short-term debts as they mature. The net working capital required to conduct business depends on the company's **operating (or cash) cycle**, which is the time between paying cash for goods and receiving cash from customers—see Exhibit 2.4.

Companies, for example, use cash to purchase or manufacture inventories held for resale. Inventories are usually purchased on credit from suppliers (accounts payable). This financing is called **trade credit**. Inventories are sold either for cash or on credit (accounts receivable). When receivables are ultimately collected, a portion of the cash received is used to repay accounts payable, and the remainder goes to the cash account for the next operating cycle.



When cash is invested in inventory, the inventory can remain with the company for 30 to 90 days or more. Once inventory is sold, the resulting accounts receivable can remain with the company for another 30 to 90 days. Assets such as inventories and accounts receivable are costly to hold because they tie up cash. As companies complete one operating cycle, sales and gross profit are reported in the income statement, and cash is generated (equal to the sales proceeds less the purchase cost of the inventory sold). A prime objective is to shorten the operating cycle in order to complete as many cycles as possible during the year. Doing so maximizes profit and cash flow. To shorten the operating cycle, managers can undertake any or all of the following actions.

- Decrease accounts receivable with tighter credit-granting policies and more assertive collection procedures.
- Reduce inventory levels by improved production systems and management of the depth and breadth of inventory.
- Increase trade credit to minimize the cash invested in inventories.

Cash Conversion Cycle Analysts often use the “cash conversion cycle” to evaluate company liquidity. The cash conversion cycle is the number of days the company has its cash tied up in receivables and inventories less the number of days of trade credit provided by company suppliers.

Following are the cash conversion cycles for **Apple Inc.** and **3M Company** (a manufacturing company).

Numbers in Days	Apple Inc.	3M Company
Average Days Sales Outstanding.....	26.7 days	50.6 days
+ Average Days Inventory Outstanding.....	5.8 days	85.9 days
- Average Days Payable Outstanding	85.2 days	42.2 days
= Average Cash Conversion Cycle	(52.7) days	94.3 days

On average, Apple collects its receivables in 26.7 days, sells its inventories in 5.8 days, and pays its accounts payable in 85.2 days, resulting in a cash conversion cycle of (52.7) days ($26.7 + 5.8 - 85.2$). The negative cash cycle implies that Apple can invest the cash it receives from sales for 52.7 days before making payment to suppliers, thus realizing the profit and cash flow on the sale as well as investment income. By comparison, 3M, a more typical manufacturing company, collects its receivables in 50.6 days, sells its inventories in 85.9 days, and pays its suppliers in 42.2 days, resulting in a cash conversion cycle of 94.3 days ($50.6 + 85.9 - 42.2$).

Apple's cash conversion cycle is exceptional on all three dimensions: it sells its inventories quickly (often pre-sold), it collects its receivables quickly (buyers often use credit cards to purchase products), and it delays payment to suppliers as long as it can without damaging supplier relations. To analyze a company's operations, we can compare the cash conversion cycle over time and look for trends. We can also compare with competitor companies to look for abnormal levels.

Noncurrent Liabilities

Noncurrent liabilities are obligations due after one year. Examples of noncurrent liabilities follow.

Long-term debt—amounts borrowed from creditors that are scheduled to be repaid more than one year in the future; any portion of long-term debt that is due within one year is reclassified as a current liability called *current maturities of long-term debt*. Long-term debt includes bonds, mortgages, and other long-term loans.

Other long-term liabilities—various obligations, such as pension liabilities and long-term tax liabilities, that will be settled a year or more into the future.

Apple reports \$90,514 million of noncurrent liabilities. Apple's noncurrent liabilities include long-term debt, deferred revenue, and deferred tax liability for income taxes the company will pay in the future. Deferred (unearned) revenue arises when a company receives cash in advance of providing a good or service.

Apple reports total assets of \$290,479 million, liabilities of \$171,124 million, and shareholders' equity of \$119,355 million. This reveals that it finances 59% ($\$171,124 \text{ million} / \$290,479 \text{ million}$) of its assets with borrowed funds and 41% with shareholder investment. This is in the range of debt levels for large public companies. The S&P 500 companies, for example, report liabilities totaling 64% of assets in 2015. Companies must monitor their financing sources and amounts. Too much borrowing is risky in that borrowed money must be repaid with interest. The level of debt a company can effectively manage is directly related to the stability and reliability of its operating cash flows.

Stockholders' Equity

Stockholders' equity reflects financing provided from company owners. Equity is often referred to as *residual interest*. That is, stockholders have a claim on any assets in excess of what is needed to meet company obligations to creditors. The following are examples of items typically included in equity.

Contributed capital

Common stock—par value received from the original sale of common stock to investors.

Additional paid-in capital—amounts received from the original sale of stock to investors in excess of the par value of stock.

Preferred stock—value received from the original sale of preferred stock to investors; preferred stock has fewer ownership rights than common stock.

Treasury stock—amount the company paid to reacquire its common stock from shareholders.

Retained earnings—accumulated net income (profit) that has not been distributed to stockholders as dividends.

Accumulated other comprehensive income or loss—accumulated changes in asset and liability fair values that are not reported in the income statement.

Earned capital

The equity section of a balance sheet consists of two basic components: contributed capital and earned capital.

Contributed capital is the net funding a company received from issuing and reacquiring its shares; that is, the funds received from issuing shares less any funds paid to repurchase such. Apple reports \$119,355 million in total stockholders' equity. Its contributed capital is \$27,416 million. Apple's common stock has a par value of \$0.00001 per share (see Exhibit 2.3). This means that, when Apple sells shares of stock, its Common stock account increases by the number of shares sold multiplied by \$0.00001, and its Additional paid-in capital account increases by the remainder of the proceeds from the sale (Apple's balance aggregates the common stock and additional paid-in capital accounts, which is acceptable under GAAP). Apple's stockholders (via its board of directors) have authorized the company to issue up to 12.6 billion shares of common stock. As of September 26, 2015, Apple has sold (issued) 5,578,753,000 shares for total proceeds of \$27,416 million, or \$4.91 per share, on average.

Earned capital is the cumulative net income (loss) that has been retained by the company (not paid out to stockholders as dividends). Apple's earned capital (titled Retained earnings) totals \$92,284 million as of its 2015 year-end. Its other equity accounts total \$(345) million.

Analysis Insight ■ Common-Size Balance Sheet

One tool for analyzing a company's balance sheet is the *common size balance sheet*. This is a balance sheet where each item is recast as a percent of total assets. It is called *common size* because each item is scaled by a common denominator. Common sizing the balance sheet enables us to perform the following types of analyses:

- Compare a company's balance sheets across two or more years. Companies provide side-by-side balance sheets for two years, and the 10-K often includes an 11-year history of key balance sheet accounts. If the company has grown or shrunk in size over time, comparing dollars (or other currency) masks shifts in relative size of balance sheet items. Percentages reveal a more accurate picture.
- Compare two or more companies' balance sheets. The common sizing eliminates size differences among companies—we can compare a small firm with a large firm because each asset, liability, and equity account is expressed in percentage terms. The other benefit is that common sizing is unit free, so we can compare companies that report in different currencies.
- Compare balance sheets with an industry average or some other benchmark. The percentages create a common basis for comparison, and this can help assess a particular company's financial position relative to others in the same industry.

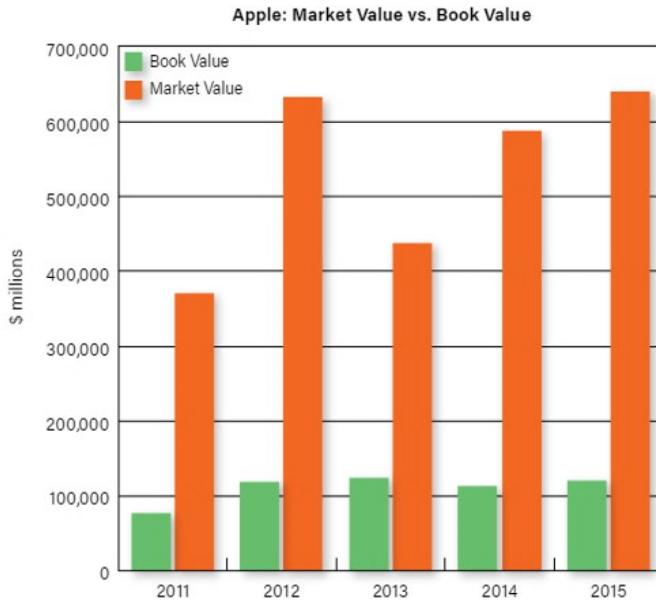
Retained Earnings

There is an important relation for retained earnings that reconciles its beginning balance and its ending balance as follows.

$$\begin{array}{r} \text{Beginning retained earnings} \\ + \text{Net income (or - Net loss)} \\ - \underline{\text{Dividends}} \\ = \text{Ending retained earnings} \end{array}$$

This is a useful relation to remember. Apple's retained earnings increases (or decreases) each year by the amount of its reported net income (loss) minus its dividends. (There are other items that can impact retained earnings that we discuss in later modules.) After we explain the income statement, we will revisit this relation and show how retained earnings link the balance sheet and income statement.

Apple's market value has historically exceeded its book value of equity (see graph). Much of Apple's market value derives from intangible assets, such as brand equity, that are not fully reflected on its balance sheet and from favorable expectations of future financial performance (particularly in recent years). Apple has incurred many costs, such as research and development (R&D), advertising, and promotion, that will yield future economic benefits. However, Apple expensed these costs (did not capitalize them as assets) because their future benefits were uncertain and, therefore, could not be reliably measured. Companies capitalize intangible assets only when those assets are purchased, and not when they are internally developed. Consequently, Apple's balance sheet and the balance sheets of many knowledge-based companies are, arguably, less informative about company value.



Market Value vs. Book Value Stockholders' equity is the “value” of the company determined by generally accepted accounting principles (GAAP) and is commonly referred to as the company's **book value**. This book value is different from a company's **market value** (market capitalization or *market cap*), which is computed by multiplying the number of outstanding common shares by the company's stock price. We can compute Apple's market cap by multiplying its outstanding shares at September 25, 2015 (5,578,753,000 shares), by its stock price on that date (\$114.71), which equals \$639,939 million. This is considerably larger than its book value of equity on that date of \$119,355 million. Book value and market value can differ for several reasons, mostly related to the following.

- GAAP generally reports assets and liabilities at historical costs, whereas the market attempts to estimate fair market values.
- GAAP excludes resources that cannot be reliably measured (due to the absence of a past transaction or event), such as talented management, employee morale, recent innovations, and successful marketing, whereas the market attempts to value these.
- GAAP does not consider market differences in which companies operate, such as competitive conditions and expected changes, whereas the market attempts to factor in these differences in determining value.
- GAAP does not usually report expected future performance, whereas the market attempts to predict and value future performance.

Presently, for U.S. companies, median book value is about one-half of market value (yielding a 2.0 market-to-book ratio). This means the market has drawn on information in addition to that provided in the balance sheet and income statement in valuing companies' stock. A major part of this information is in financial statement notes, but not all. It is important to understand that, eventually, all factors determining company market value are reflected in financial statements and book value. Assets are eventually sold, and liabilities are settled. Moreover, talented management, employee morale, technological innovations, and successful marketing are eventually recognized in reported profit. The difference between book value and market value is one of timing.

Research Insight ■ Market-to-Book Ratio

The market-to-book ratio is computed as a company's market value divided by the book value to total equity. It can also be computed as stock price per share divided by book value or equity per share. The market-to-book ratio varies considerably over time, reflecting the variability in the global economy. Specifically, over the past ten years, the median market-to-book ratio for the S&P 500 companies has ranged from a low of 1.6 (during the financial crisis) to a high of 3.2 (immediately preceding the crisis).



LO1 Review 2-1

Following are account balances (\$ millions) for **Microsoft Corporation** as of the fiscal year ended June 30, 2015. Prepare Microsoft's balance sheet as of June 30, 2015.

Total revenue	\$ 93,580	Cash flows for financing activities	\$ (9,153)
Accounts payable.....	6,591	Other current assets	7,376
Cash and short-term investments	96,526	Accrued expenses	5,096
Cash flows from operating activities.....	29,080	Other stockholders' equity.....	2,522
Other current liabilities	38,171	Accounts receivable.....	17,908
Inventories	2,902	Long-term liabilities.....	46,282
Cost of goods sold	33,038	Cash at beginning of year	8,669
Cash flows for investing activities	(23,001)	Other long-term assets.....	36,780
Retained earnings.....	9,096	Other expense.....	9,665
Income tax expense	6,314	Property, plant, and equipment, net	14,731
Operating expenses.....	32,370	Common stock and paid-in capital....	68,465

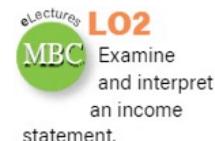


Solution on p. 2-36.

Income Statement

The income statement reports revenues earned from products sold and services provided during a period, the expenses incurred to produce those revenues, and the resulting net income or loss. The general structure of the income statement follows.

Revenues
- Cost of goods sold
Gross profit
- Operating expenses
Operating profit
- Nonoperating expenses (+ Nonoperating revenues)
- Income tax expense
Income from continuing operations
+/- Discontinued operations, net of tax
= Net income



LO2
Examine
and interpret
an income
statement.

On some income statements we see two lines after the net income line. These lines apportion “consolidated” net income between *net income attributable to noncontrolling interests* and *net income attributable to the parent company shareholders* (also called the controlling interest). Noncontrolling interests arise when a subsidiary company is partially owned by shareholders other than the parent company. We discuss noncontrolling interests in later modules.

See Exhibit 2.5 for **Apple**’s 2015 income statement. Apple reports net income of \$53,394 million on sales of \$233,715 million. This means about \$0.23 of each dollar of sales is brought down to the bottom line (\$53,394 million/\$233,715 million). Apple’s net income margin is higher than that of the average publicly-traded company that reports about \$0.06 in profit for each sales dollar. For Apple, the remaining \$0.77 (\$1.00 – \$0.23) is consumed by expenses incurred to generate sales, including costs to manufacture Apple products (cost of sales), as well as wages, advertising, R&D, equipment costs (such as depreciation), and taxes.

Exhibit 2.5 ■ Apple’s Income Statement (\$ millions)

APPLE INC.	
Income Statement	
For Year Ended September 26, 2015	
Net sales	\$233,715
Cost of sales.....	<u>140,089</u>
Gross margin	93,626
Operating expenses	
Research and development.....	8,067
Selling, general, and administrative.....	<u>14,329</u>
Total operating expenses	<u>22,396</u>
Operating income.....	71,230
Other income, net.....	<u>1,285</u>
Income before provision for income taxes	72,515
Provision for income taxes.....	<u>19,121</u>
Net income.....	<u><u>\$53,394</u></u>

Operating expenses are the usual and customary costs a company incurs to support its operating activities. Those include cost of goods sold, selling expenses, depreciation expense, and research and development expense. Not all of these expenses require a cash outlay; for example, depreciation expense is a noncash expense, as are many accrued expenses, such as wages payable, that recognize the expense in advance of cash payment.

Nonoperating expenses relate to the company’s financing and investing activities and include interest expense, interest or dividend income, and gains and losses from the sale of securities. We see, for example, that Apple reports \$1,285 million of other income. This is nonoperating income. It’s important to understand that it is a company’s operating activities that create value for shareholders. Granted, investments do earn additional returns, but only at the going market rate, and shareholders could invest at that rate themselves. Apple holding the investments does not create additional shareholder value. It is for this reason our analysis seeks to isolate the core (or sustainable) operating profit and cash flows. We discuss operating profit more thoroughly in a later module.

Alert The FASB has released a preliminary draft of a proposal to restructure financial statements to, among other things, better distinguish operating and nonoperating activities.

Managerial Decision ■ You Are the Securities Analyst

You are analyzing the performance of a company that hired a new chief executive officer (CEO) during the current year. The current year’s income statement includes an expense labeled “asset write-offs.” Write-offs represent the accelerated transfer of costs from the balance sheet to the income statement. Are you concerned about the legitimacy of these expenses? Why, or why not? [Answer, p. 2-26]

Recognizing Revenues and Expenses

An important consideration in preparing the income statement is *when* to recognize revenues and expenses. For many revenues and expenses, the decision is easy. When a customer purchases an item, pays with cash, and walks out of the store with the item, we know the sale is made and revenue should be recognized. Or when companies receive and pay an electric bill, they have clearly incurred an expense that should be recognized.

However, should Apple recognize revenue when it sells iPods to a retailer that does not have to pay Apple for 60 days? Should Apple recognize an expense for employees who work this week but will not be paid until the first of next month? The answer to both of these questions is yes.

Two fundamental principles guide recognition of revenues and expenses.

Revenue recognition principle—recognize revenues for goods and services provided to customers at an amount expected to be received.

Expense recognition (matching) principle—recognize expenses when *incurred*.

These two principles are the foundation of **accrual accounting**, which is the accounting system used to prepare all GAAP-based financial statements. The general approach is this: first, recognize revenues in the time period when the company satisfies the performance obligations of the sales contract at the amount expected to be received; then, record all expenses *incurred* to generate those revenues during that same time period (this is called matching expenses to revenues). Net income is then correctly reported for that period.

Recognizing revenues does not necessarily imply the receipt of cash. Revenue is *recognized* when the company has done what it is obligated to do under the sales contract, such as, when goods have been transferred or services performed for the customer. This means a sale of goods on credit would qualify for recognition as long as the goods have been transferred to the customer as laid out in the sales contract. The company records revenue but receives no cash; instead, it records an accounts receivable. Likewise, companies recognize an expense when it is *incurred*, even if no cash is paid. For example, companies recognize as expenses the wages earned by employees, even though they will not be paid until the next pay period. The company records an expense but pays no cash; instead, it records an accrued liability for the wages payable.

Accrual accounting requires estimates and assumptions. Examples include estimating how much revenue has been earned on a long-term contract, the amount of accounts receivable that will not be collected, the degree to which equipment has been “used up,” and numerous other estimates. All of these estimates and assumptions affect both reported net income and the balance sheet. Judgments affect all financial statements. This is an important by-product of accrual accounting. We discuss these estimates and assumptions, and their effects on financial statements, throughout the book.

Managerial Decision ■ You Are the Operations Manager

You are the operations manager on a new consumer product that was launched this period with very successful sales. The chief financial officer (CFO) asks you to prepare an estimate of warranty costs to charge against those sales. Why does the CFO desire a warranty cost estimate? What issues must you address in arriving at such an estimate? [Answer, p. 2-26]

Reporting of Transitory Items

From time to time, companies will divest a segment of their business as their strategy changes. When they do, we see an additional component of net income located at the bottom of the statement called **discontinued operations**—see Exhibit 2.6. Discontinued operations has two components: (1) the net income (loss) from the segment’s business activities prior to sale and (2) any gain or loss on the actual sale of the business. (The income statement must also separately report earnings per share [EPS] from continuing and discontinued operations.)

Exhibit 2.6 ■ General Income Statement Format

Sales	
– Cost of goods sold	
Gross profit	
– Operating expenses	
– Nonoperating expenses (+ Nonoperating revenues)	
– Tax expense	←
Income from continuing operations	
± Discontinued operations, net of tax	←
Net income	

Tax expense applies to income from continuing operations

Transitory items are those not expected to recur

To be classified as a discontinued operation, the disposal of the business unit must represent a strategic shift that has, or will have, a major effect on the company's financial results. Because these divestitures represent strategic shifts with material financial effects, the reporting of discontinued operations is relatively infrequent.

Discontinued operations are segregated from "Income from continuing operations" because the discontinued operations represent a transitory item; that is, transactions or events that affect the current and prior periods but will not recur. Many financial statement users analyze current-year financial statements to help predict future performance. One good example is a company's stock price, which is heavily influenced by expected future profits and cash flows. Although transitory items help us understand past performance, they are largely irrelevant to predicting future performance. Consequently, investors and other financial statement users focus on income from continuing operations because it represents the profitability that is likely to persist (continue) into the future. Likewise, the financial press tends to focus on income from continuing operations when it discloses corporate earnings (often described as earnings before one-time charges, or street earnings).

In addition to segregating the results of operations of the discontinued operation in the current and previous two years' income statements reported, companies are also required to segregate the discontinued operation's assets and liabilities on its current year's and prior year's balance sheets.

Analyzing the Income Statement

In the prior module, we described an analytical framework to disaggregate return on assets into two important components: (1) profit margin, computed as Net income/Sales, and (2) asset turnover, computed as Sales/Average total assets. To augment the ROA analysis, we look at two additional profitability measures.

- Gross profit margin (Gross profit/Sales).
- Margins for operating expenses (Operating expense/Sales).

The **gross profit margin** is influenced by both the selling price of the company's products and the cost to make or buy those products. For example, if we purchase a product for \$6 and sell it for \$10, our gross profit margin is 40% ($[\$10 - \$6]/\$10$). We analyze the gross profit margin by comparing the ratio over time and with peer companies' ratios. Typically, a high and/or increasing gross profit margin is a positive sign. A low or declining margin signals more intense competition or a lessening of the desirability of the company's product line or increasing inventory costs.

Analysis of **operating expenses** focuses on each expense category reported by the company as a percentage of sales over time and compared with peer companies. Any deviations from historical trends or significantly higher or lower levels from peer companies should be investigated to uncover causes. A particularly worrisome sign is when margins for operating expenses are declining in the face of falling profits. The concern is that the company has tried to address declining profits by reducing critical expenses such as R&D, marketing, or compensation costs. This generally leads to a short-term improvement at a long-term cost as market share declines and employee morale suffers. We discuss the analysis of the income statement in much more detail in Module 4.

Analysts typically prepare common size income statements as a starting point for their analysis; each income statement item is expressed as a percent of net sales. As with the common size balance sheet, a common size income statement facilitates the same three types of comparisons: one company across years (called time-series analysis), many companies across one year (called cross-sectional analysis), and to a benchmark such as an industry average. Common size analysis is also referred to as “vertical analysis” because the percentages in the column on the income statement add up vertically to 100% of total sales (the top-line number on the income statement). A common size balance sheet adds up vertically to 100% of total assets.

LO2 Review 2-2

Refer to the data in Review 2-1 to answer the requirement.

**Required**

Prepare Microsoft's income statement for the fiscal year ended June 30, 2015. Hint: Refer to Exhibits 2.5 and 2.6 for presentation guidance.

Solution on p. 2-38.

Statement of Stockholders' Equity

The statement of stockholders' equity reconciles the beginning and ending balances of stockholders' equity accounts. The statement of stockholders' equity for Apple is shown in Exhibit 2.7.



Exhibit 2.7 ■ Apple's Statement of Stockholders' Equity (\$ millions)

	Common Stock and Additional Paid-in Capital	Accumulated Other Comprehensive Income (Loss)			Total Equity
		Retained Earnings	Other Comprehensive Income (Loss)	Total Equity	
September 27, 2014.....	\$23,313	\$87,152	\$1,082	\$111,547	
Stock issuance, net	3,355			3,355	
Net income.....		53,394		53,394	
Dividends		(11,627)		(11,627)	
Other.....	748	(36,635)	(1,427)	(37,314)	
September 26, 2015	<u>\$27,416</u>	<u>\$92,284</u>	<u>\$□(345)</u>	<u>\$119,355</u>	

Common stock and additional paid-in capital increase by the proceeds from the sale of stock. Retained earnings increase by the net income (or decrease by the net loss) reported in the income statement and decrease by the dividends to shareholders. Accumulated other comprehensive income increases and decreases by changes in asset and liability fair values that are not reported in the income statement (we discuss accumulated other comprehensive income in Module 8).

In sum, Apple's stockholders' equity begins the year at \$111,547 million and ends fiscal 2015 with a balance of \$119,355 million for a net increase of \$7,808 million, reflecting the issuance of common stock, the recognition of net income, the declaration of dividends to shareholders, and other adjustments.



U.S. GAAP and IFRS require a similar set of financial statements with similar formats. Both standards require current and long-term classifications for assets and liabilities, and both recognize revenues when earned and expenses when incurred. Although differences between U.S. GAAP and IFRS do exist at the "detailed level," there are two broader differences worth mention.

- GAAP makes no formal prescription for the balance sheet and the income statement; however, the SEC requires three years of comparative income statements, whereas IFRS requires only two.
- GAAP income statements categorize expenses by their function (e.g., cost of sales, selling, or administrative). For IFRS, expenses can be shown either by function or by nature (e.g., materials, labor, or overhead), whichever provides more reliable and relevant information.

Review 2-3 LO3



Use the data in Review 2-1 and the additional data below to prepare Microsoft's statement of stockholders' equity for the fiscal year ended June 30, 2015.

\$ millions	Common Stock and APIC	Retained Earnings	Accumulated Other Comprehensive Income
Beginning balance	\$68,366	\$17,710	\$ 3,708

Additional information for fiscal year 2015:

- Stock issuances, net during the year total \$99.
- Decrease in accumulated other comprehensive income is \$1,186.
- Dividends are \$10,063.
- Other decreases in retained earnings total \$10,744.

Solution on p. 2-38.

Statement of Cash Flows



LO4

Describe a statement of cash flows.

The balance sheet and income statement are prepared using accrual accounting, in which revenues are recognized when earned and expenses when incurred. This means companies can report income even though no cash is received. Cash shortages—due to unexpected cash outlays or when customers refuse to or cannot pay—can create economic hardships for companies and even cause their demise.

To evaluate company performance, we must assess a company's cash management in addition to its profitability. Obligations to employees, creditors, and others are usually settled with cash. Illiquid companies (those lacking cash) are at risk for failure. Given the importance of cash management, companies must report a statement of cash flows in addition to the balance sheet, income statement, and statement of equity.

The income statement provides information about the economic viability of the company's products and services. It tells us whether the company can sell its products and services at prices that cover its costs and provide a reasonable return to lenders and stockholders. On the other hand, the statement of cash flows provides information about the company's ability to generate cash from those same transactions. It tells us from what sources the company has generated its cash (so we can evaluate whether those sources are persistent or transitory) and what it has done with the cash it generated.

Statement Format and Data Sources

The statement of cash flows is formatted to report cash inflows and cash outflows by the three primary business activities.

- **Cash flows from operating activities** Cash flows from the company's transactions and events that relate to its operations.
- **Cash flows from investing activities** Cash flows from acquisitions and divestitures of investments and long-term assets.
- **Cash flows from financing activities** Cash flows from issuances of and payments toward borrowings and equity.

The combined cash flows from these three sections yield the net change in cash for the period as illustrated by the following cash flow statement for **Apple**.

Exhibit 2.8 ■ Apple's Statement of Cash Flows (\$ millions)		
APPLE INC. Statement of Cash Flows For Year Ended September 26, 2015		
Cash generated by operating activities	\$81,266	
Cash used in investing activities	(56,274)	
Cash used in financing activities	(17,716)	
Net change in cash	7,276	
Cash balance, September 27, 2014	13,844	
Cash balance, September 26, 2015	\$21,120	

Apple generated \$81,266 million of cash from its operating activities. It used \$56,274 million of cash for investing activities, such as the purchase of PPE assets or marketable securities (the parentheses on the numbers in the statement of cash flow imply a “use” or net outflow of cash). Apple used \$17,716 million of cash for financing activities, such as paying dividends, repurchasing common stock from the market, or reducing debt. The three types of cash flow together generated \$7,276 million of cash during the year, thereby increasing the cash account from \$13,844 million at the beginning of fiscal 2015 to \$21,120 million at fiscal-year-end. Apple’s cash flow picture is healthy: the company generated substantial cash from operating activities and used that cash to invest in PPE infrastructure, reduce debt, and return cash to stockholders in the form of dividends and stock repurchases.

Our analysis of cash flows focuses on the sources and uses of cash.

- Is the company generating cash from operating activities?
- Is the operating cash flow sustainable?
- Is the company investing its cash to grow its infrastructure (PPE) or to enter new markets by acquiring other companies?
- Is the company using its excess cash to build liquidity (purchase of marketable securities)?
- Is the company paying down debt or paying dividends?
- Is the company repurchasing stock?

Ultimately, a company’s ending cash balance must be positive. So, if operating cash flow is negative, the company must raise cash from investing activities (the sale of PPE assets or marketable securities) or financing activities (borrowing money, selling stock, or cutting dividends and share repurchases). In the long run, the amount of cash that can be raised from investing and financing activities is finite. Although companies can usually sustain a short-term negative operating cash flow, long-term operating cash outflows are a serious concern. We discuss the statement of cash flows in detail in a later module.

Review 2-4 LO4



Refer to the data in Review 2-1 to answer the requirement.

Required

Solution on p. 2-38. Prepare Microsoft's statement of cash flows for the fiscal year ended June 30, 2015.

Articulation of Financial Statements



The four financial statements are linked with each other and linked across time. This section demonstrates the linkages (articulation) of financial statements using Apple.

Retained Earnings Reconciliation

One of the most important articulations between financial statements involves the balance sheet and income statement. The two statements are linked via retained earnings. Recall that retained earnings is updated each period as follows.

$$\begin{array}{r} \text{Beginning retained earnings} \\ \pm \text{ Net income (loss)} \\ - \text{ Dividends} \\ \hline = \text{Ending retained earnings} \end{array}$$

Retained earnings reflect cumulative income that has not yet been distributed to shareholders. Exhibit 2.9 shows Apple's retained earnings reconciliation for 2015.

Exhibit 2.9 ■ Apple's Retained Earnings Reconciliation (\$ millions)

**APPLE INC.
Retained Earnings Reconciliation
For Year Ended September 26, 2015**

Retained earnings, September 27, 2014.....	\$87,152
Add: Net income	53,394
Less: Dividends.....	(11,627)
Other adjustments.....	<u>(36,635)</u>
Retained earnings, September 26, 2015.....	<u>\$92,284</u>

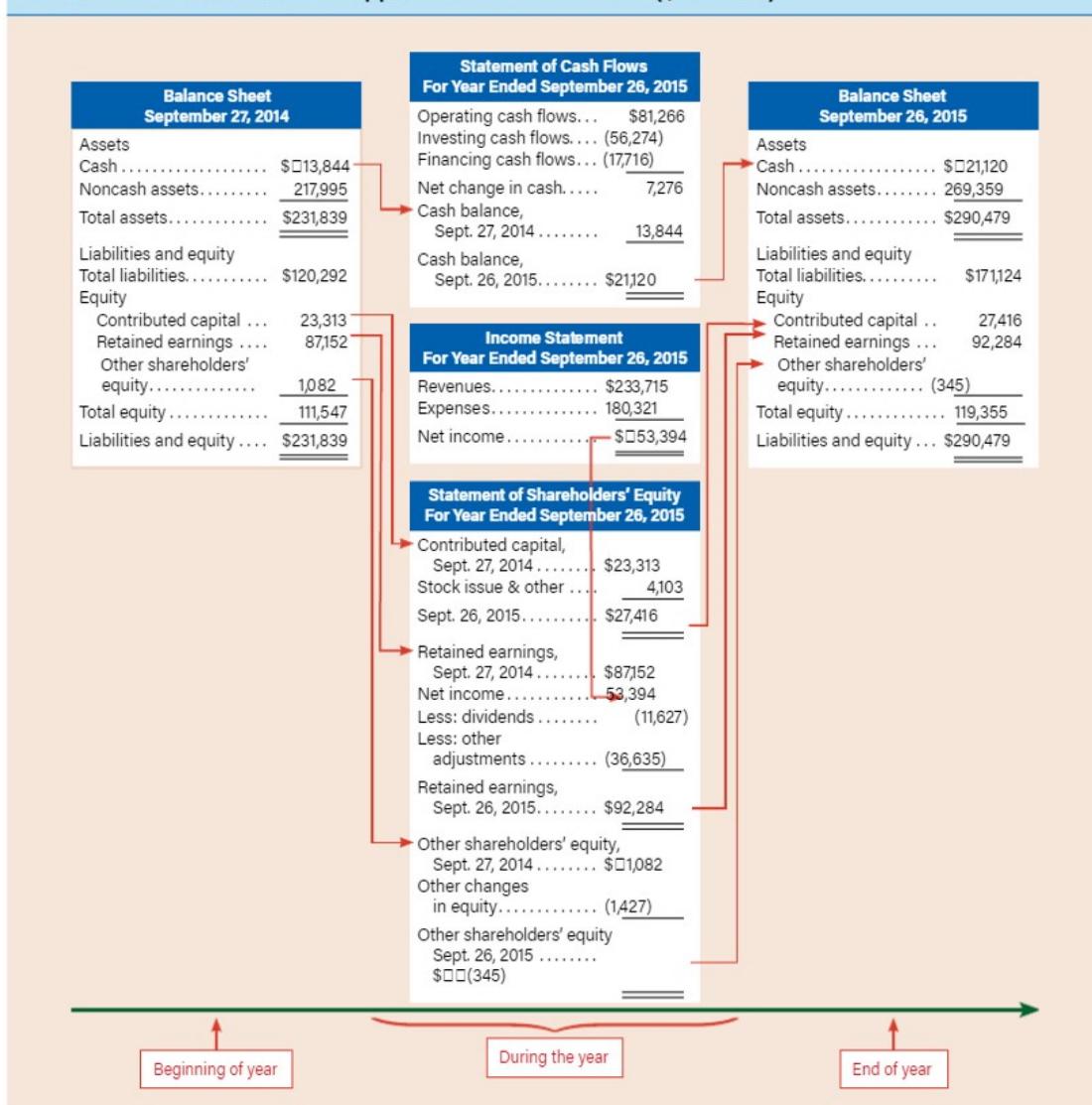
This reconciliation of retained earnings links the balance sheet and the income statement.

In the absence of transactions with stockholders—such as stock issuances and repurchases, and dividend payments—the change in stockholders' equity equals income or loss for the period. The income statement, thus, measures the change in company value as measured by *GAAP*. This is not necessarily company value as measured by the *market*. Of course, all value-relevant items eventually find their way into the income statement. So, from a long-term perspective, the income statement does measure change in company value. This is why stock prices react to reported income and to analysts' expectations about future income.

Financial Statement Linkages

Exhibit 2.10 lays out the linkages among the four financial statements. Apple begins fiscal 2015 with assets of \$231,839 million, consisting of cash of \$13,844 million and noncash assets of \$217,995 million. These investments are financed with \$120,292 million from nonowners and \$111,547 million

Exhibit 2.10 ■ Articulation of Apple Financial Statements (\$ millions)



from stockholders. The owner financing consists of contributed capital of \$23,313 million, retained earnings of \$87,152 million, and other shareholders' equity of \$1,082 million.

Exhibit 2.10 shows balance sheets at the beginning and end of Apple's fiscal year on the left and right columns, respectively. The middle column reflects annual operating activities. The statement of cash flows explains how operating, investing, and financing activities increase the cash balance by \$7,276 million from \$13,844 million at the beginning of the year to \$21,120 million at year-end. The ending balance in cash is reported in the year-end balance sheet on the right.

Apple's \$53,394 million net income reported on the income statement is linked to the statement of shareholders' equity. Apple's retained earnings increases by net income of \$53,394 million and decreases by dividend payments of \$11,627 million (other adjustments reduce retained earnings by \$36,635 million).

Understanding these linkages gives managers as well as external financial statement users a keener ability to assess the impact transactions have on the financial statements. Every transaction has at least two effects on the financial statements. For example, purchasing new PPE increases non-cash assets and decreases cash on the balance sheet, which in turn affects the statement of cash flows. Many other transactions have more than two effects. For example, consider the cash sale of inventory. This transaction has the following income statement effects: (1) revenue increases, (2) expenses

increase, and (3) net income increases (assuming the sales price exceeded the cost of the inventory). The balance sheet is affected as follows: (1) cash increases, (2) inventory decreases, and (3) retained earnings increases. Cash from operations increases on the statement of cash flows, and the statement of stockholders' equity is affected via retained earnings. With such an understanding, we can more accurately answer questions such as the following.

- What are the financial statement effects of purchasing new PPE versus renting it?
- How is ROA affected when the company discontinues certain operations?
- What are the income statement and balance sheet effects of outsourcing production?
- How will a proposed merger affect profit margin and asset turnover?

Review 2-5 LO5



Assume **Microsoft Corporation** reports the following balances for the prior-year balance sheet and current-year income statement (\$ millions). Prepare the articulation of Microsoft's financial statements for fiscal years 2014 and 2015 following the format of Exhibit 2.10.

Balance Sheet, June 30, 2014		Income Statement, For Year Ended June 30, 2015	
Assets			
Cash	\$ 8,669	Revenues.....	\$ 93,580
Noncash assets.....	<u>163,715</u>	Expenses.....	<u>81,387</u>
Total assets.....	<u>\$172,384</u>	Net income.....	<u>\$12,193</u>
Liabilities and equity			
Total liabilities.....	<u>\$82,600</u>		
Equity			
Contributed capital.....	68,366	Operating cash flows.....	\$ 29,080
Retained earnings.....	17,710	Investing cash flows.....	(23,001)
Other stockholders' equity.....	<u>3,708</u>	Financing cash flows.....	<u>(9,153)</u>
Liabilities and equity	<u>\$172,384</u>		

Statement of Cash Flows, For Year Ended June 30, 2015		
Operating cash flows.....	\$ 29,080	
Investing cash flows.....	(23,001)	
Financing cash flows.....	<u>(9,153)</u>	

Notes: 1. Stock issuances for the year are \$99.
2. Dividends for the year are \$10,063.
3. Other decreases in retained earnings are \$10,744.
4. Change in other stockholders' equity for the year is \$(1,186).

Solution on p. 2-39.

Additional Information Sources



The four financial statements are only a part of the information available to financial statement users. Additional information, from a variety of sources provides useful insight into company operating activities and future prospects. This section highlights additional information sources.

Form 10-K

Companies with publicly traded securities must file with the SEC a detailed annual report and discussion of their business activities in their Form 10-K (quarterly reports are filed on Form 10-Q). Many of the disclosures in the 10-K are mandated by law and include the following general categories:

- **Item 1**, Business
- **Item 1A**, Risk Factors
- **Item 2**, Properties
- **Item 3**, Legal Proceedings
- **Item 4**, Submission of Matters to a Vote of Security Holders
- **Item 5**, Market for Registrant's Common Equity and Related Stockholder Matters

- **Item 6**, Selected Financial Data
- **Item 7**, Management's Discussion and Analysis of Financial Condition and Results of Operations
- **Item 7A**, Quantitative and Qualitative Disclosures About Market Risk
- **Item 8**, Financial Statements and Supplementary Data
- **Item 9**, Changes in and Disagreements with Accountants on Accounting and Financial Disclosure
- **Item 9A**, Controls and Procedures
- **Item 10**, Directors, Executive Officers, and Corporate Governance
- **Item 11**, Executive Compensation
- **Item 12**, Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters
- **Item 13**, Certain Relationships and Related Transactions, and Director Independence
- **Item 14**, Principal Accountant Fees and Services

Description of the Business (Item 1)

Companies must provide a general description of their business, including their principal products and services, the source and availability of required raw materials; all patents, trademarks, licenses, and important related agreements; seasonality of the business; any dependence upon a single customer; and competitive conditions, including particular markets in which the company competes, the product offerings in those markets, and the status of its competitive environment. Companies must also provide a description of their overall strategy. [Apple](#)'s partial disclosure follows.

The Company is committed to bringing the best user experience to its customers through its innovative hardware, software and services. The Company's business strategy leverages its unique ability to design and develop its own operating systems, hardware, application software and services to provide its customers products and solutions with innovative design, superior ease-of-use and seamless integration. As part of its strategy, the Company continues to expand its platform for the discovery and delivery of digital content and applications through its Internet Services, which allows customers to discover and download digital content, iOS, Mac and Apple Watch applications, and books through either a Mac or Windows-based computer or through iPhone, iPad and iPod touch® devices ("iOS devices") and Apple Watch. The Company also supports a community for the development of third-party software and hardware products and digital content that complement the Company's offerings. The Company believes a high-quality buying experience with knowledgeable salespersons who can convey the value of the Company's products and services greatly enhances its ability to attract and retain customers. Therefore, the Company's strategy also includes building and expanding its own retail and online stores and its third party distribution network to effectively reach more customers and provide them with a high-quality sales and post-sales support experience. The Company believes ongoing investment in research and development ("R&D"), marketing and advertising is critical to the development and sale of innovative products and technologies.

Management's Discussion and Analysis (Item 7)

The management discussion and analysis (MD&A) section of the 10-K contains valuable insight into the company's results of operations. In addition to an executive overview of company status and its recent operating results, the MD&A section includes information relating to critical accounting policies and estimates used in preparing the financial statements, a detailed discussion of sales activity; year-over-year comparisons of operating activities; analysis of gross margin, operating expenses, taxes, and off-balance-sheet and contractual obligations; assessment of factors that affect future results; and financial condition.

Item 7A reports quantitative and qualitative disclosures about market risk. For example, Apple makes the following disclosure relating to its Mac operating system and its iPods, iPhones, iPads, and other products.

The markets for the Company's products and services are highly competitive and the Company is confronted by aggressive competition in all areas of its business. These markets are characterized by frequent product introductions and rapid technological advances that have substantially increased the capabilities and use of mobile communication and media devices, personal computers and other digital electronic devices. The Company's competitors that sell mobile devices and personal computers based on other operating systems have aggressively cut prices and lowered their product margins to gain or maintain market share. The Company's financial condition and operating results can be adversely affected by these and other industry-wide downward pressures on gross margins. Principal competitive factors important to the Company include price, product features (including security features), relative price and performance, product quality and reliability, design innovation, a strong third-party software and accessories ecosystem, marketing and distribution capability, service and support and corporate reputation.

Schedule II—Valuation and Qualifying Accounts

In addition to the 10-K sections described above, the SEC requires companies to report additional information about certain balance sheet accounts. That information explains reserves and allowances the company establishes to reflect expected losses or uncollectible amounts. (We explain these accounts in later modules.) Many companies comply with this requirement by including the required information in notes to financial statements or as additional information at the end of the 10-K. Exhibit 2.11 shows a typical disclosure from [Cisco Inc.](#) from its 2015 10-K.

Exhibit 2.11 ■ Cisco's Schedule II from 2015 10-K

Year Ended July 25, 2015 (\$ millions)	Allowances for	
	Financing Receivables	Accounts Receivable
Balance at beginning of fiscal year	\$349	\$265
Provisions	57	77
Write-offs net of recoveries	(7)	(40)
Foreign exchange and other	(17)	—
Balance at end of fiscal year	<u>\$382</u>	<u>\$302</u>

Cisco provides information relating to its reserves for anticipated losses on its financing receivables (leases and loans), and on its accounts receivable. Companies often provide similar analysis on estimated sales returns and deferred tax accounts. Our objective in reviewing these accounts is to determine if they are reasonable in amount and, if not, the extent to which our estimate of core operating income differs from that reported in the company's income statement. We discuss this analysis in later modules.

Form 20-F and Form 40-F

Non-U.S. companies that are publicly traded in the United States also file annual reports with the SEC. These foreign companies must furnish, within four months after the fiscal year end, the same audited financial statements required on Form 10-K. The filing, labeled Form 20-F, requires that firms provide financial statements prepared according to U.S. GAAP or IFRS. If the company uses accounting standards other than GAAP or IFRS, Form 20-F must discuss major differences between the accounting principles used and GAAP and provide a table that reconciles net income as reported to U.S. GAAP net income. In addition, each balance sheet item and cash flow measure that differs from U.S. GAAP, must be reconciled. Canadian companies file their annual reports, prepared under IFRS, using Form 40-F.

Form 8-K

Another useful report that is required by the SEC and is publicly available is the Form 8-K. This form must be filed within four business days of any of the following events.

- Quarterly earnings press release
- Entry into or termination of a material definitive agreement (including petition for bankruptcy)
- Exit from a line of business or impairment of assets
- Change in the company's certified public accounting firm
- Change in control of the company
- Departure of the company's executive officers
- Changes in the company's articles of incorporation or bylaws

Outsiders typically use Form 8-K to monitor for material adverse changes in the company.

Analyst Reports

Sell-side analysts provide their clients with objective analyses of company operating activities. Frequently, these reports include a discussion of the competitive environment for each of the company's principal product lines, strengths and weaknesses of the company, and an investment recommendation, including financial analysis and a stock price target. For example, **Oppenheimer** provides the following in its March 18, 2016, report to clients on Apple.



March 18, 2016

Stock Rating:	
OUTPERFORM	
12-18 mo. Price Target	\$120.00
AAPL - NASDAQ	\$105.80

EQUITY RESEARCH
COMPANY UPDATE

TECHNOLOGY/EMERGING TECHNOLOGIES AND SERVICES

Apple Inc.

Looking into Our Crystal Ball

SUMMARY

Next week (3/21) Apple is holding a press event, widely anticipated for new product announcements. While we expect to see several "under the hood" improvements across devices, we are not expecting the same exuberance as last year when Apple shared final details of the Apple Watch. Moreover, we worry investors will find the next several Apple media events overwhelming. In this note, we make predictions of what we expect to see over the next two years as well as provide investors with a history of past events (see appendix). We expect excitement to return as we predict 360 capture to be introduced for the iPhone, an OLED display, deeper Siri integrations, Apple's first IoT device for the home, and a mobile VR headset.

KEY POINTS

- **Capturing Leadership in Smartphone Camera:** the iPhone cameras best embody Apple's ability to elevate off-the-shelf components with superior software engineering skills to differentiate themselves from competition. We believe a series of major overhauls are in line for the upcoming iPhones—we see 360 video and depth sensing as the most likely new features.
- **Siri—The Omnipresent AI Assistant Across All Devices:** We believe Apple will continue to push wider deployment of Siri. This year, we believe Apple will encourage third-party developers to link with Siri in more meaningful ways, as a counterattack to "OK Google" and Amazon Echo.
- **One More Thing—VR:** We believe Apple has been building up to release a mobile VR headset based on potential changes in display technology (OLED), GPU improvement (consistent doubling of performance in recent iterations), and the introduction of more sophisticated sensor fusion, all of which will allow Apple to introduce a VR headset that utilizes current iPhones or iPads.
- **Incremental Improvements:** other non-essential improvements we believe Apple may gradually roll out for its hardware and software are: weather proofing, better battery life, lighter and thinner industrial designs, introduction of new materials, and enhancement and expanding partnerships for HomeKit, HealthKit, CarPlay, and Apple Pay.
- **Bottom Line:** We believe Apple's broadened device line-up and improving user experience will continue to add leverage to its ecosystem, allowing the company to engage and retain users previously untouched. It does this in small steps—and ultimately enables the company to create the next big thing. We don't see this model changing—but we do believe it could frustrate investors.

Credit Services

Several firms, including **Standard & Poor's** ([StandardAndPoors.com](#)), **Moody's Investors Service** ([Moody's.com](#)), and **Fitch Ratings** ([FitchRatings.com](#)), provide credit analysis that assists potential lenders, investors, employees, and other users in evaluating a company's creditworthiness and future financial viability. Credit analysis is a specialized field of analysis, quite different from the equity analysis illustrated here. These firms issue credit ratings on publicly issued bonds as well as on firms' commercial papers.

Data Services

A number of companies supply financial statement data in easy-to-download spreadsheet formats. **Thomson Reuters Corporation** ([ThomsonReuters.com](#)) provides a wealth of information to its database subscribers, including the widely quoted *First Call* summary of analysts' earnings forecasts. Standard & Poor's provides financial data for all publicly traded companies in its *Compustat* database. This database reports a plethora of individual data items for all publicly traded companies or for any specified subset of companies. These data are useful for performing statistical analysis and making comparisons across companies or within industries. Finally, **Capital IQ** ([CapitalIQ.com](#)), a division of Standard & Poor's, provides "as presented" financial data that conform to published financial statements, as well as additional statistical data and analysis.

Review 2-6 LO6



Use the SEC website ([www.sec.gov/edgar/searchedgar/companysearch.html](#)) to download **Microsoft's** 2015 10-K, and answer the requirements.

Required

1. On what date did Microsoft file its 2015 10-K with the SEC? Compare this date with the company's fiscal year end. Why do the two dates differ?
2. Item 1 of the 10-K lists the company's executive officers. What are the names of the CEO and CFO?
3. As of June 30, 2015, how many people worked for Microsoft, and where were they located?
4. In the MD&A (10-K Item 7), Microsoft reports some interesting statistics and facts.
 - How many Xbox consoles did the company sell, and what was the growth rate for Xbox Live users?
 - What is Bing's market share?
 - Did the company acquire any other companies during the year? How many, and what was one notable acquisition?
5. Who are the company's auditors?

Solution on p. 2-39

Global Accounting



Both GAAP and IFRS use accrual accounting to prepare financial statements. Although there are vastly more similarities than differences, we highlight below a few of the more notable differences for financial statements.

Balance Sheet The most visible difference is that many IFRS-based balance sheets are presented in reverse order of liquidity. The least liquid asset, usually goodwill, is listed first, and the most liquid asset, cash, is last. The same inverse liquidity order applies to liabilities. There are also several detailed presentation and measurement differences that we explain in other modules. As one example, for GAAP-based balance sheets, bank overdrafts are often netted against cash balances. IFRS does not permit this netting on the balance sheet. However, the IFRS statement of cash flows *does* net the cash balance with any bank overdrafts and, thus, the cash balance on the statement of cash flows might not match the cash amount on the balance sheet.

Income Statement The most visible difference is that GAAP requires three years' of data on the income statement whereas IFRS requires only two. Another difference is that GAAP income statements

classify expenses by *function* and must separately report cost of goods sold, whereas IFRS permits expense classification by *function* (cost of sales, selling and administrative, etc.) or by *type* (raw materials, labor, depreciation, etc.). This means, for example, there is no requirement to report a cost of sales figure under IFRS.

Guidance Answers

You Are the Securities Analyst

Pg. 2-13 Of special concern is the possibility that the new CEO is shifting costs to the current period in lieu of recording them in future periods. Evidence suggests such behavior occurs when a new management team takes control. The reasoning is that the new management can blame poor current period performance on prior management and, at the same time, rid the balance sheet (and the new management team) of costs that would normally be expensed in future periods.

You Are the Operations Manager

Pg. 2-14 The CFO desires a warranty cost estimate that corresponds to the sales generated from the new product. To arrive at such an estimate, you must estimate the expected number and types of deficiencies in your product and the costs to repair each deficiency per the warranty provisions. This is often a difficult task for product engineers because it forces them to focus on product failures and associated costs.

Questions

- Q2-1.** The balance sheet consists of assets, liabilities, and equity. Define each category, and provide two examples of accounts reported within each category.
- Q2-2.** Explain how we account for a cost that creates an immediate benefit versus a cost that creates a future benefit.
- Q2-3.** GAAP is based on the concept of accrual accounting. Define and describe accrual accounting.
- Q2-4.** Analysts attempt to identify transitory items in an income statement. Define transitory items. What is the purpose of identifying transitory items?
- Q2-5.** What is the statement of stockholders' equity? What useful information does it contain?
- Q2-6.** What is the statement of cash flows? What useful information does it contain?
- Q2-7.** Define and explain the concept of financial statement articulation. What insight comes from understanding articulation?
- Q2-8.** Describe the flow of costs for the purchase of a machine. At what point do such costs become expenses? Why is it necessary to record the expenses related to the machine in the same period as the revenues it produces?
- Q2-9.** What are the two essential characteristics of an asset?
- Q2-10.** What does the concept of liquidity refer to? Explain.
- Q2-11.** What does the term *current* denote when referring to assets?
- Q2-12.** Assets are recorded at historical costs even though current market values might, arguably, be more relevant to financial statement readers. Describe the reasoning behind historical cost usage.
- Q2-13.** Identify three intangible assets that are likely to be *excluded* from the balance sheet because they cannot be reliably measured.
- Q2-14.** Identify three intangible assets that are recorded on the balance sheet.
- Q2-15.** What are accrued liabilities? Provide an example.
- Q2-16.** Define net working capital. Explain how increasing the amount of trade credit can reduce the net working capital for a company.
- Q2-17.** What is the difference between company *book value* and *market value*? Explain why these two amounts differ.
- Q2-18.** Describe the linkage between the income statement and the equity section of the balance sheet. Describe the linkage between the statement of cash flows and the equity section of the balance sheet when a company pays dividends.

Mini Exercises

LO1, 2



M2-19. Identifying and Classifying Financial Statement Items

For each of the following items, indicate whether they would be reported in the balance sheet (B) or income statement (I).

- | | | |
|--|--|--|
| <input type="checkbox"/> a. Net income | <input type="checkbox"/> d. Accumulated depreciation | <input type="checkbox"/> g. Interest expense |
| <input type="checkbox"/> b. Retained earnings | <input type="checkbox"/> e. Wages expense | <input type="checkbox"/> h. Interest payable |
| <input type="checkbox"/> c. Depreciation expense | <input type="checkbox"/> f. Wages payable | <input type="checkbox"/> i. Sales |

LO1, 2



M2-20. Identifying and Classifying Financial Statement Items

For each of the following items, indicate whether they would be reported in the balance sheet (B) or income statement (I).

- | | | |
|--|---|--|
| <input type="checkbox"/> a. Machinery | <input type="checkbox"/> e. Common stock | <input type="checkbox"/> i. Taxes expense |
| <input type="checkbox"/> b. Supplies expense | <input type="checkbox"/> f. Factory buildings | <input type="checkbox"/> j. Cost of goods sold |
| <input type="checkbox"/> c. Inventories | <input type="checkbox"/> g. Receivables | <input type="checkbox"/> k. Long-term debt |
| <input type="checkbox"/> d. Sales | <input type="checkbox"/> h. Taxes payable | <input type="checkbox"/> l. Treasury stock |

LO6

Delta Airlines (DAL)

M2-21. Gather and Use Information from Form 8-K

On February 5, 2016, **Delta Airlines** filed a Form 8-K Current Report with the SEC. What important announcement did Delta make that day? Hint: Use the SEC website (www.sec.gov/edgar/searchedgar/companysearch.html) to find the Form 8-K.

LO1



M2-22. Assigning Accounts to Sections of the Balance Sheet

Identify each of the following accounts as a component of assets (A), liabilities (L), or equity (E).

- | | |
|---|--|
| <input type="checkbox"/> a. Cash and cash equivalents | <input type="checkbox"/> e. Long-term debt |
| <input type="checkbox"/> b. Wages payable | <input type="checkbox"/> f. Retained earnings |
| <input type="checkbox"/> c. Common stock | <input type="checkbox"/> g. Additional paid-in capital |
| <input type="checkbox"/> d. Equipment | <input type="checkbox"/> h. Taxes payable |

LO3



M2-23. Determining Missing Information Using the Accounting Equation

Use knowledge of accounting relations to complete the following table for Boatsman Company.

	2016	2017
Beginning retained earnings.....	\$189,089	\$ <u> </u> ?
Net income (loss)	?	48,192
Dividends	0	15,060
Ending retained earnings.....	169,634	?

LO3

Johnson & Johnson (JNJ)

M2-24. Reconciling Retained Earnings

Following is financial information from **Johnson & Johnson** for the year ended January 3, 2016. Prepare the retained earnings reconciliation for Johnson & Johnson for the year ended January 3, 2016 (\$ millions).

Retained earnings, Dec. 28, 2014....	\$97,245	Dividends	\$8,173
Net earnings.....	15,409	Retained earnings, Jan. 3, 2016.....	?
Other retained earnings changes ...	(602)		

E2-25. Gather and Use Information from Form 20-F

Stock of **Credit Suisse Group** trades on the New York Stock Exchange as well as in various European stock markets. The company's Form 20-F reported the following.

LO2, 6**Credit Suisse Group (CS)**

The accompanying consolidated financial statements of Credit Suisse Group AG (the Group) are prepared in accordance with accounting principles generally accepted in the US (US GAAP) and are stated in Swiss francs (CHF). The financial year for the Group ends on December 31.

On October 21, 2015, the Group announced its new strategy and organization, which included the introduction of a new segment structure. In connection with the strategic review of the Group, restructuring expenses of CHF 355 million were recognized in 2015. Reclassifications have been made to the prior year's consolidated financial statements to conform to the current presentation. The reclassifications had no impact on net income/(loss) or total shareholders' equity.

Required

- Why would Credit Suisse prepare its financial statements in accordance with U.S. GAAP?
- Credit Suisse separately reported the CHF 355 million restructuring expense. Explain how this reporting could help analysts who seek to predict future earnings.

E2-26. Gather and Use Information from Form 20-F

Nippon Telegraph and Telephone Corporation reports the following information in Schedule II of its 2016 Form 20-F. Accounts receivable represents the amount customers owe the company at year-end. The balance in the allowance for doubtful accounts is the company's best estimate of the amount customers will not repay.

LO1, 6**Nippon Telegraph and Telephone Corporation (NTT)**

VALUATION AND QUALIFYING ACCOUNTS				
For Year Ended March 31 (¥ millions)	Balance at Beginning of Period	Additions Charged to Costs and Expenses	Deductions	Balance at End of Period
Allowance for doubtful accounts, March 31, 2014.....	¥44,961	¥37,197	¥(35,265)	¥46,893
Allowance for doubtful accounts, March 31, 2015.....	¥46,893	¥28,504	¥(32,167)	¥43,230
Allowance for doubtful accounts, March 31, 2016.....	¥43,230	¥32,200	¥(30,194)	¥45,236

Required

The balance in the allowance account increased during 2016 (from ¥ 43,230 million to ¥ 45,236 million) after decreasing during 2015 (from ¥ 46,893 million to ¥ 43,230 million). What additional information would an analyst want to use to determine if this variability is of concern?

E2-27. Constructing Financial Statements from Account Data

Barth Company reports the following year-end account balances at December 31, 2016. Prepare the 2016 income statement and the balance sheet as of December 31, 2016.

LO1, 2

Accounts payable.....	\$□16,000	Inventory	\$□36,000
Accounts receivable.....	30,000	Land	80,000
Bonds payable, long-term	200,000	Goodwill.....	8,000
Buildings	151,000	Retained earnings.....	160,000
Cash	148,000	Sales revenue.....	500,000
Common stock.....	150,000	Supplies inventory	3,000
Cost of goods sold	180,000	Supplies expense	6,000
Equipment.....	70,000	Wages expense	40,000




LO1, 2 E2-28. Constructing Financial Statements from Transaction Data

Baiman Corporation commences operations at the beginning of January. It provides its services on credit and bills its customers \$40,000 for January sales. Its employees also earn January wages of \$12,000 that are not paid until the first of February. Complete the following statements for the month-end of January.

Income Statement		Balance Sheet	
Sales.....	\$ _____	Cash	\$ _____
Wages expense	_____	Accounts receivable.....	_____
Net income (loss)	\$ _____	Total assets.....	\$ _____
		Wages payable	\$ _____
		Retained earnings.....	_____
		Total liabilities and equity..	\$ _____

LO1, 2, 3, 4, 5 E2-29. Applying Financial Statement Linkages to Understand Transactions


Consider the effects of the independent transactions, *a* through *g*, on a company's balance sheet, income statement, and statement of cash flows. Complete the table below to explain the effects and financial statement linkages. Use "+" to indicate the account increases and "−" to indicate the account decreases. Refer to Exhibit 2.10 as a guide for the linkages.

	a.	b.	c.	d.	e.	f.	g.
Balance Sheet							
Cash	_____	_____	_____	_____	_____	_____	_____
Noncash assets.....	_____	_____	_____	_____	_____	_____	_____
Total liabilities.....	_____	_____	_____	_____	_____	_____	_____
Contributed capital.....	_____	_____	_____	_____	_____	_____	_____
Retained earnings.....	_____	_____	_____	_____	_____	_____	_____
Other equity.....	_____	_____	_____	_____	_____	_____	_____
Statement of Cash Flows							
Operating cash flow.....	_____	_____	_____	_____	_____	_____	_____
Investing cash flow.....	_____	_____	_____	_____	_____	_____	_____
Financing cash flow.....	_____	_____	_____	_____	_____	_____	_____
Income Statement							
Revenues.....	_____	_____	_____	_____	_____	_____	_____
Expenses.....	_____	_____	_____	_____	_____	_____	_____
Net income.....	_____	_____	_____	_____	_____	_____	_____
Statement of Stockholders' Equity							
Contributed capital.....	_____	_____	_____	_____	_____	_____	_____
Retained earnings.....	_____	_____	_____	_____	_____	_____	_____

- a.* The company issued common stock in exchange for cash and property and equipment.
- b.* The company paid cash for rent of office furnishings and facilities.
- c.* The company performed services for clients and immediately received cash earned.
- d.* The company performed services for clients and sent a bill with payment due within 60 days.
- e.* The company compensated an office employee with cash as salary.
- f.* The company received cash as partial payment on the amount owed from clients in transaction *d*.
- g.* The company paid cash in dividends.

LO1, 2, 3, 4, 5 E2-30. Applying Financial Statement Linkages to Understand Transactions


Consider the effects of the independent transactions, *a* through *g*, on a company's balance sheet, income statement, and statement of cash flow. Complete the table below to explain the effects and financial statement linkages. Use "+" to indicate the account increases and "−" to indicate the account decreases. Refer to Exhibit 2-10 as a guide for the linkages.

	a.	b.	c.	d.	e.	f.	g.
Balance Sheet							
Cash	_____	_____	_____	_____	_____	_____	_____
Noncash assets.....	_____	_____	_____	_____	_____	_____	_____
Total liabilities.....	_____	_____	_____	_____	_____	_____	_____
Contributed capital.....	_____	_____	_____	_____	_____	_____	_____
Retained earnings.....	_____	_____	_____	_____	_____	_____	_____
Other equity	_____	_____	_____	_____	_____	_____	_____
Statement of Cash Flows							
Operating cash flow.....	_____	_____	_____	_____	_____	_____	_____
Investing cash flow.....	_____	_____	_____	_____	_____	_____	_____
Financing cash flow.....	_____	_____	_____	_____	_____	_____	_____
Income Statement							
Revenues.....	_____	_____	_____	_____	_____	_____	_____
Expenses.....	_____	_____	_____	_____	_____	_____	_____
Net income.....	_____	_____	_____	_____	_____	_____	_____
Statement of Stockholders' Equity							
Contributed capital.....	_____	_____	_____	_____	_____	_____	_____
Retained earnings.....	_____	_____	_____	_____	_____	_____	_____

- a. Owners invested cash in the company in exchange for shares of common stock.
- b. The company received cash from the bank for a loan.
- c. The company purchased equipment to manufacture goods for sale and paid with cash.
- d. The company manufactured a custom piece of inventory and paid cash for materials and labor. The company sold the inventory for more than cost, and the customer promised to pay for the inventory in 30 days.
- e. The company paid monthly rent for a manufacturing space.
- f. The company paid \$935 cash in dividends to the owners.
- g. The company received cash from the customer in transaction d.

E2-31. Identifying and Classifying Balance Sheet and Income Statement Accounts

Following are selected accounts for **Staples Inc.** for the fiscal year ended January 30, 2016..

LO1, 2

Staples Inc. (SPLS)



\$ millions	Amount	Classification
Sales.....	\$21,059	_____
Accumulated depreciation.....	4,375	_____
Depreciation expense	388	_____
Retained earnings.....	6,900	_____
Net income.....	379	_____
Property, plant, and equipment, net	1,586	_____
Selling, general, and administrative expense.....	4,600	_____
Accounts receivable.....	1,899	_____
Total liabilities.....	4,788	_____
Total stockholders' equity.....	5,384	_____

E2-32. Identifying and Classifying Balance Sheet and Income Statement Accounts

Following are selected accounts for **Target Corporation**, for the fiscal year ended January 30, 2016..

LO1, 2

Target Corporation (TGT)

- a. Indicate whether each account appears on the balance sheet (B) or income statement (I).
- b. Using the following data, compute total assets and total expenses.

\$ millions	Amount	Classification
Total revenues	\$73,785	_____
Accrued liabilities	4,236	_____
Depreciation and amortization expense	2,213	_____
Retained earnings.....	8,188	_____
Net income.....	3,363	_____
Property, plant, and equipment, net	25,217	_____
Selling, general, and administrative expense	14,665	_____
Inventory	8,601	_____
Total liabilities.....	27,305	_____
Total stockholders' equity.....	12,957	_____

LO1, 2

E2-33. Comparing Income Statements and Balance Sheets of Competitors

Abercrombie & Fitch
(ANF)
TJX Companies (TJX)



Income Statement (\$ thousands)	ANF	TJX
Sales.....	\$3,518,680	\$30,944,938
Cost of goods sold	1,361,137	22,034,523
Gross profit.....	2,157,543	8,910,415
Total expenses.....	2,121,967	6,632,757
Net income.....	<u>\$35,576</u>	<u>\$2,277,658</u>

Balance Sheet (\$ thousands)	ANF	TJX
Current assets	\$1,178,980	\$6,772,560
Long-term assets	1,254,059	4,726,922
Total assets.....	<u>\$2,433,039</u>	<u>\$11,499,482</u>
Current liabilities.....	<u>\$534,703</u>	<u>\$4,402,230</u>
Long-term liabilities.....	<u>602,614</u>	<u>2,790,177</u>
Total liabilities.....	<u>1,137,317</u>	<u>7,192,407</u>
Stockholders' equity	<u>1,295,722</u>	<u>4,307,075</u>
Total liabilities and equity.....	<u>\$2,433,039</u>	<u>\$11,499,482</u>

- Express each income statement amount as a percentage of sales. Comment on any differences observed between these two companies, especially as they relate to their respective business models.
- Express each balance sheet amount as a percentage of total assets. Comment on any differences observed between these two companies, especially as they relate to their respective business models.
- Which company has a lower proportion of debt? What do the ratios tell us about the relative riskiness of the two companies?

LO1, 2

E2-34. Comparing Income Statements and Balance Sheets of Competitors

Apple Inc. (AAPL)
HP Inc. (HPQ)

Income Statement (\$ millions)	Apple	HP
Sales.....	\$233,715	\$103,355
Cost of goods sold	140,089	78,596
Gross profit.....	93,626	24,759
Total expenses.....	40,232	20,205
Net income.....	<u>\$53,394</u>	<u>\$4,554</u>

Balance Sheet (\$ millions)	Apple	HP
Current assets	\$ 89,378	\$ □51,787
Long-term assets	201,101	55,095
Total assets	<u>\$290,479</u>	<u>106,882</u>
Current liabilities	\$ 80,610	\$ □42,191
Long-term liabilities	90,514	36,540
Total liabilities	<u>171,124</u>	<u>78,731</u>
Stockholders' equity	<u>119,355</u>	<u>28,151</u>
Total liabilities and equity	<u>\$290,479</u>	<u>\$106,882</u>

- a. Express each income statement amount as a percentage of sales. Comment on any differences observed between the two companies, especially as they relate to their respective business models. (*Hint:* Apple's gross profit as a percentage of sales is considerably higher than HP's. What aspect of Apple's business do we believe is driving its profitability?)
- b. Express each balance sheet amount as a percentage of total assets. Comment on any differences observed between the two companies. Apple has chosen to structure itself with a higher proportion of equity (and a lower proportion of debt) than HP. How does this capital structure decision affect our evaluation of the relative riskiness of these two companies?

E2-35. Comparing Income Statements and Balance Sheets of Competitors

Following are selected income statement and balance sheet data for two communications companies, **Comcast** and **Verizon**, for the year ended December 31, 2015.

LO1, 2
Comcast (CMCSA)
Verizon (VZ)

Income Statement (\$ millions)	Comcast	Verizon
Sales	\$74,510	\$131,620
Operating costs	<u>58,512</u>	<u>98,560</u>
Operating profit	<u>15,998</u>	<u>33,060</u>
Nonoperating expenses	<u>7,585</u>	<u>15,181</u>
Net income	<u>\$ □8,413</u>	<u>\$ □17,879</u>

Balance Sheet (\$ millions)	Comcast	Verizon
Current assets	\$ □12,303	\$ □22,280
Long-term assets	<u>154,271</u>	<u>222,360</u>
Total assets	<u>\$166,574</u>	<u>\$244,640</u>
Current liabilities	\$ □18,178	\$ □35,052
Long-term liabilities	<u>94,418</u>	<u>191,746</u>
Total liabilities	<u>\$112,596</u>	<u>226,798</u>
Stockholders' equity*	<u>53,978</u>	<u>17,842</u>
Total liabilities and equity	<u>\$166,574</u>	<u>\$244,640</u>

*Includes noncontrolling interest

- a. Express each income statement amount as a percentage of sales. Comment on any differences observed between the two companies.
- b. Express each balance sheet amount as a percentage of total assets. Comment on any differences observed between the two companies, especially as they relate to their respective business models.
- c. Both Verizon and Comcast have chosen a capital structure with a higher proportion of liabilities than equity. How does this capital structure decision affect our evaluation of the riskiness of these two companies? Take into consideration the large level of capital expenditures that each must make to remain competitive.

E2-36. Comparing Financial Information Across Industries

Use the data and computations required in parts *a* and *b* of exercises E2-33 and E2-34 to compare **TJX Companies** and **Apple Inc.**

LO1, 2
TJX Companies (TJX)
Apple Inc. (AAPL)

- Compare gross profit and net income as a percentage of sales for these two companies. How might differences in their respective business models explain the differences observed?
- Compare sales versus total assets. What do observed differences indicate about the relative capital intensity of these two industries?
- Which company has the higher percentage of total liabilities to stockholders' equity? What do these ratios imply about the relative riskiness of these two companies?

LO1, 2, 3, 4, 5

E2-37. Applying Financial Statement Linkages to Understand Transactions

Consider the effects of the independent transactions, *a* through *h*, on a company's balance sheet, income statement, and statement of cash flow. Complete the table below to explain the effects and financial statement linkages. Use "+" to indicate the account increases and “-” to indicate the account decreases. Refer to Exhibit 2-10 as a guide for the linkages.

	a.	b.	c.	d.	e.	f.	g.	h.
Balance Sheet								
Cash	—	—	—	—	—	—	—	—
Noncash assets.....	—	—	—	—	—	—	—	—
Total liabilities.....	—	—	—	—	—	—	—	—
Contributed capital.....	—	—	—	—	—	—	—	—
Retained earnings.....	—	—	—	—	—	—	—	—
Other equity.....	—	—	—	—	—	—	—	—
Statement of Cash Flows								
Operating cash flow.....	—	—	—	—	—	—	—	—
Investing cash flow.....	—	—	—	—	—	—	—	—
Financing cash flow.....	—	—	—	—	—	—	—	—
Income Statement								
Revenues.....	—	—	—	—	—	—	—	—
Expenses.....	—	—	—	—	—	—	—	—
Net income.....	—	—	—	—	—	—	—	—
Statement of Stockholders' Equity								
Contributed capital.....	—	—	—	—	—	—	—	—
Retained earnings.....	—	—	—	—	—	—	—	—

- Wages are earned by employees but not yet paid.
- Inventory is purchased on credit.
- Inventory purchased in transaction *b* is sold on credit (and for more than its cost).
- Collected cash from transaction *c*.
- Equipment is acquired for cash.
- Paid cash for inventory purchased in transaction *b*.
- Paid cash toward a note payable that came due.
- Paid cash for interest on borrowings.

Problems

LO1

P2-38. Constructing and Analyzing Balance Sheet Amounts from Incomplete Data

3M Company (MMM)

Selected balance sheet amounts for **3M Company**, a manufacturer of consumer and business products, for three recent years follow.

	\$ millions	Current Assets	Long-Term Assets	Total Assets	Current Liabilities	Long-Term Liabilities	Total Liabilities	Stockholders' Equity*
2013.....	\$12,733	\$□ □ □?	\$33,550	\$□ □ □?	\$□ 8,104	\$15,602	\$17,948	
2014.....	12,303	18,906	?	5,964	12,103	?	13,142	
2015.....	?	21,732	32,718	7,118	13,853	20,971		?

* Includes noncontrolling interest

Required

- Compute the missing balance sheet amounts for each of the three years shown.
- What types of accounts would we expect to be included in current assets? In long-term assets?

P2-39. Use Additional Information from 10-K to Explain Linkages Among Financial Statements

Community Health Systems operates general acute care hospitals in communities across the United States. The company reports the following information in Schedule II of its 2015 10-K.

LO1, 2, 5, 6
Community Health Systems (CYH)

SCHEDULE II—VALUATION AND QUALIFYING ACCOUNTS					
\$ millions	Balance at Beginning of Year	Acquisitions and Dispositions	Bad Debt Expense	Write-Offs	Balance at End of Year
December 31, 2015, allowance for doubtful accounts	\$3,504	\$(17)	\$3,168	\$(2,545)	\$4,110
December 31, 2014, allowance for doubtful accounts	2,438	960	3,022	(2,916)	3,504
December 31, 2013, allowance for doubtful accounts	2,191	—	2,034	(1,787)	2,438

Accounts receivable represents the amount customers owe Community Health Systems for services rendered. The balance in the allowance for doubtful accounts is the company's best estimate of the amount that customers will not repay.

Community Health Systems' balance sheet and income statements reported the following information:

\$ millions	2015	2014	2013
Revenue.....	\$22,564	\$21,561	\$14,853
Operating income before tax.....	1,337	1,339	917
Total assets.....	26,861	27,421	17,117

Required

- Compute the common-size allowance for doubtful accounts for each year. Compare 2015 to the prior years; what do we observe? What is one conclusion analysts might draw from this analysis?
- On average, the firms in the S&P 500 report common-size allowance for doubtful accounts between 3% and 5%. Why might Community Health Systems' ratio be so much higher? How could an analyst verify this inference?
- Compute the common-size bad debt expense for each year. Interpret the ratio for 2015. What trend do we observe?
- If the company had recorded bad debt expense of \$2,668 in 2015 (which is \$500 less of bad debt expense), what would the company have reported for operating income before tax? How would retained earnings have been affected? How is cash from operations affected? For this question, ignore tax effects.

P2-40. Gather and Use Additional Information from 10-K

Use the SEC website (www.sec.gov/edgar/searchedgar/companysearch.html) to download the 2015 10-K for **Facebook Inc.**, and answer the following questions.

LO6
Facebook (FB)

- On what date did Facebook file its 2015 10-K with the SEC? Compare this date to the company's fiscal year end. Why do the two dates differ?
- Item 1 of the 10-K reports the company's mission. What is its mission?
- Who does Facebook see as its main competition? See Item 1 of the 10-K.
- As of December 31, 2015, how many people worked for Facebook?
- How many daily active users did Facebook have in December 2015? How does this compare with December 2014?
- Many companies file Schedule II with the 10-K. One of the components of Schedule II is an estimate of the amount owing from customers that will not be collected (allowance for doubtful accounts). What does Facebook report concerning this schedule? Explain.
- Who are the company's auditors?



LO1, 2 P2-41. Comparing Operating Characteristics Across Industries

Following are selected income statement and balance sheet data for companies in different industries.

Target Corp. (TGT)
Nike (NKE)
Harley-Davidson (HOG)
Cisco Systems (CSCO)

	\$ millions	Sales	Cost of Goods Sold	Gross Profit	Net Income	Assets	Liabilities	Stockholders' Equity
Target Corp. (TGT)	\$73,785	\$51,997	\$21,788	\$3,363	\$40,262	\$27,305	\$12,957	
Nike (NKE)	32,376	17,405	14,971	3,760	21,396	9,138	12,258	
Harley-Davidson (HOG)	5,995	3,620	2,375	752	9,991	8,151	1,840	
Cisco Systems (CSCO)	49,247	18,287	30,960	10,739	121,652	58,067	63,585	

Required

- Compute the following ratios for each company.
 - Gross profit/Sales
 - Net income/Sales
 - Net income/Stockholders' equity
 - Liabilities/Stockholders' equity
- Comment on any differences among the companies' gross profit-to-sales ratios and net income as a percentage of sales. Do differences in the companies' business models explain the differences observed?
- Which company reports the highest ratio of net income to equity? Suggest one or more reasons for this result.
- Which company has financed itself with the highest percentage of liabilities to equity? Suggest one or more reasons why this company can take on such debt levels.

LO2, 4 P2-42. Comparing Cash Flows Across Retailers

Following are selected accounts from the income statement and the statement of cash flows for several retailers, for their fiscal years ended in 2016.

Macy's (M)
Home Depot (HD)
Staples (SPLS)
Target (TGT)
Walmart (WMT)

\$ millions	Sales	Net Income	Cash Flows from		
			Operating	Investing	Financing
Macy's	\$27,079	\$1,072	\$1,984	\$(-1,092)	\$(-2,029)
Home Depot Inc.	88,519	7,009	9,373	(2,982)	(5,898)
Staples Inc.	21,059	379	978	(374)	(406)
Target Corp.	73,785	3,363	5,844	508	(4,516)
Walmart Stores	478,614	14,694	27,389	(10,675)	(17,144)

Required

- Compute the ratio of net income to sales for each company. Rank the companies on the basis of this ratio. Do their respective business models give insight into these differences?
- Compute net cash flows from operating activities as a percentage of sales. Rank the companies on the basis of this ratio. Does this ranking coincide with the ratio rankings from part a? Suggest one or more reasons for any differences observed.
- Compute net cash flows from investing activities as a percentage of sales. Rank the companies on the basis of this ratio. Does this ranking coincide with the ratio rankings from part a? Suggest one or more reasons for any differences observed.

IFRS Applications

LO1, 2 I2-43. Comparing Income Statements and Balance Sheets of Competitors

Following are selected income statement and balance sheet data from two European grocery chain companies: **Tesco PLC** (UK) and **Ahold** (the Netherlands).

Income Statements For Fiscal Year Ended	Tesco February 27, 2016 (£ millions)	Ahold December 30, 2015 (€ millions)
Sales.....	£54,433	€38,203
Cost of goods sold	<u>51,579</u>	<u>27,835</u>
Gross profit.....	2,854	10,368
Total expenses.....	<u>2,716</u>	<u>9,517</u>
Net income.....	<u>£000 138</u>	<u>€000 851</u>

Balance Sheet	Tesco February 27, 2016 (£ millions)	Ahold December 30, 2015 (€ millions)
Current assets	£14,828	€005,260
Long-term assets	<u>29,076</u>	<u>10,620</u>
Total assets.....	<u>£43,904</u>	<u>€15,880</u>
Current liabilities.....	£19,714	€005,002
Long-term liabilities.....	<u>15,574</u>	<u>5,257</u>
Total liabilities.....	<u>35,288</u>	<u>10,259</u>
Stockholders' equity	<u>8,616</u>	<u>5,621</u>
Total liabilities and equity.....	<u>£43,904</u>	<u>€15,880</u>

Required

- Prepare a common-size income statement. To do this, express each income statement amount as a percent of sales. Comment on any differences observed between the two companies. Ahold's gross profit percentage of sales is considerably higher than Tesco's. What might explain this difference?
- Prepare a common-size balance sheet. To do this, express each balance sheet amount as a percent of total assets. Comment on any differences observed between the two companies.
- Ahold has chosen to structure itself with a higher proportion of equity (and a lower proportion of debt) than Tesco. How does this capital structure decision affect our assessment of the relative riskiness of these two companies?

Management Applications

MA2-44. Understanding the Company Operating Cycle and Management Strategy

LO1, 4

Consider the operating cycle as depicted in Exhibit 2.4 to answer the following questions.

- Why might a company want to reduce its cash conversion cycle? (*Hint:* Consider the financial statement implications of reducing the cash conversion cycle.)
- How might a company reduce its cash conversion cycle?
- Examine and discuss the potential impacts on *customers* and *suppliers* of taking the actions identified in part b.

MA2-45. Ethics and Governance: Understanding Revenue Recognition and Expense Recording

LO2

Revenue should be recognized when it is earned and expense when incurred. Given some lack of specificity in these terms, companies have some latitude when applying GAAP to determine the timing and amount of revenues and expenses. A few companies use this latitude to manage reported earnings. Some have argued that it is not necessarily bad for companies to manage earnings in that, by doing so, management (1) can better provide investors and creditors with reported earnings that are closer to "core" earnings (i.e., management purges earnings of components deemed irrelevant or distracting so that share prices better reflect company performance) and (2) can present the company in the best light, which benefits both shareholders and employees—a Machiavellian argument that "the end justifies the means."

- Is it good that GAAP is written as broadly as it is? Explain. What are the pros and cons of defining accounting terms more strictly?
- Assess (both pro and con) the Machiavellian argument above that defends managing earnings.

Ongoing Project

(This ongoing project began in Module 1 and continues through most of the book; even if previous segments were not completed, the requirements are still applicable to any business analysis.) The goal of this module's project is to perform vertical analysis of the balance sheet and income statement, assess cash flows, and determine market capitalization.

1. *Balance Sheet Analysis.* Prepare a common-size balance sheet. To facilitate this, obtain the balance sheet in spreadsheet form from the SEC website at the “Interactive Data” link on the search results page. Look for major differences over time. Some questions to consider:
 - What are the company’s largest assets? Largest liabilities?
 - What proportion of total assets is financed by owners? (Hint: Compare with total equity.)
 - What proportion of total assets is financed by nonowners?
2. *Income Statement Analysis.* Prepare a common size income statement. Express each item on the income statement as a percent of total sales or revenue. Do this for all years on the income statement. Look for major differences over time and between the companies. Do any patterns emerge? Some questions to consider:
 - What are the major expenses?
 - Are there any unusual or discontinued items? Are they large in magnitude?
 - Was the company more or less profitable when compared with the prior year?
3. *Statement of Cash Flows Analysis.* Determine the size and direction (cash source or use) of cash flows from operations, investing, and financing. One goal is to understand the company’s pattern of cash flows and to form an opinion about the general strength of its cash flows. Some questions to consider:
 - What were the cash flows from operations? Were they positive?
 - Were operating cash flows smaller or larger than net income?
 - Did the company generate or use cash from investing activities?
 - Did the company generate or use cash from financing activities?
4. *Market Capitalization.* Determine the market capitalization at the most recent year-end. Determine the number of shares outstanding from the balance sheet. Recall that shares outstanding is total shares issued less any treasury shares. Obtain the year-end stock price from an investment website such as Seeking Alpha or Yahoo Finance. Compare market cap with the book value (total equity) of the company.

Solutions to Review Problems

Review 2-1—Solution (\$ millions)

MICROSOFT CORPORATION Balance Sheet June 30, 2015			
Cash and short-term investments.....	\$ 96,526	Accounts payable	\$ 6,591
Accounts receivable.....	17,908	Accrued expenses	5,096
Inventories	2,902	Other current liabilities	38,171
Other current assets	7,376	Long-term liabilities.....	46,282
Property, plant, and equipment, net	14,731	Common stock and paid-in capital....	68,465
Other long-term assets.....	36,780	Retained earnings.....	9,096
Total assets.....	<u><u>\$176,223</u></u>	Other stockholders' equity.....	2,522
		Total liabilities and equity.....	<u><u>\$176,223</u></u>

Review 2-2—Solution (\$ millions)

MICROSOFT CORPORATION Income Statement For Year Ended June 30, 2015	
Total revenue	\$93,580
Cost of goods sold	33,038
Gross profit	60,542
Operating expenses	32,370
Operating income	28,172
Other expenses	9,665
Income before income tax	18,507
Income tax expense	6,314
Net income	<u><u>\$12,193</u></u>

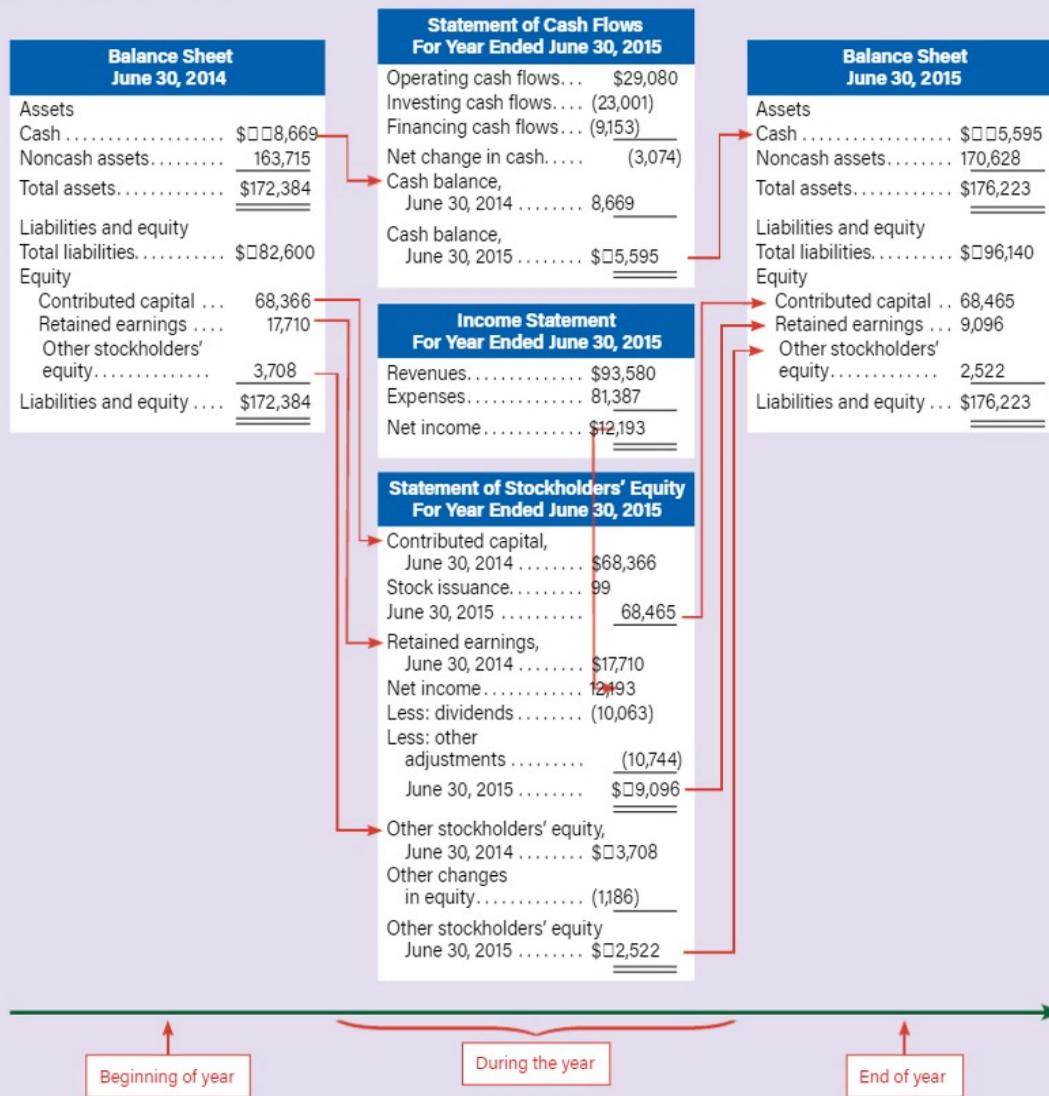
Review 2-3—Solution (\$ millions)

MICROSOFT CORPORATION Statement of Stockholders' Equity For Year Ended June 31, 2015				
	Common Stock and Paid-in Capital	Retained Earnings	Accumulated Other Comprehensive Income	Total Equity
Beginning balance	\$68,366	\$17,710	\$3,708	\$89,784
Stock issuance, net	99			99
Net income		12,193		12,193
Dividends		(10,063)		(10,063)
Other		(10,744)	(1,186)	(11,930)
Ending balance	<u><u>\$68,465</u></u>	<u><u>\$29,096</u></u>	<u><u>\$2,522</u></u>	<u><u>\$80,083</u></u>

Review 2-4—Solution (\$ millions)

MICROSOFT CORPORATION Statement of Cash Flows For Year Ended June 30, 2015	
Cash flows from operating activities	\$29,080
Cash flows used for investing activities	(23,001)
Cash flows used for financing activities	(9,153)
Net change in cash	(3,074)
Cash balance, beginning of year	8,669
Cash balance, end of year	<u><u>\$5,595</u></u>

Review 2-5—Solution



Review 2-6—Solution

1. The 10-K was filed on July 31, 2015, and the company's fiscal year end was June 30, 2015. The SEC filing is a month after year end because the auditors took a month to complete the audit.
2. The company's CEO is Satya Nadella, and the CFO is Amy E. Hood.
3. As of June 30, 2015, Microsoft employed approximately 118,000 people on a full-time basis, roughly 60,000 in the United States and 58,000 internationally.
4. The MD&A reports the following.
 - Xbox console volumes grew to over 12 million, and Xbox Live users increased 22%.
 - Bing exceeded 20% U.S. market share as the company focused its advertising business on search.
 - Microsoft completed 16 acquisitions, including Mojang Synergies, the Swedish video game developer of the Minecraft gaming franchise.
5. The company is audited by Deloitte and Touch out of the Seattle office.

