

CHAPTER SIX

6

ANALYZING OPERATING ACTIVITIES

A LOOK BACK

The previous three chapters analyzed the accounting numbers describing financing and investing activities. We focused on their evaluation and interpretation. We also analyzed these activities for future operations.

A LOOK AT THIS CHAPTER

This chapter extends our analysis to operating activities. We analyze accrual measures of both revenues and expenses in determining net income. Understanding recognition methods for both revenues and expenses is emphasized. We also interpret the income statement and its components for financial analysis.

A LOOK AHEAD

Chapter 7 extends our analysis to cash measures of operating and other business activities. We analyze the cash flow statement for interpreting these activities. We show how both accrual and cash measures of business activities enhance our analysis of financial statements.

ANALYSIS OBJECTIVES

- Explain the concepts of income measurement and their implications for analysis of operating activities.
- Describe and analyze the impact of nonrecurring items, including extraordinary items, discontinued segments, accounting changes, write-offs, and restructuring charges.
- Analyze revenue and expense recognition and its risks for financial statement analysis.
- Analyze deferred charges, including expenditures for research, development, and exploration.
- Explain supplementary employee benefits and analyze the disclosures for employee stock options (ESOs).
- Describe and interpret interest costs and the accounting for income taxes.
- Analyze and interpret earnings per share data (Appendix 6A).
- Discuss economics of employee stock options (Appendix 6B).

Spin City of Earnings

NEW YORK—"When do exceptional charges become so routine that they're not exceptional anymore? If the company is Eastman Kodak, apparently never. Kodak has taken one-time restructuring charges every year for the past 12, wiping out virtually half of its \$11.4 billion operating earnings since 1992" (*BusinessWeek* 2004).

Of course, companies have routinely taken restructuring charges. But nervous investors fear that huge multiyear write-offs increasingly distort earnings—so much so, that some question whether the meaning of earnings numbers and their value as a measure of performance is getting trampled.

There are two issues inherent in restructuring charges. First, is the timing. Restructuring charges represent asset write-offs and the accruals of future liabilities such as severance payments. Because both are estimates, an overly conservative company can

front-load such charges. This burdens the current income statement and benefits future income statements. This practice is referred to as a "big bath." Second is the question of interpretation—should such charges be treated as normal operating expenses or as transitory charges? Kodak prefers the latter. "Kodak pegged

**. . . write-offs
increasingly
distort earnings . . .**

operating earnings at \$2.25 to \$2.55 a share before charges. That puts its price-earnings ratio at 13, cheap compared with the 18 average for the Standard & Poor's 500 stock index. But take out up to \$400 million for restructuring, and Kodak's per-share earnings nosedive to 80 cents to \$1.30, while its p-e soars as high as 38."

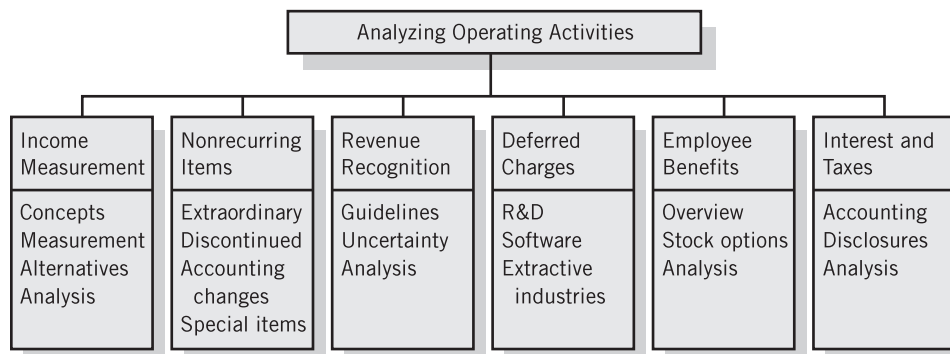
Companies are burying all sorts of normal operating expenses in these charges. "Kodak may try to spirit the changes away in presentations, but investors should be leery. The restructuring charges aren't simply for selling old equipment and factories at a loss. Hard cash will be flying out the door—up to \$200 million a year—to pay severance and other real costs."

"Should recurring restructuring charges be segregated in the income statement and eliminated from pro forma operating earnings in press releases?" Many companies appear to think so. "Somebody woke up to the fact that if you take something as a restructuring charge, investors will forgive you immediately," says Robert S. Miller, the nonexecutive chairman hired to clean up Waste Management. "We've almost lost the notion of what are earnings and what are one-time charges."

PREVIEW OF CHAPTER 6

Income is the net of revenues and gains *less* expenses and losses. Income is one measure of operating activities and it is determined using the accrual basis of accounting. The income statement reports net income for a period of time along with the income components: revenues, expenses, gains, and losses. We analyze income and its components to assess company performance and risk exposures, and to predict the amounts, timing, and uncertainty of future cash flows. While "bottom line" net income frames our analysis, income components provide the crucial pieces of a mosaic revealing the economic portrait of a company's operating activities. This chapter describes the analysis and interpretation of income components. We consider current reporting requirements and their implications for analysis of income components. We describe how we might usefully apply analytical adjustments to income components and related disclosures to enhance the analysis. We direct special attention to revenue recognition and the recording

of major expenses and costs. The content and organization of this chapter are as follows:



..... INCOME MEASUREMENT

Income Concepts—A Recap

Income summarizes the financial effects of a business's operating activities. The main purpose of the income statement is to explain how income is determined, with its important components reported as separate line items. In Chapter 2 we introduced both economic and accounting concepts of income and distinguished them from cash flows. In this section, we recap the salient points from the discussion in Chapter 2. However, it is recommended that readers browse the section in Chapter 2 before proceeding with the rest of the discussion on income measurement.

To recap, there are two alternative concepts of income: economic income and permanent income. **Economic income** measures the net change in shareholder's wealth during a period and is typically equal to a period's cash flows plus change in present value of expected future cash flows. **Permanent income** is an estimate of the stable average income that a business is expected to earn over its lifetime, given the current state of its business. Permanent income (also called sustainable income or recurring income) is conceptually similar to *sustainable earning power*, and its determination is a major quest in analysis. While economic income measures *change* in shareholder value, permanent income is *proportional* to value.

Accounting (reported) income is based on accrual accounting and is determined by recognizing revenues and matching costs to the recognized revenues. Accounting income purports to measure neither economic income nor permanent income. In addition, accounting income has measurement error, arising because of accounting distortions introduced by arbitrary rules, earnings management, and estimation error. Because of these reasons, accounting income can be visualized as comprising of three components: (1) a **permanent or recurring component**, where each dollar is equal to $1/r$ dollars of company value (r is cost of capital); (2) a **transitory component**, where each dollar is merely equal to one dollar of company value; and (3) a **value irrelevant component**, which is irrelevant for valuation.

A major quest in analysis is identifying the permanent or recurring component of reported income. Standard setters are aware of the need to separate recurring and nonrecurring components of income. Accordingly, the line items on the income statement are arranged in a manner that allows an analyst to identify nonrecurring components. As a first step toward determining permanent income, analysts determine **core income**,

which is the current period's reported income after removing all nonrecurring (or value irrelevant components).

Accounting is gradually, but inexorably, adopting a model of *fair value accounting*. Under fair value accounting, reported income is conceptually similar to economic income and will include large, nonrecurring components in the form of unrealized gains/losses arising because of changes in assets' and liabilities' fair values. The importance of analyzing income and isolating its permanent component will be an even more important task as fair value accounting becomes more pervasive.

Measuring Accounting Income

Revenues (and gains) and expenses (and losses) are the two major components of accounting income. This section discusses these two components. Exhibit 6.1 shows a typical income statement with major line items along with some alternative income measures.

Revenues and Gains

Revenues are earned inflows or prospective earned inflows of cash that arise from a company's ongoing business activities. These include cash inflows such as cash sales, and

Income Statement

Exhibit 6.1

AMBER CORP. AND SUBSIDIARIES			
Consolidated Income Statement (\$ millions)			
	2006	2005	2004
Revenues	\$14,314	\$12,716	\$13,033
Cost of goods sold.....	(8,270)	(7,454)	(7,943)
Gross profit	6,044	5,262	5,090
Expenses			
Selling and administrative	(2,964)	(2,478)	(2,396)
Research and development	(1,234)	(899)	(855)
Restructuring charge.....	—	(1,016)	—
Interest expense	(725)	(715)	(654)
Income before taxes	1,121	154	1,185
Income taxes	(336)	(351)	(355)
Income from continuing operations.....	785	(197)	830
Gain from extinguishment of debt.....	38	—	—
Loss from operating discontinued segment	—	0	(23)
Gain from sale of discontinued segment.....	—	—	66
Net income.....	<u>\$ 823</u>	<u>\$ (197)</u>	<u>\$ 873</u>
Foreign currency translation adjustments.....	82	(54)	(31)
Unrealized holding gain on available-for-sale securities	24	22	6
Post retirement benefits adjustment.....	0	(4)	—
Comprehensive income	<u>\$ 929</u>	<u>\$ (233)</u>	<u>\$ 848</u>

prospective cash inflows such as credit sales. **Gains** are earned inflows or prospective earned inflows of cash arising from transactions and events unrelated to a company's ongoing business activities. Exhibit 6.1 provides an example of a gain—specifically, a gain on sale of a discontinued segment. The distinction between revenues and gains is based on the ongoing business activities that produce revenues. Revenues are expected to persist indefinitely for a going concern. In contrast, gains are nonrecurring. This distinction is important for analysis, especially when determining sustainable income.

Revenue recognition methods can significantly affect reported income. Revenue recognition is becoming more complex, as it is increasingly linked with e-commerce activity. It is also an area with minimal guidance from accounting standards. This permits opportunities for earnings management. Accordingly, analyzing revenue recognition practices is crucial in financial statement analysis. For this reason we devote a section to revenue recognition later in the chapter.

Expenses and Losses

Expenses are incurred outflows, prospective outflows, or allocations of past outflows of cash that arise from a company's ongoing business operations. **Losses** are decreases in a company's net assets arising from peripheral or incidental operations of a company. Accounting for expenses and losses often involves assessing the amount and timing of their allocation to reporting periods. Timing is a matter of when they are incurred, often based on matching them with revenues generated.

Another important issue is that of cost *deferral* (or multiperiod allocation). Accountants capitalize costs whose benefits are realized over many periods. These costs are systematically allocated to future periods. In contrast, many costs are incurred in the same period in which they are recognized. (It is not necessary that cash outflows for expenses and losses occur at the same time they are recognized.)

Alternative Income Classifications and Measures

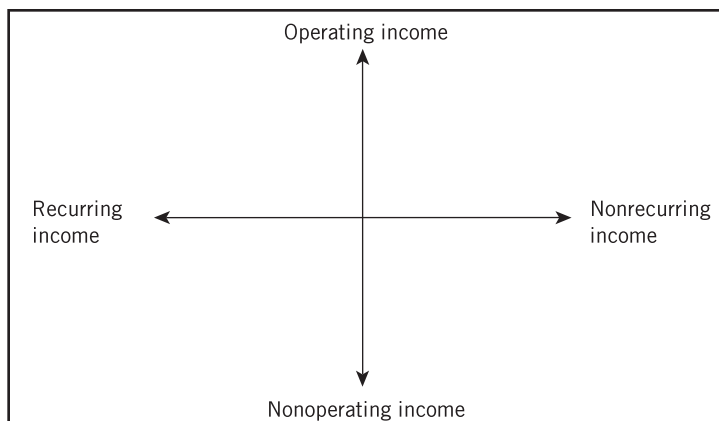
Proper income classification is important in analysis. Income can be classified along two major dimensions: (1) operating versus nonoperating and (2) recurring versus nonrecurring. Many times, these two dimensions of classification are used synonymously. For example, certain analysts (and even certain companies) refer to an income measure that excludes all nonrecurring items as operating income. While it may be true that a majority of operating income components tend to be recurring, it must be understood that these two classifications are distinct, both in nature and purpose. For example, a nonrecurring item such as loss of inventory from fire is an operating loss. Similarly, a nonoperating item such as interest income may be recurring in nature. The operating versus nonoperating classification depends primarily on the source of the revenue or expense—namely, whether it arises from the ongoing operations of the company or from its securities transactions or financing activities. The recurring versus nonrecurring classification depends primarily on the behavior of the revenue or expense—namely, whether it is expected to persist or it is a one-time event. It is important for an analyst to appreciate the differences between these alternative classifications. Exhibit 6.2 stresses the distinction in these dimensions of classifying income.

Recurring and Nonrecurring Income

The importance of classifying income components as recurring or nonrecurring arises from the need to determine the permanent and transitory components of income. In

Operating vs. Nonoperating and Recurring vs. Nonrecurring Dimensions for Classifying Income

Exhibit 6.2



this section, we discuss alternative income measures reported in financial statements and their implications for analysis.

Alternative Measures of Accounting Income. Income statements typically report three alternative income measures: (1) net income, (2) comprehensive income, and (3) continuing income. **Net income** is regarded as the bottom line measure of income. In reality, it is not. GAAP allows a number of direct adjustments to equity, called *dirty surplus* items, that bypass the income statement. *SEAS 130* attempts to remedy this problem with an alternative measure of income called *comprehensive income*. **Comprehensive income** reflects nearly all changes to equity, other than those from owner activities (such as dividends and share issuances). This implies that comprehensive income is the bottom-line measure of income, and is the accountant's proxy for economic income. Unfortunately, companies are allowed to report comprehensive income in the statement of changes in equity instead of the income statement. The income statement in Exhibit 6.1, however, does include both measures of income. Comprehensive income differs from net income in that it reflects certain unrealized holding gains and losses foreign currency translation adjustments, and minimum pension liability adjustments (not reported are derivative gains and losses which also affect comprehensive income).

Accountants also report an intermediate measure of income called *continuing income*. **Continuing income** is a measure that excludes extraordinary items, cumulative effects of accounting changes, and the effects of discontinued operations. For this reason, continuing income is often called *income before extraordinary items*, *income before discontinued operations*, or *income before cumulative effect of accounting change*, or any combination as appropriate. Companies without these components need not report continuing income. Exhibit 6.1 includes income from continuing operations as a separate line item.

Many analysts compute another measure of income that we refer to as *core income*. (This is because core income, which excludes all nonrecurring and unusual items, can better reflect the results of current operations. However, as we noted earlier, the distinction between operating and nonoperating income is separate from the sustainability of income components.) **Core income** is a measure that excludes all nonrecurring items that are reported as separate line items on the income statement. In Exhibit 6.1, core income equals the continuing income reported in 2006 and 2004. Yet in 2005, core

income is different—it excludes the after-tax effect of the restructuring charge of \$1,016 million. In this case, core income equals continuing income *plus* the restructuring charge that is multiplied by one minus the 35% marginal tax rate, or \$463 [computed as \$(197) plus the quantity $\$1,016 \times 0.65$].

Analysis Implications. Accounting standards require alternative income measures so users can identify sustainable and nonsustainable income components. Many analysts prefer an income measure that corresponds to one of the reported measures or some variation that excludes (or includes) certain line items. Debates rage over what constitutes the “correct” measure of income. We caution against such debates for two reasons.

First, a correct measure of income is not possible without specifying analysis objectives. As already noted, income serves two important but different roles: to measure the net change in equity and to provide an estimate of sustainable earning power. It is impossible for a single income measure to satisfy both objectives at the same time.

Second, the alternative accounting income measures result from merely including, or excluding, certain line items. This means they are still *accounting measures* of income and are subject to accounting distortions. At best, these alternative accounting income measures are starting points for more detailed accounting analysis necessary to estimate sustainable income. For example, comprehensive income is a natural starting point to determine economic income.

Operating and Nonoperating Income

Operating income is a measure of company income from ongoing operating activities. There are three important aspects of operating income. First, operating income pertains only to income generated from operating activities. Therefore, any revenues (and expenses) not related to business operations are not part of operating income. Second, and related to the first, operating income focuses on income for the company as a whole rather than for debt and equity holders. This means that financing revenues and expenses (mainly interest expense) are excluded when measuring operating income. Third, operating income pertains only to ongoing business activities. This means any income or loss pertaining to discontinued operations is excluded from operating income.

Nonoperating income includes all components of income not included in operating income. It is sometimes useful when analyzing nonoperating income to separate components pertaining to financing activities from those pertaining to discontinued operations.

Analysis Implications. The usefulness of operating income arises from an important goal in corporate finance. That is, the desire to separate investing (and operating) decisions such as capital budgeting, from those of financing decisions such as dividend policy. Because of this goal, it is necessary to determine a comprehensive measure of company income that is independent of a company’s financing and securities investment decisions. Operating income is one such measure. Note that operating income before taxes is similar to earnings before interest and taxes (EBIT), while operating income after taxes is similar to net operating profit after taxes (NOPAT).

In most cases, operating income can be determined by rearranging the income statement and making proper adjustments for taxes. Still, it is sometimes necessary to draw on more detailed adjustments using information in notes. For example, when a company has operating leases, the entire lease rental is included as an operating expense even though the lease payment includes an interest component. In this case, operating income is understated unless the analyst estimates the interest component and makes the necessary adjustments using note information. It is beyond the scope of this chapter to show how to compute operating income. We return to this topic in the financial analysis part of the book.

Comprehensive Income

GAAP has long espoused the comprehensive, or all-inclusive, concept of income, where the bottom-line income number articulates with equity in successive balance sheets—that is, the bottom-line income reflects all changes in shareholders' equity arising from other than owner transactions. This articulation is called *clean surplus*. Nevertheless, standard setters have over time allowed certain components of comprehensive income to bypass the income statement as direct adjustments to equity. These adjustments, called *dirty surplus*, have increased in importance and magnitude in recent years. The motivation for these dirty surplus items comes from concerns about excessive income volatility if all changes to equity flow through the income statement. Still, many users are concerned that allowing changes to equity to bypass the income statement will reduce the reliability of accounting income. To address these concerns, companies are required to report a measure of comprehensive income in addition to net income.

Measuring Comprehensive Income. As defined by *SEAS 130*, comprehensive income is computed by adjusting net income for dirty surplus items, collectively called *other comprehensive income*. We show the determination of comprehensive income from a typical company:

Net income		\$1,205
Other comprehensive income		
+/- Unrealized holding gain (loss) on marketable securities.....	\$305	
+/- Foreign currency translation adjustment	(12)	
+/- Postretirement benefits adjustment.....	(17)	
+/- Unrealized holding gain or loss on derivative instruments.....	945	<u>1,221</u>
Comprehensive income.....		<u>\$2,426</u>

The other comprehensive income for this company consists of four components: (1) unrealized holding gains or losses that result from changes in the fair (market) value of available-for-sale investment securities, (2) foreign currency translation gains and losses, (3) changes in the funded status of postretirement benefits not included in net income, and (4) unrealized holding gains or losses arising from the effective portion of cash flow hedges (derivatives). These amounts are expressed on an after-tax basis. All four components are in the nature of unrealized (holding) gains or losses. The components arise from changes in the value of assets and liabilities that do not originate from arm's-length transactions. A few analysts maintain that the transaction basis of net income is an important distinction between net income and comprehensive income. We show that this distinction is neither important nor necessarily true.

Analysis Implications. The importance of comprehensive income for financial statement analysis arises because it is the accountant's proxy for economic income. Comprehensive income is preferred to net income, where the latter measure purports to estimate neither economic nor sustainable income.

A few analysts argue the importance of net income vis-à-vis comprehensive income relates to the notion that net income is transaction-based while comprehensive income is not. However, this argument is not entirely correct. Namely, net income has many components in the nature of unrealized gains or losses that are not transaction based. For example, net income includes holding gains or losses from trading securities, from fair value hedges, and from the ineffective portion of cash flow hedges. Moreover, the fact that some income components arise through arm's-length transactions is a

distinction that is irrelevant from an economic point of view since unrealized gains or losses are a legitimate part of economic income.

It is important to recognize that comprehensive income must be adjusted in determining economic income. We confine discussion in this section to evaluating the appropriateness of the four usual items included in other comprehensive income. In particular, unrealized gains and losses arising from investment and/or derivative securities are a legitimate part of economic income. However, note that unrealized holding gains on investment securities reported as part of other comprehensive income excludes holding gains on held-to-maturity securities. Similarly, foreign currency translation adjustments and postretirement benefits adjustments must be included when determining economic income.

Some analysts argue that all components of other comprehensive income are irrelevant because they do not persist. Research shows the only component of other comprehensive income that is relevant for equity valuation is the unrealized holding gain or loss on marketable securities, and even that applies only to financial institutions (Dhaliwal, Subramanyam, and Trezevant, 2000). Research also suggests that while the funded status of postretirement benefit plans is useful for valuation, unrealized gains and losses arising from changes in funded status are value irrelevant as a component of income (Hann, Heflin, and Subramanyam, 2007). This implies certain components of comprehensive income are irrelevant for determining permanent income, which is probably a more important measure for equity valuation than is economic income. Still, as we already pointed out, economic income is an important measure that has a role distinct from permanent income. The components of other comprehensive income are important in determining economic income.

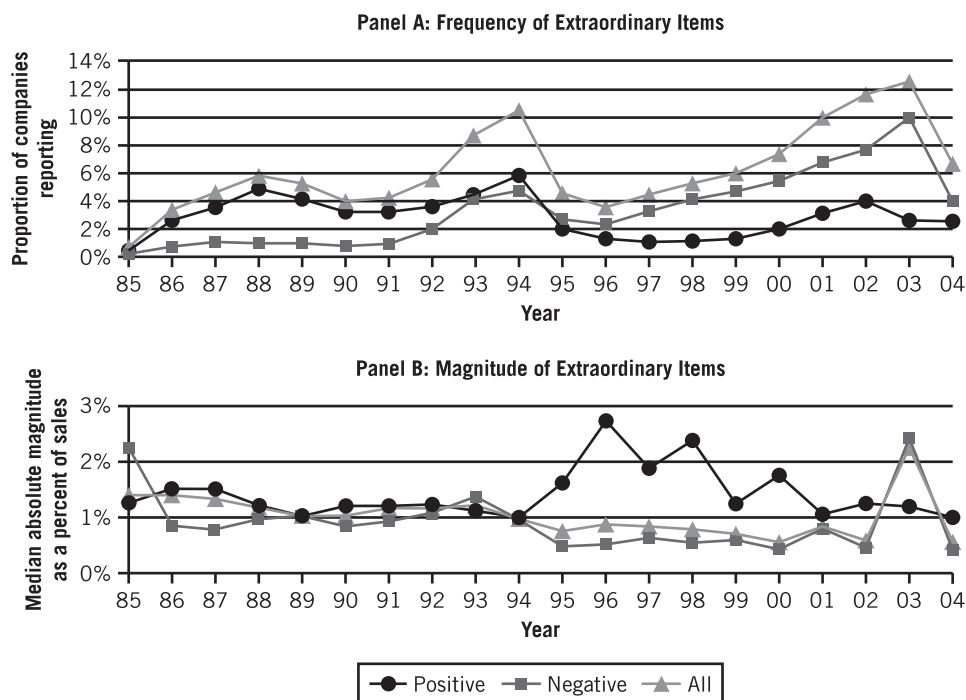
.....NONRECURRING ITEMS

This section describes several nonrecurring items—including extraordinary items, discontinued segments, accounting changes, restructuring charges, and special items—along with their analysis and interpretation.

Extraordinary Items

Extraordinary items are distinguished by their unusual nature and by the infrequency of their occurrence. Prior to the passage of *SEAS 145* (effective for fiscal years beginning after May 2002), the vast majority of extraordinary items were gains and losses from early retirement of debt. Others included losses from natural disasters and expropriation of assets. However, the proportion of companies reporting extraordinary items has declined markedly. This is because under current accounting standards, gains and losses relating to the extinguishment of debt must be both unusual and infrequent (see our discussion of criteria later) to be classified as an extraordinary item, and debt refinancing does not typically meet these criteria.

Extraordinary items are classified separately in the income statement. Because of the stringent criteria for classification, extraordinary items are uncommon. Exhibit 6.3 reports the frequency and magnitude of extraordinary items. The proportion of companies reporting extraordinary items is typically less than 6%, but has increased to as much as 12.4% of reporting companies. Extraordinary items, when they occur, usually constitute less than 3% of sales. The proportion of negative and positive extraordinary items is about the same.

Magnitude and Frequency of Extraordinary Items**Exhibit 6.3**

Source: Compiled from Compustat data.

Accounting for Extraordinary Items

To qualify as extraordinary, an item must be *both* unusual in nature and infrequent in occurrence. These terms are defined as follows:

- **Unusual nature.** An event or transaction that has a high degree of abnormality and is unrelated to, or only incidentally related to, the ordinary and typical activities of the company.
- **Infrequent occurrence.** An event or transaction that is not reasonably expected to recur in the foreseeable future.

Extraordinary items are reported, net of tax, as separate line items in the income statement after continuing income. When a company reports extraordinary items, continuing income is called *income before extraordinary items*. Any item that is either unusual or infrequent (not both) cannot be classified as an extraordinary item.

Practice also requires companies to *not* report certain gains and losses as extraordinary items because they are not unusual in nature and are expected to recur as a consequence of customary and continuing business activity. Examples include:

- Write-down or write-off of receivables, inventories, equipment leased to others, deferred R&D costs, or other intangible assets.
- Gains or losses on disposal of a business segment.
- Gains or losses from sale or abandonment of property, plant, or equipment.
- Effects of a strike, including those against competitors and major suppliers.
- Adjustment of accruals on long-term contracts.

Analyzing Extraordinary Items

Extraordinary items are nonrecurring in nature. An analyst, therefore, excludes extraordinary items when computing permanent income. Extraordinary items also are excluded from income when making comparisons over time or across companies. Yet, while extraordinary items are transitory, they yield a cost (or benefit) on the company, dollar for dollar. An analyst must therefore include the entire amount of the extraordinary item when computing economic income.

Extraordinary items are often operating in nature. However, they differ from normal operating revenues or expenses because they are nonrecurring. For example, a loss of inventory from fire arises as a part of the company's operations (and reveals the nature of operating risks inherent in the company's business), but it is not expected to occur on a regular basis. Thus, extraordinary items that arise from a company's business operations are included when computing operating income but excluded when determining permanent income. Extraordinary items also reveal risk exposures of a company. While these risks may be remote, their occurrence suggests the possibility of recurrence at some future date. The large magnitude of most extraordinary losses also encourages analysis even when their occurrence is infrequent. In some cases, extraordinary items may recur, although infrequently. For example, a warehouse by the beach in an area susceptible to hurricanes may incur flood damage every few years. An analyst must consider this when evaluating sustainable earning power.

ANALYSIS VIEWPOINT

... YOU ARE THE SUPPLIER

Your company supplies raw materials to Chicago Construction Corp. Your job is to annually assess customers for credit terms and policies. Chicago Construction's net income for this year is down by 12%. Your analysis of its financial statements shows this decrease is due to an extraordinary loss attributed to a construction site fire. Absent this extraordinary loss, income is up by 23%. What is your credit assessment of Chicago Construction?

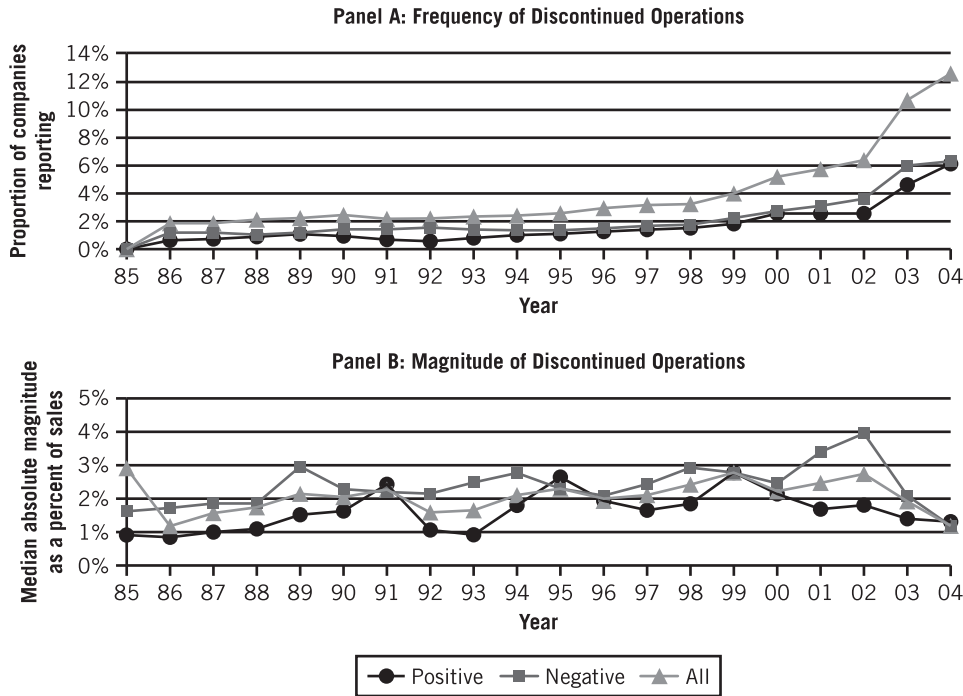
Discontinued Operations

Companies sometimes dispose of entire divisions or product lines. When these dispositions pertain to separately identifiable business segments, they are accorded special accounting treatment in the income statement. A recent standard (*SEAS 144*) has broadened such treatment to include any component of an entity (rather than a segment of a business). A component of an entity comprises operations (and cash flows) that can be clearly distinguished, operationally and for purposes of financial reporting, from the rest of the business.

Exhibit 6.4 shows the magnitude and frequency of discontinued operations over the past two decades. Through the mid-1990s, approximately 2% of publicly traded companies reported discontinued operations in their income statements. Since that time, the frequency of these items has increased markedly to about 12% in 2004. The magnitude of discontinued operations as a percentage of sales, however, has remained fairly constant at about 2% of sales, although decreases in income tend to be larger than the effect of discontinued operations, resulting in net increases. Discontinued operations, when they occur, can be a substantial component of net income.

Magnitude and Frequency of Discontinued Operations

Exhibit 6.4



Source: Compiled from Compustat data.

Accounting for Discontinued Operations

To qualify as discontinued operations, the assets and business activities of the divested segment must be clearly distinguishable (both physically and operationally) from the assets and business activities of the remaining entity. For example, discontinuance of an entire line of products will usually qualify as a discontinued operation, but not the discontinuance of a particular brand. Judgment is involved in deciding what constitutes a discontinued operation since it depends on the nature and scale of a company’s business—what constitutes a discontinued operation for one company may not for another. Companies also record gains or losses from discontinued operations when they sell their stake (either fully or partially) in a consolidated subsidiary.

Accounting and reporting for discontinued operations is twofold. First, the income statements for the current and prior two years are restated after excluding the effects of the discontinued operations from the line items that determine continuing income. Second, gains or losses pertaining to the discontinued operations are reported separately, net of their related tax effects, and are excluded from continuing income. Continuing income is called *income before discontinued operations* when discontinued operations are reported.

A company reports gains or losses from discontinued operations (for the current and two prior years) in two categories: (1) operating income or loss from discontinued operations until the management commits to the disposal and (2) gains and losses on disposal, including operating income or loss during the phase-out period. We provide an example of the reporting for discontinued operations in Illustration 6.1.

ILLUSTRATION 6.1

Kmart agreed to sell a majority stake in its consolidated subsidiary, Builders Square. Accordingly, Kmart recorded an after-tax loss on disposal of discontinued operations of \$385 million in Year 6 and restated its prior two years' income statements to reflect this discontinuance. This restatement resulted in a loss of \$260 million in the prior year, which was the operating loss of Builders Square for that year. The left-side of the excerpt below shows the lower part of Kmart's income statements (from its Year 6 annual report). The right side shows the original and restated income statements for Year 5 and an explanation of the \$260 million loss on discontinued operations. Note that the loss on disposal of discontinued operations includes \$61 million (\$446 million less \$385 million) in Year 6 and \$30 million in Year 5 related to discontinuances *other than* Builders Square.

LOWER PORTION OF INCOME STATEMENT

	Year 6	Year 5
Net income (loss) from continuing operations before extraordinary item	\$231	\$(230)
Loss from discontinued operations, net of taxes.....	(5)	(260)
Loss on disposal of discontinued operations, net of taxes	(446)	(30)
Extraordinary item.....	—	(51)
Net income (loss)	<u>\$(220)</u>	<u>\$(571)</u>

ORIGINAL AND RESTATED INCOME STATEMENT FOR YEAR 5

	Original	Restated (Builders)	Difference
Net income (loss) from continuing operations before extraordinary item	\$(490)	\$(230)	\$(260)
Loss from discontinued operations, net of taxes		(260)	← ↑
Loss on disposal of discontinued operations, net of taxes	(30)	(30)	
Extraordinary item	(51)	(51)	
Net income (loss)	<u>\$(571)</u>	<u>\$(571)</u>	

Analyzing Discontinued Operations

Analysis is futuristic and decision oriented. Therefore, for purposes of analysis, all effects of discontinued operations must be removed from current and past income. This rule applies regardless of whether the objective is determining economic or permanent income or in determining operating or nonoperating income. The adjustment is straightforward for the current and past two years because companies are required to restate their income statements and report the income or loss on discontinued operations separately. Such ready information does not exist for prior years. Some companies restate summary financial information, including income, for the past 10 years, which we can then use. Also, some companies report several prior years' information about discontinued operations separately. Yet, in most cases this information is unavailable. In such situations, an analyst must be careful when conducting intertemporal analysis, such as evaluating income patterns over time.

With regard to a company's financial condition, an analyst must remove the assets and liabilities of the discontinued operations from the balance sheet (if they are not already removed). Amounts for assets and liabilities are typically provided in footnote disclosures. The cumulative gains or losses from discontinued operations should not, however, be removed from equity.

Accounting Changes

Companies can change accounting methods and assumptions underlying financial statements for certain reasons. Sometimes, accounting methods are changed because of a new accounting standard. Other times, accounting methods and/or assumptions are

changed to better reflect changing business activities or conditions. Also, managers sometimes change accounting methods and/or assumptions to window-dress financial statements, particularly for managing earnings. To discourage managers from unjustified switching from one accounting method to another, accounting standards require that “in the preparation of financial statements there is a presumption that an accounting principle once adopted should not be changed in accounting for events and transactions of a similar type . . . the presumption that an entity should not change an accounting principle may be overcome only if the enterprise justifies the use of an alternative acceptable accounting principle on the basis that it is preferable.”

Accounting standards distinguish among four types of accounting changes: (1) a change in accounting principle, (2) a change in accounting estimate, (3) a change in reporting entity, and (4) correction of an error. We discuss reporting requirements pertaining to each type and examine analysis implications.

Reporting of Accounting Changes

Change in Accounting Principle. A change in accounting principle occurs when a company switches from one generally accepted accounting principle to another generally accepted accounting principle. The phrase *accounting principle* refers to both the accounting standards and practices used and the methods of applying them. An example of a change in accounting principle is a change in depreciation method from straight line to accelerated.

Under current accounting standards, when a change occurs, current period income is computed using the new principle. The cumulative effect of this change in principle (net of tax) on retained earnings as of the beginning of the period when the change occurs is computed. This cumulative effect is reported in the income statement after extraordinary items, but before net income. This computation is a “catch-up” adjustment, because previously published financial statements are not revised.

The FASB has recently issued a standard (*SEAS 154*) that replaces the cumulative effect treatment, described in the prior paragraph, with retrospective application. That is, the proposed statement will require restatement of prior period statements following the newly adopted accounting principle together with prospective application of that principle. If restatement is impracticable, companies will apply the accounting principle prospectively from the earliest feasible date.

We provide an example of an accounting principle change in Illustration 6.2 per the earlier standard. It is too early to provide an example of a retrospective application under *SEAS 154*.

Change in Accounting Estimate. Accrual accounting requires estimates of items such as useful lives of assets, warranty costs, inventory obsolescence, pension assumptions, and uncollectible receivables. These are known as *accounting estimates*. Accounting estimates are approximations based on unknown future conditions. As such, accounting estimates can change. There exist certain accounting and disclosure requirements when changes occur in accounting estimates. These are:

- **Prospective application**—a change is accounted for in the period of change and, if applicable, future periods as and when any effects occur (there is no retroactive restatement).
- **Note disclosure**—disclose the effects of the change on both net income and income before extraordinary items (including earnings per share) for the current period only, even when a change affects future periods.

ILLUSTRATION 6.2

The following excerpt is an example of the reporting for a change in accounting principle:

SEABOARD CORPORATION—CONSOLIDATED STATEMENT OF EARNINGS

(\$ thousands)	Year 6	Year 5	Year 4
Earnings before cumulative effect of a change in accounting principle.....	\$2,840	\$20,202	\$35,201
Cumulative effect of changing accounting for inventory (net of \$1,922 tax).....	3,006	—	—
Net earnings.....	\$5,846	\$20,202	\$35,201

Note: Inventories

During the fourth quarter of Year 6, the company changed its method of accounting for spare parts and supplies used in poultry and pork processing operations retroactively effective January 1, Year 6. Previously these spare parts and supplies were expensed when purchased. Under the new method such purchases will be recorded as inventory and charged to operations when used. The company believes this method is preferable as it provides a better matching of revenues and expenses. The cumulative effect of this accounting change at January 1, Year 6, was to increase net income by \$3,006 thousand or \$2.02 per common share. The effect of this accounting change was to increase income before cumulative effect of change in accounting principle by \$788,000 or \$0.53 per common share for the year ended December 31, Year 6. The pro forma effect of retroactive application of this new method of accounting would not materially affect the results of operations for years ended December 31, Year 5 and Year 4.

Illustration 6.3 identifies one example of a change in accounting estimate.

ILLUSTRATION 6.3

Delta Airlines previously depreciated its flight equipment over 15 years using a salvage value of 10%. In the fourth quarter of a recent year, Delta changed its depreciation policy to one that assumes a life of 20 years with a salvage value of 5%. This change decreased Delta's depreciation expense by \$36 million in that fourth quarter and, consequently, increased its fiscal year net income by \$22 million.

Under the newly proposed standard, in addition to estimates of useful lives and salvage values, changes in depreciation policies (such as from straight line to declining balance) will also be treated as a change in estimate and applied prospectively.

Analyzing Accounting Changes

There are several points an analyst must consider when analyzing accounting changes. First, accounting changes are “cosmetic” and yield no cash flow consequences—either present or future. This means the financial condition of a company is not affected by a change in accounting.

Second, while an accounting change is cosmetic, it can sometimes better *reflect* economic reality. For example, a company's decision to extend the depreciable lives of its machinery might be an attempt to better match costs with actual usage patterns. In principle, a necessary condition for a change in accounting methods is that the change better reflect the underlying economics.

Third, an analyst must be alert to earnings management. Earnings management is less of an issue in the adoption of new standards—although, managers may time its adoption for a period when its effect is most favorable (or least detrimental). However, in the case of voluntary accounting changes, earnings management is a likely motivation. While managers sometimes manage earnings through changes in accounting principles, the more popular and shrewd method of earnings management is by changing accounting estimates. Unlike a change in accounting principle, where the cumulative effect is highlighted in the income statement, information about changes in estimates often are buried in the notes. To illustrate, the motive for Delta Airlines' change in depreciation policy, described in Illustration 6.3, is apparent when we examine its pattern in operating losses around that time: Year 2—\$(675) million; Year 3—\$(575) million; Year 4—\$(447) million. This pattern depicts a marked improvement over time—a compounded decrease in losses of 13% per annum. However, when we restate reported numbers as per the original depreciation methods, we see the following pattern in operating losses: Year 2—\$(675) million; Year 3—\$(609) million; Year 4—\$(583) million. This shows the accounting change increases income by \$34 million in Year 3 and by \$136 million in Year 4. The decline in operating losses using the original data is, thus, a mere 5% per annum.

Another concern with accounting changes is earnings manipulation. Unlike earnings management, which is window dressing within the confines of GAAP, earnings manipulation arises when companies stray beyond acceptable practices. When the SEC staff spots such accounting practices, the company is asked to restate its financial statements. Such restatements, reported in *Accounting Enforcement Releases* (or *AERs*), suggest that a company is adopting excessively aggressive accounting practices. While honest errors do arise, an analyst should be concerned when a company is forced by the SEC to restate its financial statements. At a minimum, this reflects poor earnings quality, and an analyst must take extra care when analyzing financial statements of such companies.

Fourth, an analyst must assess the impact of accounting changes on comparisons across time. It is important for an analyst to compare “apples with apples.” This means making sure any comparisons (especially across time) are made with a consistent set of accounting rules. If the company reports the effects of accounting changes for prior years' data in its notes, the income history can be adjusted. If no such information is reported, an analyst must be aware of the potential limitations for any comparisons across time. This is important because companies sometimes change accounting estimates to window-dress earnings' history.

Finally, an analyst would want to evaluate the effect of an accounting change on both economic income and permanent income. For estimating permanent income, the analyst can use the reported numbers under the new method and ignore the cumulative effect. For estimating economic income of the current period, both the current and cumulative effect are included. More generally, an analyst must evaluate the ability of the change to better reflect economic reality. If the change is arbitrary or seems to impair the ability of the numbers to reflect economic reality, then we can undo the effects of the change using note information.

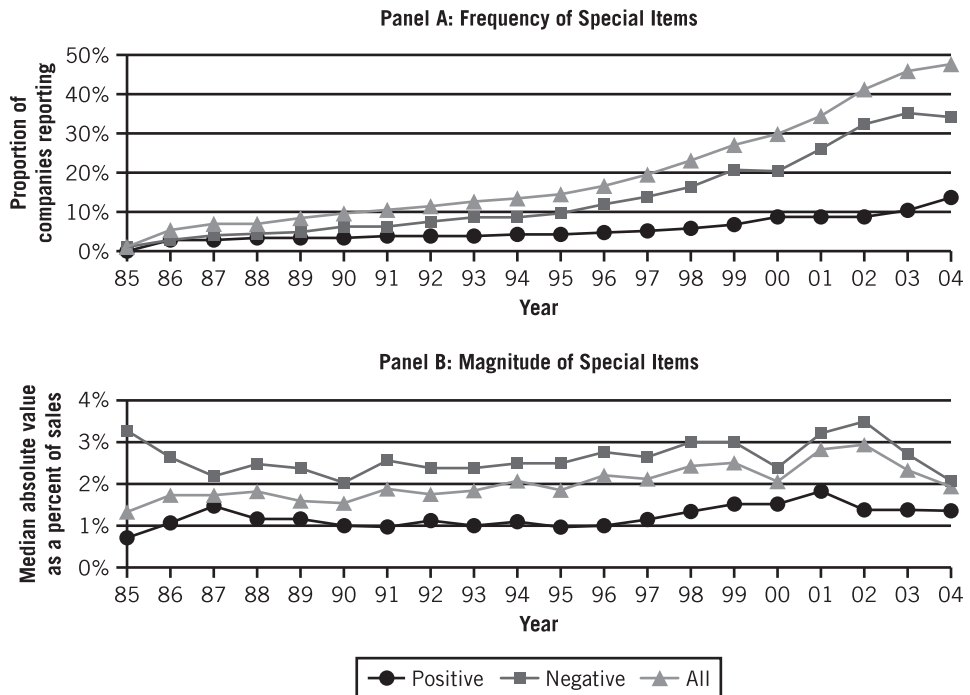
Special Items

Special items refer to transactions and events that are unusual or infrequent, but not both. These items are typically reported as separate line items on the income statement *before* continuing income. Often, special items are nonroutine items that do not meet the criteria for classification as extraordinary.



PRICEY D&O

Providers of directors and officers (D&O) liability coverage are demanding full disclosure from clients. The alternative is vastly higher premiums or no coverage at all. Companies are being rejected for dubious revenue-recognition practices, poor internal controls, and financial restatements. Last year a company might have paid a few hundred thousand dollars per year for D&O coverage that now costs more than \$1 million.

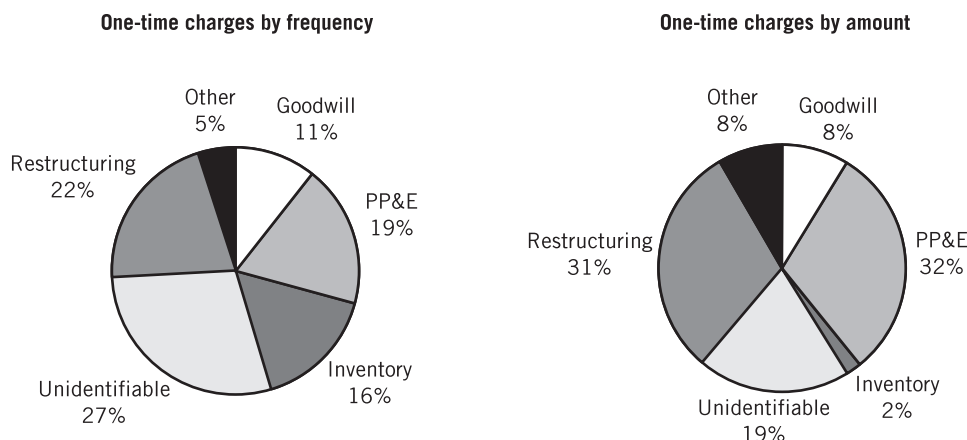
Exhibit 6.5**Frequency and Magnitude of Special Items**

Source: Compiled from Compustat data.

Special items constitute the most common and important class of nonrecurring items. As reported in Exhibit 6.5, their frequency is increasing. The frequency of special items has increased dramatically, from 1% of reporting companies through the 1980s to nearly 48% of reporting companies. Most of this increase has been concentrated in special items that reduce income, primarily restructuring expenses. The magnitude of special items has remained fairly constant at about 2% of sales, with negative effects consistently higher in absolute value than positive effects. These items, when they occur, can have a significant impact on reported profits, often turning a profitable year into a loss. They are generally the most transitory item in income from continuing operations.

Exhibit 6.6 shows the makeup of one-time special charges both by frequency and by dollar value. Restructuring charges and asset write-offs of goodwill, inventory, and property, plant, and equipment (PP&E) form the bulk of such charges. Of these, impairment of long-lived assets and restructuring charges constitute the two major categories of special items. There are two differences between them. First, restructuring charges are associated with major reorganizations of a company as a whole or within a division. Restructuring often involves a change in business strategy, financing, or physical reorganization of the business. On the other hand, asset impairments are narrower in scope, involving the write-down or write-off of a class of assets. A second major difference is that asset impairments are mainly accrual accounting adjustments, while restructuring charges often involve substantial cash flow commitments either contemporaneously or in the future.

Special items pose challenges for analysis. First, the economic implications of special items, such as restructuring charges, are complex. Second, many special items are

Makeup of One-Time Charges (Special Items)**Exhibit 6.6**

Source: Francis, Hanna and Vincent, *Journal of Accounting Research* (1996).

discretionary and, hence, serve earnings management aims. The remainder of this section focuses on the two major types of special items: asset impairments and restructuring charges. We describe the accounting and reporting for these items, and discuss the analysis implications.

Asset Impairments

Impairment of Long-Lived Assets. A long-lived asset is said to be impaired when its fair value (market value or value from use within the company) is below its carrying value (book value in the balance sheet). Asset impairments occur for many reasons, these include a decline in the asset market value, a decline in market demand for the output from the asset, technological obsolescence, and changes in the company's business strategy. Asset impairments are a byproduct of conservatism—report at the lower of cost or market. GAAP does not permit writing up asset values.

Asset impairments must be distinguished from both restructurings and disposals of segments. We have already discussed differences between a restructuring and an asset impairment. An asset impairment is also different from a disposal of a business segment, both in its accounting treatment and in its economic implications. In a disposal, a company sells one or more assets, or a business segment, and ceases to operate the disposed assets. In contrast, an impaired asset, while it can be sold or disposed of in any manner, is often retained in the company and operated at a reduced level, made idle, or abandoned. From an accounting point of view, disposal of a business segment is treated as discontinued operations that we discussed earlier, while asset impairments are recorded as special items.

SEAS 121 prescribes a two-step procedure for determining the amount of impairment¹. First, an asset impairment is recognized when the carrying value of the asset is below the *undiscounted* value of future expected cash flows from the asset. Second, once this condition is satisfied, the amount of loss is measured as the difference between the

¹ *SFAS 121* has now been superseded by *SFAS 144*. However, *SFAS 144* has not altered provisions relating to impairments in a material manner.

asset carrying value and its fair value, which equals the *discounted* value of future expected cash flows from the asset if its fair value cannot be determined from the market.

This standard does not require disclosure about the determination of the impairment amount, nor does it require disclosure about probable asset impairments. The standard also allows flexibility in determining when and how much of an asset's value to write off and does not require a plan for disposal of the asset. Illustration 6.4 gives a typical disclosure of asset impairment.

ILLUSTRATION 6.4



Chiron Corp. reported an impairment loss of \$31.3 million in its income statement pertaining to its manufacturing facility in Puerto Rico. The company discloses the following information in its notes: "The cumulative impact on the company's manufacturing needs of recent product developments prompted management to conclude that Chiron currently has excess manufacturing capacity relative to its projected needs. Specifically, management concluded that the company's need for its idle pharmaceutical fill and finishing facility in Puerto Rico (the "Puerto Rico facility"), originally outfitted as a second manufacturing site of Betaseron, was eliminated due to manufacturing process improvements and cumulative impact of the introduction of a competing product . . . [later] management determined that it could not find a suitable use for the Puerto Rico facility consistent with its previous expectations for the facility's use as a contract manufacturing plant. As a result, the company reviewed the carrying amount of the Puerto Rico facility and related machinery and equipment assets for impairment in accordance with *SEAS 121*. Consequently, . . . the Company recorded a \$31.3 million impairment loss to record the Puerto Rico facility and related machinery and equipment at their individual estimated fair market values determined on the basis of independent appraisals."

Impairment of Other Assets. In addition to impairment of long-lived assets, companies sometimes write off other types of assets such as receivables, inventories, and goodwill. While the values of inventory and receivables are determinable with reasonable accuracy, the write-off of goodwill is the result of a valuation process and is, therefore, somewhat subjective (see Chapter 5).

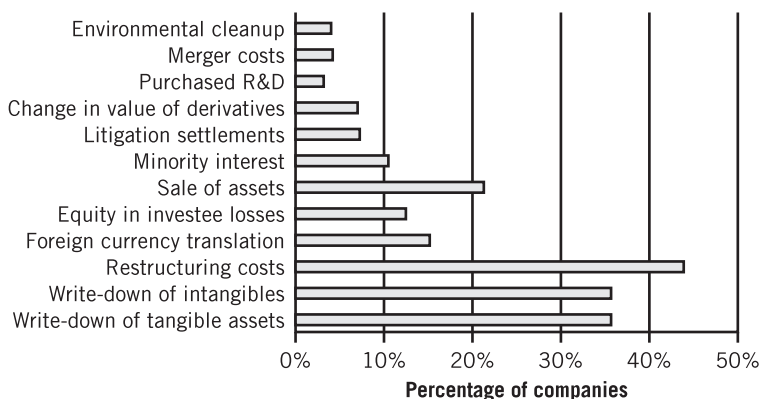
Restructuring Charges

Unlike asset impairments, restructuring charges are usually associated with major changes in a company's business and strategy. Restructuring usually entails extensive reorganization including divestment of business units, termination of contractual agreements, discontinuation of product lines, worker retrenchment, change in management, and writing off of assets often combined with new investments in plant, technology, and manpower. Restructuring comes at a cost. Divested business units often are sold at a loss, laid-off employees demand compensation, written-off fixed assets and inventory yield losses, lease buy-outs are costly, and new investments and improvements must be paid for. Companies usually make a provision for the cost of the restructuring program, including severance accruals and accruals for asset write-downs, among others. This provision is created through a restructuring charge, which is entirely charged to the current income statement as a special item. When the restructuring program is implemented, sometimes over many years, actual costs are charged against the provision as and when incurred. The remaining balance in the provision is shown as a restructuring reserve. Any remaining balance in the reserve at the completion of the program is reversed by recording it back to income.

To illustrate, Kodak extensively restructured its operations in 2003 and 2004, taking cumulative charges in excess of \$1.1 billion. These charges reduced income from continuing operations by over 60% in 2003 and changed its 2004 profit into a loss.

As mentioned in its MD&A, Kodak’s main motivation for its restructuring program is cost reduction. Kodak discusses its restructuring activities in its 2004 annual report: “Currently, the Company is being adversely impacted by the progressing digital substitution. As the Company continues to adjust its operating model in light of changing business conditions, it is probable that ongoing cost reduction activities will be required from time to time.”

Types of Special Losses Reported by Companies



Analyzing Special Items

Analyzing special items is a challenging and important task in accounting analysis. The use of estimates creates opportunities for managing earnings. Also challenging is understanding the underlying economics of special items, especially restructuring charges. The importance of special items arises because of their frequency and impact on net income of past, present, and future periods. In this section, we explain why special items are a popular tool for earnings management. We then describe the implications of special charges and the adjustments necessary for financial statements.

Earnings Management and Special Charges. Exhibit 6.5 showed that a large proportion of special items, both in frequency and in magnitude, is income-decreasing. Further, the proportion of companies reporting income-decreasing items is increasing over time. This increase in special charges is troubling and has gained the attention of the SEC. The SEC warns that earnings management techniques such as the use of “big-bath restructuring charges” are eroding confidence in financial reporting.

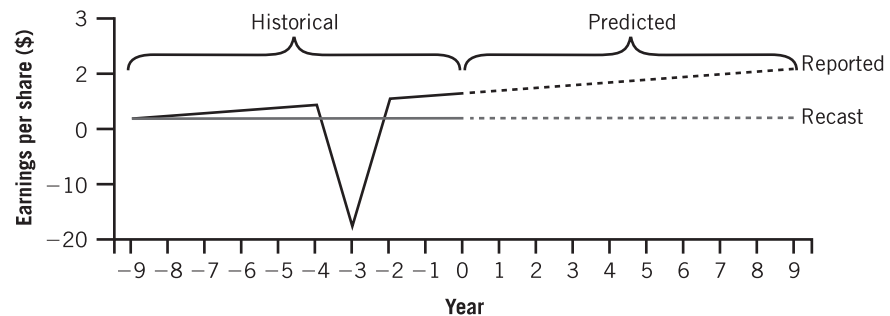
What is the motivation for reporting special charges? The answer is that one-time charges are of less concern to investors under the assumption they are nonrecurring and, therefore, do not persist into the future. If classified as transitory (nonrecurring) items by analysts, their impact on stock price is considerably lessened.

To illustrate, consider a company earning \$2 per share in perpetuity. Given a cost of capital of 10%, the value of this company is \$20 ($\$2/0.10$). Now, alternatively, assume this company overstates earnings by \$1 per share for four consecutive periods and then reverses them with a single charge in the final year as follows:

(\$ per share)	Year 1	Year 2	Year 3	Year 4
Recurring earnings	\$3	\$3	\$3	\$3
Special charge	<u>0</u>	<u>0</u>	<u>0</u>	<u>(4)</u>
Net income	<u>\$3</u>	<u>\$3</u>	<u>\$3</u>	<u>\$(1)</u>

This pattern of net income suggests a permanent component of \$3 per share and a transitory component of a negative \$4 per share in Year 4. (Recall the impact of a dollar of permanent earnings to company value is equal to that dollar divided by its cost of capital, whereas the impact of a dollar of transitory earnings to company value is a dollar.) Accordingly, many analysts would naively value this company's stock at \$26 $[(\$3/0.10) - \$4]$. Further, if the analyst entirely ignores this one-time charge (as some analysts suggest), then this company's stock is valued at \$30 $(\$3/0.10)$. These amounts are substantially different than the correct value of \$20.

Exhibit 6.7 graphically illustrates this point. The recast line reflects a constant "true" earnings of \$2 per share from Year -9 to Year 0. The reported line shows reported earnings that are progressively managed upward, with a massive charge taken in Year -3. At the end of Year 0, both cumulative reported and cumulative "true" earnings are, in reality, equal because all earnings management has been reversed. The dotted lines indicate forecasts of both "true" earnings and reported earnings trends beyond Year 0 based on past earnings' time series. It can be seen that an illusion of higher permanent earnings and earnings growth can be created by regularly managing earnings upward (for example, by delaying the write-down of impaired assets or other accruals) and reversing the accruals with special one-time charges.

Exhibit 6.7**Managing Earnings Level and Growth Perceptions with a One-Time Charge**

This graphical illustration shows that when analysts focus on only recurring components of earnings and ignore nonrecurring charges, managers are motivated to manage earnings in this manner. The illustration also shows we should be wary of special charges. It is important to investigate companies that repeatedly take one-time charges to determine if these charges are the result of an earnings management strategy.

Income Statement Adjustments. As Exhibit 6.7 reveals, one-time charges can seriously distort earnings patterns and trends. It is important for an analyst to make adjustments for determining the effect of special charges, especially on permanent income. This section discusses adjustments to determine a company's permanent income and then discusses adjustments to determine economic income. Permanent income should reflect the profitability of a company under normal circumstances. Most special charges constitute operating expenses that need to be reflected in permanent income. At a basic level, special charges reflect either understatements of past expenses or "investments" for improved future profitability.

To illustrate, consider a company that invests \$40 million in machinery to manufacture a drug. The company expects the drug to be sold over the remaining life of its patent, which is eight years. Accordingly, the company depreciates the machinery (on a straight-line basis with no salvage value) over an eight-year period—depreciation expense is \$5 million per year. At the end of the fourth year, however, a competing, revolutionary product eliminates the market for this company's drug. Consequently, the company stops producing the drug at the end of the fourth year. Also, the machinery is scrapped and the company recognizes an asset impairment charge of \$20 million (which is the machine's carrying value at the end of the fourth year). The company reports the impairment as a one-time charge that is not expected to occur again. Do we concur with this company's assessment? Well, let's begin by looking at the cause of the asset impairment. Basically, the impairment arose because the company overestimated the economic life of the drug and, hence, the machine. This led to undercharging depreciation expense over the four-year period when the machine was used. The proper analysis for this case would be to adjust depreciation expense assuming a four-year life and restate past (and current) earnings. Specifically, we would decrease current period earnings (along with each of the prior three years' earnings if we are analyzing earnings trend) by \$5 million.

An actual example of such a scenario is the \$31.3 million write-down of the Puerto Rico manufacturing facility by Chiron (see Illustration 6.4). This facility is idled because of process improvements and the introduction of a competing product, which led to recognizing an impairment loss. It is important to note that the costs of the Puerto Rico facility are normal operating expenses and that these costs must be allocated to the entire period during which the facility has been operational—this period often can be determined by examining past financial reports. If it cannot be determined, these costs can be distributed over an arbitrary prior period of, say, five years.

Sometimes special charges are “investments” for improving future profitability. To illustrate, consider a company that streamlines its procurement procedures. This streamlining results in reducing the workforce in the procurement department by 20%, which is expected to save the company \$1.3 million per year in the future. The laid-off workers are paid \$4.2 million as severance compensation. The company decides to expense this entire amount as a one-time charge. On the surface, this accounting treatment seems reasonable. However, note the worker severance is expected to reduce future expenses by \$1.3 million per year. Consequently, the \$4.2 million severance compensation is similar to an investment in a long-term asset that is expected to generate net revenues (or reduced costs) of \$1.3 million per year in the future. This means the proper accounting is to allocate the \$4.2 million over current and future periods when the benefits are expected to be realized. If this period cannot be determined, then we can use an estimate—say, a period of five years.

Most restructuring charges are, at least in part, in the form of an investment. One objective of restructuring programs is streamlining a company's operations so as to improve future profitability. A restructuring program that consists of cash outflows such as severance compensation and accrual adjustments such as asset write-offs is a type of investment for improving future profitability. Accordingly, our analysis should allocate that portion of the restructuring charge over future periods expected to reap the benefits from the restructuring program.

One caveat: because restructuring charges usually impact several different years, an analyst often needs to examine prior years' reports so as to estimate the impact of allocating past restructuring charges in determining permanent income. Also, unlike

permanent income, where an analyst must determine normal profitability for a company, the determination of economic income involves measuring the effects on equity of all events that occur in the period. This means the entire amount of any special charges is included when determining economic income. Restructuring charges often include a provision for the estimated future cost of the restructuring program. This entire charge is taken in the year the program is initiated, although the actual costs are incurred over several later periods. In this situation, an alternative approach in determining economic income is to only adjust for amounts actually incurred for each year, rather than the entire charge. For example, while AT&T took a \$923 million restructuring charge in 2004, only \$550 million related to 2004. The remaining \$373 million will be charged to future years. When such a method is adopted, it is important to remember to also include actual costs related to past restructuring programs.

Adjustments to Balance Sheet. A major focus of the asset impairment standard is the balance sheet. Consequently, unlike income that is distorted by one-time charges, these charges (especially inventory and long-term asset write-downs) improve the ability of the balance sheet to reflect business reality by reporting assets closer to net realizable values.

Still, two points demand attention. First, as already noted, a portion of most restructuring charges is often in the form of a provision. This means the effects on assets and liabilities are reflected gradually over time when the actual costs are incurred. A question that arises is should the balance sheet include the entire provision or should the remaining balance in the restructuring reserve (reflecting costs yet incurred) be netted against equity? The answer depends on the analysis objectives. If the analysis is considering a going-concern scenario, it is better to keep the provision in the balance sheet because it reflects a more realistic picture of the long-term assets and liabilities. However, if the analysis objective is to determine the liquidating value of a company, it is better to offset the restructuring provision against equity. Care must be taken to ensure that determination of economic income is consistent with the balance sheet treatment. The second main point is that asset write-offs introduce a conservative bias in the reporting of assets and liabilities. Because asset write-ups are not permitted in the United States, (they are, e.g., allowed in the United Kingdom), the balance sheet is conservatively distorted from asset impairments.

.....REVENUE RECOGNITION

Revenues are defined in practice as “inflows or other enhancements of assets of an entity or settlements of its liabilities” resulting from a company’s “ongoing major or central operations.” **Gains**, on the other hand, are increases in net assets (equity) resulting from “peripheral or incidental transactions” of a company. Distinguishing between revenues and gains depends on the usual business activities of a company. Because our analysis treats these items differently (i.e., revenues are expected to persist, while gains are not), their distinction is important. It is also important to understand when a company recognizes revenues and gains. Our analytical adjustments sometimes modify income numbers using revenue recognition information. An important question is when, or at what point, in the sequence of revenue-earning activities in which a company is engaged, is it proper to recognize revenues and gains as earned? This section addresses this question.

Guidelines for Revenue Recognition

From our analysis perspective, inappropriate accrual recognition of revenues (and gains) can have one of two undesirable consequences:

1. If a company records revenue prematurely or belatedly, then revenue is assigned to the wrong period.
2. If a company records revenue prior to reasonable certainty of realization, then revenue might be recorded in one period and later canceled or reversed in another—this overstates income in the first period and understates it in the latter period.

These two effects adversely affect income measurement. To counter this, accounting applies strict and conservative rules regarding revenue recognition. Generally, revenue is recognized when it is both realized (or realizable) and earned. Exhibit 6.8 lists criteria that must be satisfied for revenue recognition. While these criteria are seemingly straightforward, they are subject to certain exceptions and have, in practice, been interpreted in different ways. To understand these variations for analysis purposes, the next section considers the application of these criteria under special circumstances.

Revenue Recognition Criteria

Exhibit 6.8



- Earning activities creating revenue are substantially complete, and no significant effort is necessary to complete the transaction.
- Risk of ownership in sales is effectively passed to the buyer.
- Revenue and the associated expense are measured or estimated with reasonable accuracy.
- Revenue recognized normally yields an increase in cash, receivables, or securities. Under certain conditions it yields an increase in inventories or other assets, or a decrease in liabilities.
- Revenue transaction is at arm's length with an independent party(ies) (not with controlled parties).
- Revenue transaction is not subject to revocation (such as a right of return).

Uncertainty in Revenue Collection

Companies use a provision for doubtful (uncollectible) accounts to reflect uncertainty in the collectibility of receivables from credit sales. A company makes a judgment, based on the circumstances, when it can no longer reasonably assure the collectibility of receivables. This judgment can be conservative or it might use liberal or optimistic assumptions. When collectibility is no longer reasonably assured, practice follows a general procedure to defer recognition of revenue until cash is collected.

Revenue When Right of Return Exists

When the buyer has a right of return, revenue is recognized at the time of sale *only* if the following conditions are met:

- Price is substantially fixed or determinable at the sale date.
- Buyer pays the seller or is obligated to pay the seller (not contingent on resale).
- Buyer's obligation to seller is unchanged in event of theft or damage to product.
- Buyer has economic substance apart from the seller.

- Seller has no significant obligations for future performance related to the sale.
- Returns are reasonably estimated.

If these conditions are met, sales revenue and cost of sales are recorded but reduced to reflect estimated returns and related expenses; if not met, revenue recognition is postponed.

Franchise Revenues

Accounting standards for franchisors require that franchise fee revenue from franchise sales be recognized only when all material services or conditions relating to the sale are substantially performed or satisfied by the franchisor. This also applies to continuing franchise fees, continuing product sales, agency sales, repossessed franchises, franchising costs, commingled revenue, and relationships between a franchisor and a franchisee. A typical franchise fee arrangement follows:

ANALYSIS EXCERPT

Application, License, and Royalty Fees. All fees from licensed operation are included in revenue as earned. Management accelerated the revenue recognition for application fees from the time the site was approved or construction began to the time cash is received. Management believes this method will more accurately relate the income recognition to performance of the related service. . . . License fees are earned when the related store opens. Unearned license fees which have been collected are included in current liabilities. Royalty fees are based on licensee revenues and are recognized in the period the related revenues are earned.

—Church's Chicken

Product Financing Arrangements

A *product financing arrangement* is an agreement involving the transfer or sponsored acquisition of inventory that (although it sometimes resembles a sale of inventory) is in substance a means of financing inventory. For example, if a company transfers (“sells”) inventory to another company and concurrently agrees to repurchase the inventory at a later date, this transaction is likely a product financing arrangement and not a sale and subsequent purchase of inventory. In essence, if a party bearing the risks and rewards of ownership transfers inventory to a purchaser and in a related transaction agrees to repurchase the product at a specified price over a specified time, or guarantees some specified resale price for sales of the product to outside parties, the arrangement is a product financing arrangement and is accounted for as such. In this case the inventory remains on the seller's statements and the seller recognizes no revenue.

Revenue under Contracts

Accounting for *long-term* construction contracts for items like buildings, aircraft, ships, or heavy machinery poses conceptual problems for the determination of revenue and profit. GAAP requires companies to use the **percentage-of-completion method** when reasonable estimates exist for both costs to complete a contract and progress toward completion of the contract. A common basis of profit estimation is to record part of the estimated total profit based on the ratio of costs incurred to date divided by expected total costs. Other acceptable methods of estimation are based on units completed, engineering estimates, or units delivered. Under this method, current or

anticipated losses are fully recognized in the period when they are initially identified. Johnson Controls describes its revenue recognition as follows:

ANALYSIS EXCERPT

Revenue Recognition. The Company recognizes revenue from long-term systems installation contracts of the Controls Group over the contractual period under the percentage-of-completion method of accounting (see “Long-Term Contracts”). In all other cases, the Company recognizes revenue at the time products are shipped and title passes to the customer or as services are performed.

Long-Term Contracts. Under the percentage-of-completion method of accounting used for long-term contracts, sales and gross profit are recognized as work is performed based on the relationship between actual costs incurred and total estimated costs at completion. Sales and gross profit are adjusted prospectively for revisions in estimated total contract costs and contract values. Estimated losses are recorded when identified. Claims against customers are recognized as revenue upon settlement. The amount of accounts receivable due after one year is not significant.

Unearned Revenue

Under long-term performance contracts—such as product warranty contracts and software maintenance contracts—revenues are often collected in advance. Under such circumstances, revenues are recognized proportionally over the entire period of the contract. The logic for such accounting is that although revenue in this case is *realizable*, it is not *earned* until the contract’s service period expires. The amount of revenues that are still unrecognized appear in the balance sheet as a liability called *unearned revenue*.

Analysis Implications of Revenue Recognition

The income statement is important to the analysis and valuation of a company. This statement is also important to management for these same reasons and others, including its role in accounting-based contractual agreements, management pressure to achieve income-based results, management compensation linked to income, and the value of stock options. Given management’s incentives, we rationally expect management to select and apply accounting principles that best meet their own interests but are still within acceptable accounting practice. The objectives of income reporting do not always align with management’s incentives in this area. Our analysis must be alert to management propensities in this area and the accounting discretion available.

ANALYSIS EXCERPT

Datapoint Corporation recorded a significant amount of sales that sales representatives booked by asking customers to order millions of dollars of computer equipment months in advance with payment to be made later. In many of these cases, Datapoint recorded sales when it had not even manufactured such equipment. It is reported that its sales representatives were under intense pressure to achieve unreasonable or unattainable goals. Datapoint subsequently reversed these sales and consented to an SEC order barring it from such future violations.

Recording of revenue is a critical event in income determination. Our analysis must take aim at the accounting methods to ascertain whether they properly reflect economic reality. For example, if a manufacturer records profits on sale to a dealer, our analysis must inquire about dealer inventories and market conditions—because real earnings activity consists of selling to the ultimate consumer.

Managers' propensities and incentives to manage revenue yield many pronouncements on the subject of revenue recognition by accounting regulatory agencies. In spite of these, our analysis must remain alert to accounting approaches skirting the spirit, if not the letter, of these pronouncements. The following excerpt provides an example:

ANALYSIS EXCERPT

Prime Motor Inns earns a major portion of its income, not from core operations, but rather from hotel sales, construction fees, and interest. In recording these nonrecurring revenues, Prime Motor Inns stretched recognition criteria by accepting notes and receivables of dubious value, and by guaranteeing to buyers of their hotels, and their bankers, certain levels of future income. While they recorded revenues, they did not record contingent liabilities associated with these revenues.

Aware of these revenue recognition problems, the SEC expressed its belief that significant uncertainties regarding a seller's ability to realize noncash proceeds received in transactions often arise when the purchaser is thinly capitalized, or highly leveraged, or when the purchaser's assets consist primarily of those purchased from the seller. These characteristics raise doubt as to whether revenue recognition is appropriate. Circumstances fueling questions about revenue recognition include:

- Lack of substantial equity capital in the purchasing entity other than that provided by the seller.
- Existence of contingent liabilities such as debt guarantees or agreements requiring the seller to infuse cash into the purchasing entity under certain conditions.
- Sale of assets or operations that have historically not produced operating cash flows sufficient to fund future debt service and dividend expectations.

Even when a company receives cash proceeds, any guarantees or other agreements requiring the company to infuse cash into the purchasing entity impacts the validity of revenue recognition. Revenue should not be recognized until (1) cash flows from operating activities are sufficient to fund debt service and dividend requirements (on an accrual basis), or (2) the company's investment in the purchasing entity is or can be readily converted to cash and the company has no further obligations under any debt guarantees or other agreements requiring it to make additional investments in the purchasing entity. Amounts of any deferred revenue, including deferral of interest or dividend revenue, are generally disclosed in a balance sheet as a deduction from the related asset account. Notes to the financial statements usually offer a description of such transactions including any commitments and contingencies, and the accounting methods applied.

Current practice generally does not allow for recognition of revenue in advance of sale. For example, it is not typical to recognize increases in the market value of property such as land, equipment, or buildings; the accretion of values in timber or natural resources; or increases in the value of inventories. Yet the timing of sales is an important

item that is partly within the discretion of management. This gives management certain latitude in revenue recognition as evidenced in the following:

ANALYSIS EXCERPT

Thousand Trails, a membership campground operator, recorded revenue from membership fees when a new member initially signed even though these fees were nearly 90% financed and many canceled within days of signing. When their revenue recognition practices became public, Thousand Trails' stock price sharply declined.

ANALYSIS VIEWPOINT

... YOU ARE THE BANKER

Playground Equipment Company calls on you for a long-term loan to expand operations. Although you are its banker, they are a recent client with new management. In reviewing financial statements as part of its application, you notice it recognizes revenue *during production*. The statements report: "revenue is recognized during production because production activity is the critical event in the company's earning process . . . and deferring revenue substantially impairs the usefulness of the financial statements." You ask a colleague for her opinion, and she feels its revenue recognition method is too liberal. She voices a preference for revenue recognition at point of sale or, possibly, when cash is received. Do you require Playground Equipment to restate its statements? What risks do you see in acting on this loan?

.....DEFERRED CHARGES

Deferred charges are costs incurred that are deferred because they are expected to benefit future periods. The increasing complexities of business activities are expanding the number and types of deferred charges. Examples are research and development costs and computer software expenditures. The distinction between deferred charges and intangible assets is often vague. In most cases, costs arising from operating activities are classified as deferred charges, while those arising from investing activities are classified as intangible assets.

The motivation for deferral of costs is to better match costs with expected benefits. This motivation underlies the capitalization of all long-term assets and was discussed in Chapter 4. If a cost incurred in the current period benefits a future period by either a contribution to revenues or reduction in costs, then a company defers this cost until the future period(s). For example, if a company incurs start-up costs in operating new, better, or more efficient facilities, it can defer these costs and match (amortize) them to expected future benefit periods.

Research and Development

Companies undertake research, exploration, and development activities for many reasons. Some of these activities are directed at maintaining existing products, while others aim at developing new products and processes. Research activities aim at discovery, and development activities are a translation of research. R&D activities exclude routine or periodic alterations in ongoing operations, market research, and testing activities.

Accounting for Research and Development

Accounting for R&D expenses is problematic. Reasons for difficulties in R&D accounting include:

- High uncertainty of ultimate benefits derived from R&D activities.
- An often significant lapse of time between initiation of R&D activities and determination of their success.
- Evaluation problems due to the intangible nature of most R&D activities.

These characteristics of R&D activities cause difficulties in accounting for them. Consequently, U.S. accounting requires companies to expense R&D costs when incurred. Only costs of materials, equipment, and facilities having *alternative future uses* (in R&D projects or otherwise) are capitalized as tangible assets.

Analysis Research



VALUING R&D EXPENDITURES

Are R&D expenditures assets? Do R&D expenditures benefit periods other than the period of the outlay? Analysis research implies R&D expenditures are valued much like other long-lived assets. For expenditures benefiting the current period only, the market immediately reduces the value of the company. Examples include rent, utilities, and taxes. If an expenditure benefits future periods, and those benefits exceed its costs, the market does not reduce the value of the company—in fact, the expenditure *increases*

company value. Research indicates the market assesses R&D expenditures in a manner similar to many long-lived assets like property, plant, and equipment. In several cases, the market is found to value R&D expenditures as possessing greater future value than many long-lived assets. This market assessment accorded R&D expenditures is inconsistent with the accounting treatment for them. R&D expenditures are generally expensed as incurred. Why the discrepancy? The accounting treatment is a convenient solu-

tion to a difficult valuation problem. More research is needed to precisely estimate the net benefits of R&D expenditures before capitalization of their costs is likely. More important, we need research on a measurement system to better assess the future benefits of *specific* R&D expenditures. R&D expenditures are not all equal, and advances in accounting for R&D depend on better techniques to recognize these differences and appropriately account for them.

Costs identified with R&D activities include:

- Materials, equipment, and facilities acquired or constructed for a *specific* R&D project, or purchased intangibles having *no* alternative future uses (in R&D projects or otherwise).
- Materials consumed in R&D activities; and depreciation of equipment or facilities, and amortization of intangible assets used in R&D activities having alternative future uses.
- Salaries and other related costs of personnel engaged in R&D activities.
- Services performed by others in connection with R&D activities.
- Allocation of indirect costs, excluding general and administrative costs not directly related to R&D activities.

Analyzing Research and Development

Analysis of R&D expenditures is challenging. They are often of sufficient magnitude to warrant scrutiny in an analysis of a company's current and future income. Accounting for R&D expenditures is a simple solution to a complex phenomenon. Future benefits are undoubtedly created by many R&D activities and, conceptually, these R&D

expenditures should not be expensed as incurred. It is the uncertainty of these benefits that limits R&D capitalization. Yet expensing R&D costs impairs the usefulness of income. For example, when a company incurs a major R&D outlay in a desire for future benefits, there is a decline in income at the same time the market often revalues upward the company's stock price. Our analysis recognizes that while current accounting virtually assures no overstatement in R&D assets, it is at the loss of reasonable measures of expenditures to match with revenues arising from R&D activities. Accounting ignores the productive experience of many ongoing R&D activities. It does, however, achieve a uniformity of accounting for R&D activities and avoids difficult judgments with a policy of capitalization and deferral. Nevertheless, current "nonaccounting" for R&D activities fails to effectively serve the needs and interests of users of financial statements.

In spite of accounting problems, it is reasonable to assume companies pursue R&D projects with expectations of positive returns. Companies often have specific return expectations, and their realization or nonrealization can be monitored and estimated as R&D projects progress. A policy of deferral of R&D costs affords managements and their independent auditors, who regularly work with uncertainties and estimates, an opportunity to convey useful information of R&D outlays. Currently, R&D outlays are treated as if they have no future benefits. Consequently, our analysis does not benefit from the insights of those in the best position to provide them.

To assess the quality and potential value of R&D outlays, our analysis needs to know more than the periodic R&D expense. We desire information on the types of research performed, the R&D outlays by category, technical feasibility, commercial viability, and the potential of projects periodically assessed and reevaluated. We also desire information on a company's success/failure experience with R&D activities to date. Current accounting does not provide us this basic information. Except in cases of voluntary disclosure, or an investor or lender with sufficient influence, we are unable to obtain this information.

What our analysis can safely assume is that expensing of R&D outlays yields more conservative balance sheets. There are likely fewer "bad" news surprises from R&D activities with this accounting treatment. Still, our analysis must realize that with a lack of information about potential benefits, we are also unaware of potential disasters befalling a company tempted or forced to spend added funds in R&D projects whose promise is great but whose failure is imminent.

ANALYSIS VIEWPOINT**... YOU ARE THE ANALYST**

The announcement of net income for California Technology Corporation shows an increase of 10%. Your analysis of its operating activities reveals the increase in income is due to a decrease in research and development expenditures. If R&D expenditures for California Technology equaled that for the previous year, income would be down by more than 15%. What is your assessment of the future profitability of California Technology Corporation based on its income announcement?

Computer Software Expenses

Development of computer software is a specialized activity that does not fit the usual expenditures of R&D activities. Development of software for marketing purposes is an ongoing activity leading directly to current or future revenues. At some point in the software's development cycle, its costs need to be deferred and matched against future revenues. Current practice in accounting for expenditures of computer software to

■ ■ ■ ■ ■ ■ ■ ■ ■ ■ HIDDEN-WARE

Microsoft takes the position that technological feasibility is reached only shortly before production and sale and, therefore, effectively expenses its development costs.

be sold, leased, or otherwise marketed identifies a point referred to as *technological feasibility* where these costs are capitalized and matched against future revenues. Until the establishment of the point of technological feasibility, all expenditures are expensed as incurred (similar to R&D). Expenditures incurred after technological feasibility, and until the product is ready for general release to customers, are capitalized as an intangible asset. Additional costs to produce software from the masters and package it for distribution are inventoried and charged against revenue as a cost of the product sold.

Exploration and Development Costs in Extractive Industries

The search for new deposits of natural resources is important to companies in extractive industries. These industries include oil, natural gas, metals, coal, and nonmetallic minerals. The importance of these industries and their special accounting problems deserve our separate attention. As with R&D activities, the search for and development of natural resources is characterized by high risk. Risk involves uncertainty; and for income determination, uncertainty yields measurement and recognition problems. For extractive industries, the problem is whether exploration and development costs that are reasonably expected to be recovered from sale of natural resources are expensed as incurred or capitalized and amortized over the expected future benefit period. While many companies expense exploration and development costs as incurred, some charge off a portion and capitalize the remainder. Few companies capitalize all exploration and development costs.

Accounting for Extractive Industries

Accounting regulators have made various attempts to curtail these divergent practices. The FASB prescribed *successful efforts accounting* for oil and gas producing companies. This directs that exploration costs, except costs of drilling exploratory wells, are capitalized when incurred. These costs are later expensed if the resource is unsuccessful *or* reclassified as an amortizable asset if proved oil or gas reserves are discovered. The SEC disagreed with this approach and instead favored *reserve recognition accounting* (a current value method). This led the FASB to reconsider and, in effect, permitted the same alternatives to continue. The SEC subsequently requested the FASB to develop supplementary disclosures, including value-based disclosures. The FASB responded with the following required supplementary *disclosures* for publicly traded oil and gas producers:

- Proved oil and gas reserve quantities.
- Capitalized costs related to oil and gas producing activities.
- Costs incurred in acquisition, exploration, and development activities.
- Results of operations for oil and gas producing activities.
- Measures of discounted future net cash flows for proved reserves.

Both publicly traded and other companies are required to disclose the method of accounting for costs incurred in oil and gas producing activities and the manner of disposing of related capitalized costs.

Disclosure is one thing and accounting measurement is another. The successful efforts accounting method has not received general support. Yet, in sanctioning use of full-cost accounting, the SEC provided that costs under this method are capitalized up to a ceiling. This ceiling is determined by the present value of company reserves. Capitalized costs exceeding this ceiling are expensed. When falling oil prices lower this ceiling, companies have and likely will continue to pressure the SEC to suspend or modify the rules.

Analysis Implications for Extractive Industries

The variety of acceptable methods of treating exploration and development costs in extractive industries hampers our comparison of results across companies. Accounting in this industry continues to exhibit diversity. The two methods in common use, and the variations on these methods, can yield significantly different results. Our analysis must be aware of this. Many analysts favor successful efforts accounting over full-cost accounting because it better matches costs with related revenues and is more consistent with current accounting practices. Successful efforts accounting requires a direct relation between costs incurred and specific reserves discovered before these exploration and development costs are capitalized. In contrast, full-cost accounting permits companies to label unsuccessful exploration and development activities as assets.

..... SUPPLEMENTARY EMPLOYEE BENEFITS

This section describes the accounting, analysis, and interpretation of supplementary employee benefits, with an emphasis on employee stock options.

Overview of Supplementary Employee Benefits

Societal pressures, competition, and scarcity of employee talent have led to a proliferation of employee benefits supplementary to salaries and wages. Some fringe benefits like vacation pay, bonuses, profit sharing, and paid health or life insurance are identifiable with the period when earned or granted. These identifiable expenses do not pose problems of accounting recognition and accrual. Other supplementary benefits, due to their tentative or contingent nature, are not accorded full or timely accounting recognition. Some of these benefits and the accounting for them are described here:

- **Deferred compensation contracts** are promises to pay employees in the future, some with contingencies. A company often grants them to key executives it wishes to retain or who desire deferring income to postretirement or lower tax years. These contracts often include noncompete clauses or specify an employee's availability for consulting services. Accounting generally requires that at least the present value of deferred compensation is accrued in a systematic and rational manner over the period of active employment starting when the contract is entered into.
- **Stock appreciation rights (SARs)** are stock rights granted to an employee on a specified number of shares. SAR awards are based on the increase in market value of the company's stock since date of grant and can be awarded in cash, stock, or a combination of both. Under these plans, a company records compensation expense at the end of each period. Expense is computed as the difference between the award market price of the shares and their grant date option price. Accounting provides a method for apportioning expense over the service period—changes in market price from period to period are reflected as adjustments to compensation expense.

Employee Stock Options

Employee stock options (ESOs), also referred to as *stock-based compensation*, are arguably the most popular form of incentive compensation. There are many reasons for this popularity. First, companies contend ESOs enhance performance by giving employees a stake in the business and thereby align employee and company incentives. Second, ESOs are viewed by employees as means to riches. Thousands of managers, scientists,

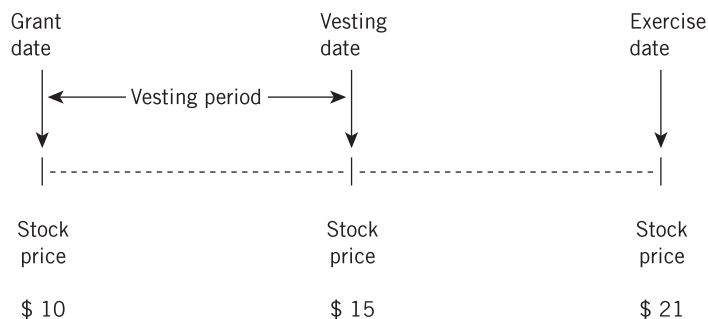
accountants, engineers, programmers, and secretaries have become millionaires with ESOs. Because of this, ESOs have emerged as a tool to attract talented and enterprising workers. Third, although ESOs are a form of employee compensation, they do not have direct cash flow effects. Fourth, under prior GAAP, ESOs provided employee benefits without requiring the recording of costs. The opposition of companies to the FASB's proposal in the mid-1990s to deduct the cost of ESOs from income is testimony to the importance of this factor. This section explains characteristics of ESOs and defines key terms. Our discussion includes the accounting and reporting for ESOs. We conclude with a discussion of analyzing ESOs.

Characteristics of Employee Stock Options

An employee stock option is a contractual opportunity granted by a company to an employee whereby the employee can purchase a fixed number of shares of the company at a specified price on or after a specified future date. Exhibit 6.9 illustrates an option granted to an employee. The *exercise price* is the price for which the employee has the right to purchase the shares. Exercise price often is set equal to the stock price on the *grant date*. The *vesting date* is the earliest date the employee can exercise the option—the employee can exercise the option at any date after the vesting date. Most ESOs have *vesting periods* of between 2 and 10 years. When the stock price is higher than the exercise price, the option is said to be *in-the-money*. It is *out-of-the-money* when the stock price is less than the exercise price.

Exhibit 6.9

Illustration of an Option Granted to an Employee



Employee stock options fit two broad categories: incentive and nonqualified. *Incentive*, or tax-favored qualified, stock options are not taxed until the stock is sold by the employee. These options must be granted at fair market value and the stock must be held for two years from the date of the grant and another one year from the date they are exercised. The difference between the exercise price and the selling price is usually taxed as ordinary income. *Nonqualified* stock options do not have the tax benefits of qualified options. These options are sometimes granted at a discount from fair market value and employees are taxed at the time of exercise on the difference between the exercise price and the stock's fair market value. In this case, the company benefits from a tax deduction equal to the amount of income recognized by the employee.

Economic Costs and Benefits of ESOs

There are both economic benefits and costs for ESOs. The main benefit of ESOs is the potential increase in company value that can arise through incentive effects on

employee behavior. ESOs aim to align incentives of employees and the company by providing employees an opportunity to participate in shareholder wealth creation. Because incentives are better aligned, it is argued that ESOs will induce employees to work harder and in the best interests of the company. While strong arguments support the incentive effects of providing employee stock options, the evidence linking ESOs to improved employee performance is not definitive. U.S. evidence of the incentive effects of ESOs is mixed, and evidence from other countries suggests there may be other, more important, factors affecting employee motivation. Still, ESOs are a popular and powerful factor in attracting talented employees. ESOs also may increase the *risk propensity* of managers. That is, ESOs may motivate managers to venture into more risky projects because managers can share in the increased upside potential but have the benefit of the downside protection offered by the option. Therefore, ESOs often are granted to managers in growth and innovative industries to induce more risk-taking.

The cost of employee stock options is their potential dilutive effects. That is, when exercised, ESOs transfer wealth from shareholders to employees by diluting current shareholders' stake in the company. But does the company incur a cost when the exercise price equals the stock price on the grant date? The *intrinsic value approach* to this question implies there is no cost. This approach measures cost as the extent to which the exercise price is lower than the stock price on the grant date. It is based on the erroneous logic that granting ESOs, with exercise price equal to stock price, is similar to issuing stock at the prevailing market price. The intrinsic value approach ignores two types of costs that arise even when the exercise price is equal to current stock price. The first is *interest cost*, which arises because the ESO is exercisable at a future date but at the currently prevailing stock price. The second is *option cost*, which is the cost of providing an employee the option to purchase (or not purchase) the company's stock. These costs are considered in option pricing models that suggest that options have value even when granted at the prevailing market price.

The benefits of employee stock options—through increased employee motivation—is reflected through items that are traditionally included in income, such as increased revenues or decreased costs. Therefore, it makes sense to match the economic costs of granting ESOs with their potential benefits that are already reflected in income. This is the economic logic behind the current accounting for employee stock options that has raised storms of protest from American corporations, particularly those in the high-tech industries.

Accounting and Reporting for ESOs

There are two major accounting issues related to ESOs: (1) dilution of earnings per share (EPS) and (2) recognizing the cost of the employee stock option as an expense in current income. This section briefly discusses both issues. Appendix 6B provides details of ESO accounting.

Dilution of Earnings per Share. *SEAS 128* recognizes the potential dilution from ESOs when determining **diluted earnings per share**. The treasury stock method determines the extent of dilution based on both the exercise price and the current stock price. ESOs in-the-money are considered *dilutive securities* and affect diluted EPS. ESOs out-of-the-money are considered *antidilutive securities* and do not affect diluted EPS. Appendix 6A gives a detailed explanation of EPS terminology and computations.

Compensation Expense. Accounting and reporting for ESOs are prescribed under *SEAS 123* and its successor, *SEAS 123(R)*. *SEAS 123(R)* requires that companies recognize the amortized cost of the ESO grants in income as share-based compensation expense. Specifically, *SEAS 123(R)* requires companies to determine the value of the

Exhibit 6.10**Factors Affecting the Fair Value of an Option**

Factor	Effect on fair value
Exercise price	—
Stock price on date of grant	+
Expected life of option	+
Risk-free rate of interest	+
Expected volatility of stock	+
Expected dividends of stock	—

ESO grant and amortize this amount over the expected exercise period, typically the options' vesting period. The value of the ESO grant is determined by multiplying the number of options granted with the fair value of each option on the date of the grant (see Exhibit 6.10). Options' fair values are determined using well-known option pricing models such as the Black-Scholes model or the binomial lattice model, based on assumptions provided by the company. While share-based compensation expense is charged to income, it is not reported as a separate line item in the income statement.

Because of political pressure, the original standard (*SEAS 123*) did not require that companies *recognize* this cost in net income, although companies were required to disclose *pro forma* income that included ESO compensation expense in a footnote. In the post-Enron political environment, transparency in financial reporting became popular, and *SEAS 123* was revised as *SEAS 123(R)*, which now requires that companies recognize compensation expense in net income. Appendix 6B details the accounting specified under *SEAS 123(R)*.

Disclosures of Employee Stock Options

Exhibit 6.11 provides excerpts from the footnotes of Cisco Systems' 2007 annual report. The footnotes give details on options granted, outstanding, and exercisable, along with assumptions used for computing the fair value of options granted and their effect on income. Between July 29, 2006, and July 28, 2007, Cisco granted 206 million options to its employees at a weighted-average exercise price of \$23.32. During the year, 309 million options were exercised, and 54 million were canceled (e.g., when employees left Cisco without exercising their options). On July 28, 2007, Cisco had 1,289 million outstanding options (both vested and nonvested), of which 829 million outstanding options had vested but were not yet exercised. The weighted-average exercise price on outstanding options was \$26.60, which was slightly below Cisco's stock price on that day of \$28.97. The aggregate intrinsic value (total in-the-money value) of the outstanding options on July 28, 2007, was approximately \$9,698 million. This is the amount that the Cisco's employees stood to gain if all outstanding options were exercised on that date. Also, on July 28, 2007, Cisco had 294 million options available for grant (i.e., have been authorized by the board of directors) but not yet granted.

During fiscal year 2007, the weighted-average fair value per option granted was \$7.11, which is determined assuming a dividend yield of 0%, a risk-free interest rate of 4.6%, an expected life of 6.7 years, and a stock price volatility of 26%. Cisco uses the binomial lattice model (instead of the Black-Scholes model) for valuing its options, which requires additional assumptions regarding Cisco's stock returns' distribution such as skewness and kurtosis. Cisco's share-based compensation expense (amortized cost of granting ESOs) for fiscal 2007 was \$931 million, which was almost 15% of its net income for that year.

Note that the share-based compensation expense is included in income during fiscal 2007 and 2006 [under *SEAS 123(R)*], while it is not included in income during fiscal 2005 (under the older standard, *SEAS 123*). Cisco also reports that the option compensation expense was included under various categories in the income statement including cost of sales, R&D, sales & marketing, and general administrative costs.

Finally, Exhibit 6.11 includes information from Cisco's income statement regarding the dilutive effect of ESOs on EPS. During fiscal 2007, assuming exercise of all vested options at the earliest opportunity, Cisco's outstanding shares would have been diluted by 210 million (from 6,055 million to 6,265 million), lowering its EPS from \$1.21 (basic EPS) to \$1.17 (diluted EPS). The EPS computation (see Appendix 6B) considers only the effect of *dilutive* options in the computation of diluted EPS. Options that are "under water" (have an exercise price greater than market price) are excluded from the EPS computation as their inclusion would increase diluted EPS (they are considered *antidilutive*).

Analyzing Employee Stock Options

Should compensation expense arising from employee stock options be charged to income? Earlier, we noted that granting options creates costs and benefits. The effects of the benefits (if any) will be recorded in income through higher revenues or lower costs arising from a motivated workforce. Therefore, it makes sense to match the costs of granting the ESOs to these benefits. This is exactly what the accounting under *SEAS 123(R)* does.

However, it must be noted that the ESOs (in the absence of incentive effects) impose no cash flow commitment on the company nor involve any resource allocation away from the shareholders in total. Specifically, ESOs do not affect either total liabilities or shareholders' equity. Any wealth transfer occurs only between current shareholders and prospective shareholders (employees). The analysis implication is that while the potential reduction in the value of *current* equity shares must be considered (such as in equity analysis), it can be ignored for evaluating solvency and liquidity (such as in credit analysis). Therefore, a credit analyst must exclude share-based compensation expense from income when evaluating profitability—for example, when determining interest coverage ratios.

On July 28, 2007, Cisco had 1,289 million outstanding ESOs at an aggregate intrinsic value of \$9,698 million. We noted earlier that the aggregate intrinsic value is the employees' net gain if all outstanding ESOs were exercised on that date. Because the employees' gain comes at the expense of the current shareholders, this amount constitutes the potential transfer of wealth from current shareholders to employees through dilution arising from ESO grants; it is often referred to as the *option overhang*. Cisco's option overhang is around 5.7% of its market value of equity. Option overhang can be a considerably higher proportion of market value of equity for younger tech companies and is a significant factor that must be considered in equity analysis and valuation. While Cisco reports the exact amount of the option overhang in its footnote, most companies do not. However, an analyst can use note information provided to derive this amount using the following formula:

$$\begin{aligned} \text{Aggregate intrinsic value (option overhang)} &= (\text{Stock price} - \text{Average exercise price}) \\ &\quad \times \text{Outstanding number of options} \end{aligned}$$

for all in-the-money options (i.e., those with exercise price below stock price). For example, for the exercise price range of \$0.001 – \$15.00, the option aggregate intrinsic value using the note information is $(\$28.97 - \$11.02) \times 122 \text{ million} = \$2,190 \text{ million}$, which approximately equals that reported by Cisco for that category.

Exhibit 6.11**Disclosures on Employee Stock Options—Cisco Systems Inc.****Stock Incentive Plan Program Description**

As of July 28, 2007, the Company had five stock incentive plans. In addition, the Company has, in connection with the acquisitions of various companies, assumed the stock incentive plans of the acquired companies or issued replacement share-based awards. Share-based awards are designed to reward employees for their long-term contributions to the Company and provide incentives for them to remain with the Company. The number and frequency of share-based awards are based on competitive practices, operating results of the Company, and government regulations. Since the inception of the stock incentive plans, the Company has granted stock options to virtually all employees, and the majority has been granted to employees below the vice president level.

General Share Based Award Information

	Share-Based Awards Available for Grant	Number Outstanding	Weighted-Average Exercise Price per Share
Balance at July 29, 2006	464	1,446	\$25.08
Granted and assumed	(206)	206	23.32
Exercised		(309)	16.00
Cancelled/forfeited/expired	19	(54)	34.04
Restricted stock and other share-based awards	(7)		
Additional shares reserved	24		
Balance at July 28, 2007	<u>294</u>	<u>1,289</u>	<u>\$26.60</u>

The following table summarizes significant ranges of outstanding and exercisable options as of July 28, 2007 (in millions except per-share amounts):

Range of Exercise Price	STOCK OPTIONS OUTSTANDING				STOCK OPTIONS EXERCISABLE		
	Number Outstanding	Remaining Life (in years)	Weighted-Average Exercise Price per Share	Aggregate Intrinsic Value	Number Exercisable	Weighted Average Exercise Price per Share	Aggregate Intrinsic Value
\$0.001–\$15.00	122	4.58	\$11.02	\$2,183	93	\$11.09	\$1,659
\$15.01–\$18.00	230	5.81	17.24	2,700	124	16.76	1,513
\$18.01–\$20.00	303	5.48	19.22	2,958	183	19.19	1,780
\$20.01–\$25.00	246	6.77	22.38	1,622	74	21.42	560
\$25.01–\$35.00	117	3.07	27.18	235	85	27.43	156
\$35.01–\$50.00	25	1.70	40.01		25	40.01	
\$50.00–\$72.56	246	1.87	54.89		245	54.89	
Total	<u>1,289</u>		<u>\$26.60</u>	<u>\$9,698</u>	<u>829</u>	<u>\$30.13</u>	<u>\$5,668</u>

The aggregate intrinsic value in the preceding table represents total pretax intrinsic value based on the stock price of \$28.97 as of July 27, 2007, which would have been received by the option holders had those options been exercised as of that date. The total of in-the-money stock options exercisable on July 28, 2007 (July 29, 2006) was 549 (969) million.

Valuation and Expense Information under SFAS 123(R)

On July 31, 2005, the Company adopted *SFAS 123(R)*, which requires the measurement and recognition of compensation expense for all share-based payment awards made to the Company's employees and directors including employee stock options and employee stock purchase rights based on estimated fair values. Employee share-based compensation expense (after-tax) under *SFAS 123(R)* was as follows (in millions):

	FISCAL YEAR-ENDED		
	July 28, 2007	July 29, 2006	July 30, 2005
Included in cost of sales	143	162	
Research and development	289	346	
Sales and marketing	392	427	
General and administrative	107	115	
Total employee share-based compensation expense	<u>\$931</u>	<u>\$1,050</u>	<u>\$1,034*</u>

* The number for 2005 is pro forma compensation expense under *SFAS 123* that was not included in income.

(continued)

Disclosures of Employee Stock Options—Cisco Systems Inc. (concluded)

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Upon adoption of *SFAS 123(R)*, the Company began estimating the value of employee stock options and employee stock purchase rights on the date of grant using a lattice-binomial model. Prior to the adoption of *SFAS 123(R)*, the value of each employee stock option and employee stock purchase right was estimated on the date of grant using the Black-Scholes model for the purpose of the pro forma financial information required in accordance with *SFAS 123*.

The Company's employee stock options have various restrictions including vesting provisions and restrictions on transfer and hedging, among others, and are often exercised prior to their contractual maturity. Binomial lattice models are more capable of incorporating the features of the Company's employee stock options than closed-form models such as the Black-Scholes model. The use of a binomial lattice model requires extensive actual employee exercise behavior data and a number of complex assumptions including expected volatility, risk-free interest rate, expected dividends, kurtosis, and skewness. The weighted-average assumptions, using the binomial lattice model, the weighted-average expected life and estimated value of employee stock options and employee stock purchase rights are summarized as follows:

	FISCAL YEAR-ENDED	
	July 28, 2007	July 29, 2006
Weighted-average assumptions:		
Expected volatility	26.0%	23.7%
Risk-free interest rate	4.6%	4.3%
Expected dividend	0.0%	0.0%
Kurtosis	4.5	4.3
Skewness	(0.79)	(0.62)
Weighted-average expected life	6.7	6.6
Weighted-average estimated value	\$ 7.11	\$ 5.15

Earnings per-Share Information (from the income statement)

	FISCAL YEAR-ENDED		
	July 28, 2007	July 29, 2006	July 30, 2005
Net income (millions)	\$7,333	\$5,580	\$5,741
Net income per share—basic	\$ 1.21	\$ 0.91	\$ 0.88
Net income per share—diluted	\$ 1.17	\$ 0.89	\$ 0.87
Shares used in per-share calculation—basic (millions)	6,055	6,158	6,487
Shares used in per-share calculation—diluted (millions)	6,265	6,272	6,612

..... INTEREST COSTS

Interest is compensation for use of money. It is the *excess* cash paid or collected beyond the money (principal) borrowed or loaned. Interest is determined by several factors, and one of the most important is credit (nonpayment) risk of the borrower. *Interest expense* is determined by the interest rate, principal, and time.

Interest Computation

Interest expense for a company is the nominal rate paid on debt financing including, in the case of bonds, the amortization of any discount or premium. A complication arises when companies issue convertible debt or debt with warrants. These situations yield a nominal rate below the cost of similar debt not enjoying these added features. In the case of convertible debt, accounting practice considers the debt and equity features inseparable. Therefore, no portion of the proceeds from issuance of convertible debt is accounted for as attributable to the conversion feature. In the case of debt issued with attached stock warrants, the proceeds attributable to the value of the warrants are accounted for as paid-in capital. The corresponding charge is to a debt discount account that is amortized over the life of the debt issue, increasing the effective interest cost.

Interest Capitalization

Capitalization of interest is required as part of the cost of assets constructed or otherwise produced for a company's *own use* (including assets constructed or produced for a company by others where deposits or progress payments are made). The objectives of interest capitalization are to (1) measure more accurately the acquisition cost of an asset and (2) amortize acquisition cost against revenues generated by an asset. An example follows:

In connection with various construction projects, interest of approximately \$19,118,000, \$30,806,000, and \$17,393,000 was capitalized as property, plant, and equipment.

—New York Times Company

Analyzing Interest

Our analysis must realize that current accounting for interest on convertible debt is controversial. Many contend that ignoring the value of a conversion privilege and using the coupon rate as the measure of interest ignores the real interest cost. Somewhat contrary to this position, computation of diluted earnings per share uses the number of shares issuable *in the event of conversion of convertible debt*. This in effect creates an additional charge to the coupon rate through diluting earnings per share.

Accounting for interest capitalization is also disputable. Some analysts take the position that interest represents a period cost and is not capitalizable. Whatever one's views, our analysis must realize that accounting for interest capitalization is vague, leading to variations in practice. We must remember that capitalized interest is included in assets' costs and enters expense via depreciation and amortization. To assess the impact of interest capitalization on net income, our analysis must know the amount of capitalized interest currently charged to income via depreciation and amortization. We also need this amount to accurately compute the fixed-charge coverage ratio (see Chapter 10). Unfortunately, practice does not require disclosure of these amounts, so our analysis is often handicapped. One potential source of this information is Form 10-K disclosures.

.....INCOME TAXES

Income tax expense is a substantial cost of business. Understanding the accounting for income taxes is important to successful analysis of financial statements. The discussion here focuses on the accounting and analysis of periodic income tax expense and associated assets and liabilities, and not on tax law.

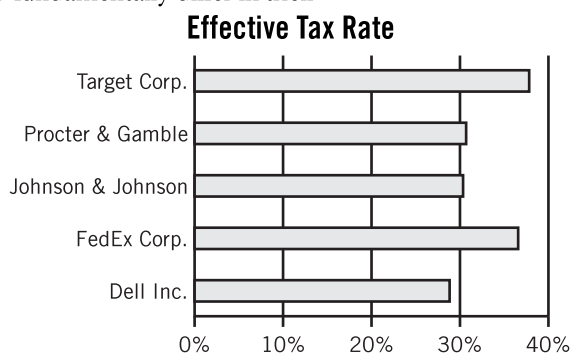
Accounting for Income Taxes *Temporary and Permanent Differences*

The complexity in accounting for income taxes arises because the rules for determining taxable income (i.e., for purposes of determining taxes payable) are based on the prevailing tax laws, and these rules are different from the rules for determining reported income under GAAP, which forms the basis for the financial statements. In general, tax rules are closer to "cash basis" accounting, permitting fewer accruals than allowed under GAAP. Also, rules for calculating certain accruals, such as depreciation, are different under tax laws than under GAAP. Additionally, tax laws allow exemptions or deductions for certain items that have no real economic basis (e.g., interest income from certain types of bonds are exempt from taxes). Finally, tax authorities do not provide refunds for net operating losses; rather these losses are carried forward and offset with income arising in

future periods. For these reasons, income reported in the financial statements can differ substantially from **taxable income** (i.e., income used for determining taxes payable under the tax laws). Companies, therefore, maintain two sets of accounting books, one for financial reporting (the “GAAP books”) and one for tax accounting (the “tax books”).

The differences between tax and GAAP income are essentially of two types: temporary and permanent. **Temporary differences**, as the name suggests, are differences that are temporary in nature and are expected to reverse in the future. Such discrepancies are mainly in the nature of timing differences between tax and GAAP accounting. For example, GAAP allows companies to take a restructuring charge for estimated costs of restructuring that may last several years, while tax laws allow deductions only when restructuring costs are actually incurred. Temporary differences are accounted for using deferred tax adjustments.

Permanent differences, as the name suggests, are differences that are permanent in nature. Such discrepancies arise because tax laws and GAAP fundamentally differ in their treatment of the item. For example, interest income from certain municipal bonds is tax exempt and therefore not included in determining taxable income, while it is included when determining GAAP income. Permanent differences are not accounted for in the financial statements; instead they are factored into the **effective tax rate**, which is the actual tax rate incurred by the business during the period. Effective tax rates can differ from the **statutory tax rate** (currently 35% for U.S. corporations) because of permanent differences. Exhibit 6.12 provides examples of common temporary and permanent differences.



Temporary and Permanent Differences between GAAP Income and Taxable Income

Exhibit 6.12

TEMPORARY DIFFERENCES

Recognized Earlier in Tax Than in GAAP

Revenues

1. Subscription revenue received in advance.
2. Advance rent received.
3. Prepaid service contracts.
4. Royalties received in advance.

Expenses

1. Accelerated depreciation for tax.
2. Capitalization of certain costs.

Recognized Later in Tax Than in GAAP

Revenues

1. Installment sales—accrual method in GAAP.
2. Equity method of accounting for investment.

Expenses

1. Product warranty expenses/liabilities.
2. Postemployment benefits.
3. Bad debt allowances.
4. Write-down of assets—inventory, PPE.
5. Restructuring charges
6. Capital lease expenses
7. Tax loss carryforwards

PERMANENT DIFFERENCES

1. Interest income from tax-exempt bonds not recognized by tax law.
2. Tax credits.
3. Taxes on unremitted earnings from foreign subsidiaries.
4. ESOP dividend deductions.
5. Foreign income taxed at rates different from U.S. statutory rates.
6. Medicare prescription drug benefits.

Deferred Taxes

Temporary differences can cause taxable income to deviate substantially from pretax income prepared under GAAP. Therefore, charging the actual tax payable during the year (which is computed using taxable income) against pretax GAAP income violates the basic matching principle of accounting and results in after-tax income that can be volatile and even meaningless. To avoid these problems, accountants use inter-period allocations known as **deferred tax adjustments**. The basis for deferred tax adjustments is to better match the tax expense for the period with the pretax income reported under GAAP. In the process, deferred tax accounting creates important balance sheet items called **deferred tax assets** or **deferred tax liabilities**.

We explain deferred tax accounting through the following two examples, which are detailed in Exhibit 6.13. In Case A we examine a situation where a company buys an asset for \$30,000, which it fully depreciates in the GAAP books over three years. Tax laws, however, allow the asset to be depreciated over an accelerated two-year period. Also, the company earns income before depreciation and tax of \$25,000 per year from use of the asset.

We first examine what happens in the tax books. Because the asset is depreciated over the first two years, the taxable income during the first two years (\$10,000 per year) is much lower than that in the third year (\$25,000). Accordingly, the tax payable in the first two years (\$3,500 per year) is much lower than that in the third (\$8,750). Under GAAP, however, pretax income is identical (\$15,000) in each of the three years, which is consistent with the unchanged economic performance across these three years. What would happen if we used the tax payable under the tax laws as the tax expense in the GAAP books? The reported net income during the three years would be \$11,500, \$11,500, and \$6,250, respectively. Obviously these numbers do not depict the underlying economic performance, which was unchanged across the three years. Accordingly, in the GAAP books we match the tax expense (tax provision) during the year to the pretax GAAP income; such matching suggests the tax provision should be \$5,250 each year (35% of \$15,000). Accordingly, we artificially increase the tax provision during the first two years by \$1,750 each and fully reverse the entire amount during the third year. These artificial adjustments are called deferred tax adjustments. The deferred tax adjustments in this case initially reduce income and, therefore, retained earnings. To compensate (i.e., to “balance” the balance sheet) we create deferred tax liabilities of \$1,750 and \$3,500 during Years 1 and 2, which are completely reversed in Year 3.

We next examine a scenario which creates deferred tax assets. Specifically, we have a situation (Case B) in which a company takes a \$30,000 restructuring charge in Year 1. The tax laws, however, allow this charge to be deducted only over the three years when they are actually incurred (\$10,000 per year). Once again the company earns \$25,000 per year before restructuring and tax. Again, we see that using tax payable (as per tax law) as the tax expense creates a situation in which the tax expense is not matched with the pretax GAAP income. Accordingly, we again create deferred tax adjustments. However, note that—unlike Case A where the adjustments initially *increased* tax provision and created deferred tax *liabilities*—the tax adjustments in Case B initially *decrease* tax provision and therefore create deferred tax *assets*.

The Nature of Deferred Tax Liabilities (or Assets)

We note that deferred tax liabilities (or assets) arise in order to compensate for the effect of the deferral on income and therefore on retained earnings. However, what is the nature of these assets or liabilities? Like all deferrals, they are not assets or liabilities in

Illustration of Deferred Tax Accounting

Exhibit 6.13



Case A: Deferred Tax Liability: GAAP depreciation straight line 3 years; Tax depreciation straight line 2 years

	TAX BOOKS				GAAP BOOKS			
	Year 1	Year 2	Year 3	Total	Year 1	Year 2	Year 3	Total
Income before depreciation and tax . . .	\$25,000	\$25,000	\$25,000	\$75,000	\$25,000	\$25,000	\$25,000	\$75,000
Depreciation expense	15,000	15,000		30,000	10,000	10,000	10,000	30,000
Income before tax (a)	10,000	10,000	25,000	45,000	15,000	15,000	15,000	45,000
Tax payable (35%)	3,500	3,500	8,750	15,750	3,500	3,500	8,750	15,750
Deferred tax					1,750	1,750	(3,500)	0
Tax provision (b)	3,500	3,500	8,750	15,750	5,250	5,250	5,250	15,750
Net income (a) — (b)	<u>\$ 6,500</u>	<u>\$ 6,500</u>	<u>\$16,250</u>	<u>\$29,250</u>	<u>\$ 9,750</u>	<u>\$ 9,750</u>	<u>\$ 9,750</u>	<u>\$29,250</u>
Net income without deferred tax					<u>\$11,500</u>	<u>\$11,500</u>	<u>\$ 6,250</u>	<u>\$29,250</u>

Deferred Tax Adjustments	Year 1	Year 2	Year 3
Income before tax (GAAP books)	\$15,000	\$15,000	\$ 15,000
Income before tax (tax books)	10,000	10,000	25,000
Difference	\$ 5,000	\$ 5,000	(\$10,000)
Deferred tax adjustment (35%)	\$ 1,750	\$ 1,750	(\$ 3,500)
Deferred tax liability	\$ 1,750	\$ 3,500	\$ 0

Case B: Deferred Tax Asset: GAAP restructuring charge in first year; Tax restructuring expenditures spread over 3 years

	TAX BOOKS				GAAP BOOKS			
	Year 1	Year 2	Year 3	Total	Year 1	Year 2	Year 3	Total
Income before restructuring and tax . . .	\$25,000	\$25,000	\$25,000	\$75,000	\$ 25,000	\$25,000	\$25,000	\$75,000
Restructuring charge (expense)	10,000	10,000	10,000	30,000	30,000			30,000
Income before tax (a)	15,000	15,000	15,000	45,000	(5,000)	25,000	25,000	45,000
Tax payable (35%)	5,250	5,250	5,250	15,750	5,250	5,250	5,250	15,750
Deferred tax					(7,000)	3,500	3,500	0
Tax provision (b)	5,250	5,250	5,250	15,750	(1,750)	8,750	8,750	15,750
Net income (a) — (b)	<u>\$ 9,750</u>	<u>\$ 9,750</u>	<u>\$ 9,750</u>	<u>\$29,250</u>	<u>(\$ 3,250)</u>	<u>\$16,250</u>	<u>\$16,250</u>	<u>\$29,250</u>
Net Income without deferred tax					<u>(\$10,250)</u>	<u>\$19,750</u>	<u>\$19,750</u>	<u>\$29,250</u>

Deferred Tax Adjustments	Year 1	Year 2	Year 3
Income before tax (GAAP books)	(\$ 5,000)	\$25,000	\$25,000
Income before tax (tax books)	15,000	15,000	15,000
Difference	(\$20,000)	\$10,000	\$10,000
Deferred tax adjustment (35%)	(\$ 7,000)	\$ 3,500	\$ 3,500
Deferred tax asset	\$ 7,000	\$ 3,500	\$ 0

the “true” sense. For example, a deferred tax liability does not impose any obligation on the business to pay taxes, nor does the deferred tax asset confer any rights to claim taxes. All that a deferred tax liability (or asset) suggests is that the actual tax payments will be proportionally higher (or lower) in future because tax payments were proportionally lower (or higher) in the past. In general, a deferred tax liability or asset signifies:

- Deferred tax liability: GAAP income was greater than taxable income in the past; past tax payments were relatively (i.e., as % of GAAP income) lower, therefore future tax payments expected to be relatively (i.e., as % of GAAP income) higher.
- Deferred tax asset: GAAP income was less than taxable income in the past; past tax payments were relatively higher, therefore future tax payments expected to be relatively lower.

In this sense, deferred tax liabilities (or assets) *do* provide information about future cash flows. However, it is important to note that the ability of these liabilities or assets to forecast future cash flows is crucially dependent on the temporary differences reversing in the future. While, on average, temporary differences do reverse, there are many factors that can prevent such reversals. The most important factor preventing reversal is growth—when a company grows, new deferrals created in future will overwhelm the reversal of past deferrals. In addition, factors such as changes in tax laws and accounting rules, inflation, and future losses can also affect the reversal of deferred tax liabilities or assets.

Accounting for Deferred Taxes

Accounting for deferred taxes is specified under *SFAS 109*. Although the objective of deferred tax accounting is matching the tax expense with pretax GAAP income, the accounting for deferred taxes takes an asset-liability approach. That is, the focus is on computation of the balance sheet items, deferred tax assets and liabilities. Income tax expense (or provision) is not computed directly. Rather, it is computed as the difference between the change in deferred tax assets and liabilities, and the tax payable to taxing authorities.

Deferred taxes are determined separately for each tax-paying component (an individual entity or group of entities consolidated for tax purposes) in each tax jurisdiction. Determination includes computing total deferred tax liability (or assets) for each taxable temporary difference (and operating loss carry-forwards, if any) using the applicable tax rates.

All deferred tax assets need to be evaluated for the probability of realization. A **valuation allowance** must be created to reduce deferred tax assets to the extent to which it is deemed that the assets are more likely (more than 50% probability) to *not* be realized. Determination of the valuation allowance is subjective and thus a potent tool for earnings management.²

Income Tax Disclosures

Exhibit 6.14 presents the income tax footnote from the Dell 2005 annual report. Dell reports tax expense (provision) of \$1,402 million. Of that amount, \$1,473 million represents total tax payments (both domestic and foreign, including a nonrecurring tax repatriation charge), and \$(71) million is the deferred tax adjustment. Therefore, deferrals actually reduce Dell’s tax expense during fiscal 2005. Dell also provides a summary of the components of its deferred tax liabilities and assets. Its \$192 million of deferred tax

² A recent ruling under *FIN 48* specifies that companies must create a contingent liability for any additional tax payments that could arise (with greater than 50% probability) under an IRS audit.

Dell Income Tax Footnote**Exhibit 6.14**

The provision for income taxes consists of the following:

	FISCAL YEAR ENDED		
	January 28, 2005	January 30, 2004	January 31, 2003
	(in millions)		
Current			
Domestic	\$ 984	\$ 969	\$702
Foreign	209	132	94
Tax repatriation charge	280	—	—
Deferred	(71)	(22)	109
Provision for income taxes	<u>\$1,402</u>	<u>\$1,079</u>	<u>\$905</u>

Deferred taxes have not been provided on excess book basis in the amount of approximately \$2.9 billion in the shares of certain foreign subsidiaries because these basis differences are not expected to reverse in the foreseeable future and are essentially permanent in duration. These basis differences arose primarily through the undistributed book earnings of the subsidiaries that Dell intends to reinvest indefinitely. The basis differences could reverse through a sale of the subsidiaries, the receipt of dividends from the subsidiaries as well as various other events. Net of available foreign tax credits, residual income tax of approximately \$740 million would be due upon a reversal of this excess book basis.

The components of Dell's net deferred tax asset are as follows:

	FISCAL YEAR ENDED	
	January 28, 2005	January 30, 2004
	(in millions)	
Deferred tax assets		
Deferred revenue	\$ 241	\$ 86
Inventory and warranty provisions	232	260
Investment impairments and unrealized gains	23	39
Provisions for product returns and doubtful accounts	22	21
Capital loss	6	96
Leasing	—	69
Other	99	104
	623	675
Deferred tax liabilities		
Fixed assets	(156)	(129)
Leasing	(10)	—
Other	(26)	(74)
	(192)	(203)
Net deferred tax asset	<u>\$ 431</u>	<u>\$ 472</u>
Current portion (included in other current assets)	\$ 425	\$ 339
Noncurrent portion (included in other noncurrent assets)	6	133
Net deferred tax asset	<u>\$ 431</u>	<u>\$ 472</u>

(continued)

Dell Income Tax Footnote (concluded)

The effective tax rate differed from the statutory U.S. federal income tax rate as follows:

	FISCAL YEAR ENDED		
	January 28, 2005	January 30, 2004	January 31, 2003
U.S. federal statutory rate	35.0%	35.0%	35.0%
Foreign income taxed at different rates	(11.6)	(7.3)	(7.9)
Tax repatriation charge	6.3	—	—
Other	1.8	1.3	2.8
Effective tax rate	<u>31.5%</u>	<u>29.0%</u>	<u>29.9%</u>

liabilities arises primarily from PP&E and relates to the use of accelerated depreciation in its tax books and straight-line depreciation for financial reporting. Its \$623 million of deferred tax assets arise as a result of the recognition of deferred revenue and the accrual of expenses (inventory and warranty provisions) in its income statement that have not yet been paid and are, therefore, not deductible for tax purposes. Also, Dell has not set up a valuation allowance for its deferred tax assets as it expects all of these benefits to be realized. The net deferred tax asset of \$431 million is reported on its balance sheet, primarily as a current asset. Finally, Dell provides a reconciliation of the statutory corporate income tax rate of 35% with its 31.5% effective tax rate. Most of this permanent difference is due to the repatriation of earnings of foreign subsidiaries at favorable tax rates in 2004. The footnote therefore provides information regarding both temporary and permanent differences.

Analyzing Income Taxes

Financial Statement Adjustments

We noted that deferred tax assets (or liabilities) are not “true” assets (liabilities) in the sense that they do not confer any future benefits or impose any future obligations on the company. Because of this, many analysts exclude them from the balance sheet when conducting ratio analysis. For example, credit raters such as Moody’s recommend that deferred tax assets or liabilities be excluded when determining solvency or liquidity ratios such as debt-to-equity ratio or current ratio. To exclude deferred tax liabilities (or assets) from the balance sheet, we need to remove them from wherever they are classified and adjust the net amount to equity. For example, for Dell’s balance sheet on January 28, 2005, we need to reduce current (noncurrent) assets by \$425 million (\$6 million) and correspondingly reduce shareholders’ equity (specifically retained earnings) by \$431 million.

Present Valuing Deferred Tax Assets and Liabilities

Deferred tax assets (or liabilities) represent potential future cash flows arising from reversal of temporary differences. However, these reversals could arise many years later, in which case the present value of the cash flow effects will be much smaller than that recorded on the balance sheet. Some analysts, therefore, recommend present valuing these asset or liabilities. To do that, it is important to understand the nature of each deferred asset or liability component and estimate how many years later, on average, they would reverse. For example, Dell classifies most of its deferred

assets and liabilities as current assets, which suggests that most of them are expected to reverse within a year. Therefore, it is not necessary to present value Dell's deferred tax assets or liabilities.

Forecasting Future Income and Cash Flows

Income tax disclosures are useful for forecasting future cash flows. We need to consider both permanent and temporary differences in our cash flow forecasts. First, let us consider permanent differences. Most valuation textbooks recommend using the statutory tax rate (currently 35%) when forecasting future earnings or cash flows. The statutory tax rate is a useful estimate of the *marginal* tax rate; that is, it helps us identify the tax effect for an additional dollar of income. It is less useful as an estimate of the *average* tax rate of a company. This is because companies may have permanent differences that can permanently lower (or, in rare cases, increase) its tax rates. A better estimate of a company's average tax rate is its effective tax rate. Because earnings (or cash flow) forecasts need to use average (rather than marginal) tax rates, effective tax rates may be more useful for this purpose. However, effective tax rates have to be used carefully because they can be very volatile. Thus, a company's effective tax rate during a year is unlikely to be a good estimate of its future effective tax rates. For this purpose an analyst should examine a company's effective tax rates over the past few years to determine its permanent component. It is also useful to analyze the nature of the permanent differences so as to better estimate the permanent component of the effective tax rate.

Temporary differences (measured by deferred tax assets or liabilities) are useful in forecasting cash flows (but not in forecasting income). The presence of large deferred tax liabilities (assets) suggests that the company's tax payments in the future are likely to be higher (lower) than its tax provision. However, in order to use this information in cash flow forecasting, it is necessary to estimate when the deferrals are expected to reverse. It is also important to realize that similar deferrals can be created in the future, which could offset the effects of the reversal of the current deferred tax assets or liabilities.

Analyzing Permanent and Temporary Differences

An analyst must evaluate why effective tax rates differ from statutory tax rates by examining the components that cause the divergence. In particular, it is important to identify any nonrecurring components that temporarily affect effective tax rates.

It is also important to analyze the nature of the temporary differences identified by the components of deferred tax assets and liabilities. An analyst must evaluate the "reversibility" of the deferrals and also make estimates about how quickly the reversals are expected to occur. For example, most of Dell's deferred tax assets are expected to reverse within one year. Also, since Dell has not created a valuation allowance, it appears unlikely that the deferred tax assets will not be realized. Overall, there appears little doubt about reversibility of Dell's deferred tax assets.

Earnings Management and Earnings Quality

The valuation allowance is a popular tool of earnings management. An analyst should therefore carefully examine any changes—in particular, a decrease—in the valuation allowance, because it could be an attempt to manage earnings.

In general, many analysts compare GAAP and taxable income to evaluate earnings quality. The presence of large deferred tax liabilities (assets) suggests that GAAP income in the past has been higher (lower) than taxable income. Therefore, companies with large deferred tax liabilities (assets) are likely adopting aggressive (conservative) accounting practices.

..... APPENDIX 6A EARNINGS PER SHARE: COMPUTATION AND ANALYSIS

Earnings per share (EPS) data are widely used in evaluating the operating performance and profitability of a company. This appendix describes the principles governing earnings per share computation and interpretation. A key feature in earnings per share computation is recognition of the potential impact of dilution. **Dilution** is the reduction in earnings per share (or increase in net loss per share) resulting from dilutive securities being converted into common stock, the exercise of options and warrants, or the issuance of additional shares in compliance with contracts. Because these adverse effects on earnings per share can be substantial, the earnings per share computation serves to call attention to the potentially dilutive effects of a firm's capital structure.

The computation and reporting requirements (see *SEAS 128*) for earnings per share are consistent with international accounting standards. *SEAS 128* requires dual presentation of *basic EPS* and *diluted EPS* on income statements of companies with complex capital structures and requires a reconciliation of the numerator and denominator of basic EPS to diluted EPS. To understand these computations and their interpretation, this appendix (1) explains simple and complex capital structures, (2) describes the various earnings per share measures, and (3) provides several case examples.

SIMPLE CAPITAL STRUCTURE

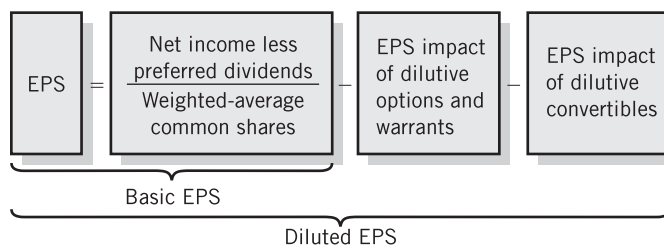
A **simple capital structure** consists only of common stock and nonconvertible senior securities and does not include potentially dilutive securities. For companies with simple capital structures, a single presentation of earnings per share is required and is computed as follows:

$$\text{Basic earnings per share} = \frac{\text{Net income} - \text{Preferred dividends}}{\text{Weighted-average number of common shares outstanding}}$$

In the numerator of this computation, dividends of cumulative senior equity securities, whether earned or not, are deducted from net income or added to net loss. The precise computation of weighted-average number of common shares is the sum of shares outstanding each day, divided by the number of days in the period.

COMPLEX CAPITAL STRUCTURE

A company is viewed as having a **complex capital structure** if it has outstanding potentially dilutive securities such as convertible securities, options, warrants, and other similar stock issue agreements. More than 25% of publicly traded companies have potentially dilutive securities. The relation between basic and diluted earnings per share for these companies is depicted as:



This dual presentation warns users of the potential for dilution in earnings per share. Both of these earnings per share figures are reported with equal prominence on income

statements of companies with complex capital structures. These companies need not report diluted earnings per share when its potential common shares are antidilutive. **Antidilutive securities** are those that increase earnings per share when exercised or converted.

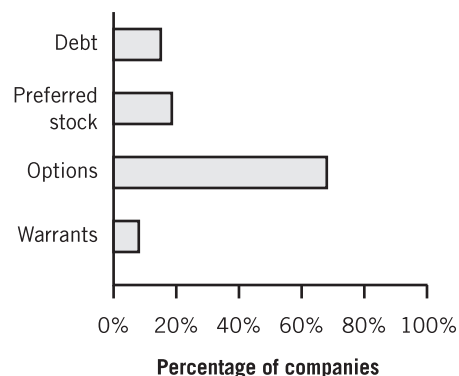
Basic Earnings per Share

The basic earnings per share computation for companies with complex capital structures is identical to that for companies with simple capital structures.

Diluted Earnings per Share

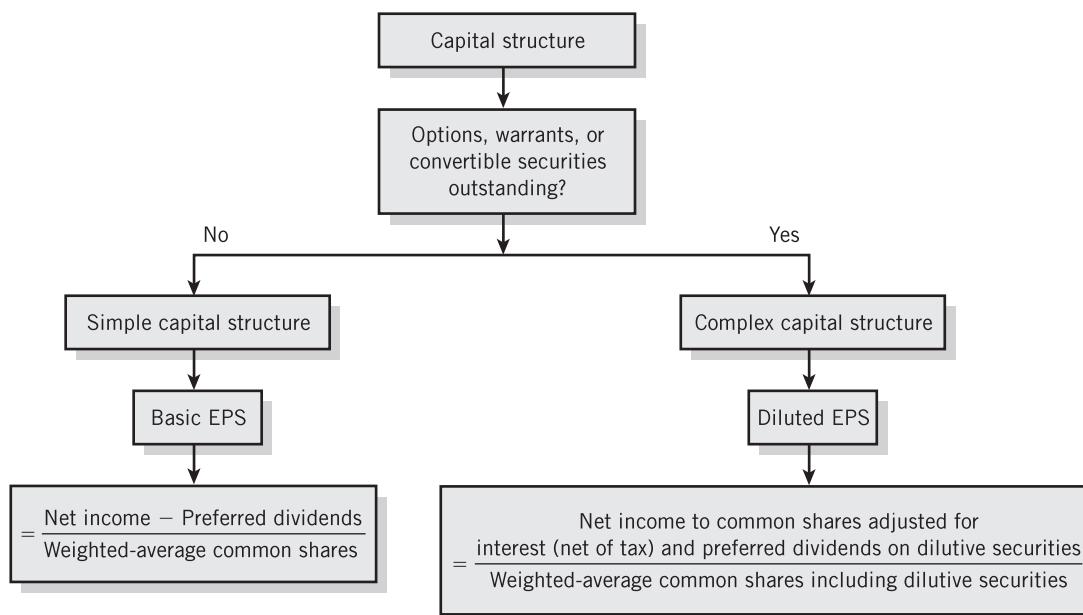
Companies with complex capital structures must report both basic and diluted EPS figures. Exhibit 6A.1 portrays the computation of

Sources of Potential Dilution



EPS Computations

Exhibit 6A.1



earnings per share for complex capital structures. Diluted EPS reflects *all* potential common shares that decrease earnings per share. We consider only the more familiar types of potentially dilutive securities—stock options and warrants, and convertible preferred stocks and bonds.

Diluted EPS is computed on an *as if* basis, that is, we assume that all convertible securities are converted and options exercised at the earliest possible opportunity (e.g., the beginning of the year if the securities are outstanding on that date). The numerator for diluted EPS adjusts net income for the following effects of the exercise of convertible securities or options:

1. If preferred shares have been converted into common, any preferred dividends must be removed as we are assuming that the preferred shares are no longer outstanding.
2. If bonds are converted, any interest expense must be backed out of net income. This is accomplished by adding back the after-tax amount of the interest accrued.

The denominator adds the additional shares issued as a result of conversion or exercise of options. For convertible bonds, the amount of shares to be issued upon conversion is added directly. For options, we assume that the proceeds from the exercise of the option are used to repurchase shares in the open market at the average stock price. Only the net shares issued are added to the denominator.

To illustrate the computation of EPS, consider a company with the following securities outstanding:

- *Common stock*: 1,000,000 shares outstanding for the entire year.
- *Preferred stock*: 500,000 shares outstanding for the entire year.
- *Convertible bonds*: \$5,000,000 6% bonds, sold at par, convertible into 200,000 shares of common stock.
- *Employee stock options*: options to purchase 100,000 shares at \$30 have been outstanding for the entire year. The average market price of the company's common stock during the year is \$40.
- *Net income*: \$3,000,000
- *Preferred dividends*: \$50,000
- *Marginal tax rate*: 35%

$$\text{Basic EPS} = \frac{\$3,000,000 - \$50,000}{1,000,000} = \$2.95$$

$$\text{Diluted EPS} = \frac{\$3,000,000 - \$50,000 + [(\$5,000,000 \times 6\%)(1 - .35)]}{1,000,000 + 200,000 + 25,000} = \$2.57$$

Basic EPS is computed as net income less preferred shares divided by the weighted-average (by fraction of the year outstanding) number of shares outstanding during the year.

Diluted EPS assumes conversion of all convertible securities and exercise of all dilutive options at their earliest possible opportunity, in this case the beginning of the year. The third term in the numerator is the add-back of after-tax interest that would not have been paid had the bonds converted into common stock. The tax adjustment is necessary since pretax income would have increased by the amount of forgone interest expense. The additional shares assumed to be issued upon conversion of the bonds are added into the denominator. The third term in the denominator relates to the exercise of the options. This is computed as follows:

Shares purchased upon exercise of option	100,000
Exercise price	× \$30
Proceeds received upon exercise	\$3,000,000
Average market price of common stock	÷ \$40
Shares repurchased with option proceeds	75,000

Net increase in shares due to exercise of options = 100,000 – 75,000 = 25,000.

ANALYSIS OF EARNINGS PER SHARE

Earnings per share requirements in accounting are often criticized because they extend to areas outside the usual realm of accountancy. Accounting for earnings per share relies on pro forma presentations influenced in large measure by market fluctuations. It also involves itself with areas of financial statement analysis. Whatever the merits of these criticisms, our analysis must welcome this initiative by the accounting profession. Factors considered in computation of earnings per share are varied and require considerable proprietary data, so it is appropriate to place this responsibility on management and its auditors. Our analysis must, however, bring a thorough understanding of the bases on which

earnings per share are computed so that we can draw reliable inferences. The earnings per share disclosures require a reconciliation of the numerators and denominators of basic and diluted earnings per share computations. This entails disclosure of the individual income and common share effects of all securities that affect earnings per share. Such disclosure provides us additional insights into companies' complex capital structures.

Despite these improvements in earnings per share computations and disclosures, serious barriers to effective analysis remain:

- Computation of basic earnings per share ignores the potential effects of dilution from options and warrants. This can “boost” the earnings per share of certain companies by 10% to 20% or more, while potentially obscuring the risk from issuances of new shares. Our analysis must study diluted earnings per share to avoid this pitfall.
- There are inconsistencies in treating certain securities as the equivalent of common stock for computing earnings per share while not considering them as part of shareholders' equity. Consequently, it is difficult in analysis to effectively link reported earnings per share with the debt-leverage position pertaining to those earnings.
- The dilutive effects of options and warrants depend on the company's common stock price. This can yield a “circular effect,” in that reporting of earnings per share can influence stock prices that, in turn, influence earnings per share. Hence, reported earnings per share can be affected by stock price and not solely reflect the economic fundamentals of the company. This also suggests that our projection of reported earnings per share consider not only future earnings but also future stock prices.

..... APPENDIX 6B ACCOUNTING FOR EMPLOYEE STOCK OPTIONS

Two accounting issues relate to employee stock options: (1) determination of diluted EPS under SFAS 128 and (2) determination of share-based compensation expense under SFAS 123(R) and related effects on the balance sheet. We discuss both accounting issues with illustrations in this appendix.

DETERMINING DILUTED EPS

Because ESOs potentially dilute current shareholders' equity holdings, their effects must be considered when determining diluted EPS. Only in-the-money options (i.e., those with exercise price below stock price) are considered *dilutive* securities—those that will potentially dilute current shareholders' equity holdings—and are included in diluted EPS computation. Options that are out-of-the-money—underwater options, where the exercise price exceeds stock price—are considered *antidilutive* and are not included in computing diluted EPS. For determining diluted EPS, the treasury stock approach is used. Illustration 6B.1 provides an example of the effects of ESOs on diluted EPS.

DETERMINING COMPENSATION EXPENSE

Determining the ESOs compensation expense for a period is a two-step process: (1) determining the cost of ESOs granted and (2) amortizing this cost over the vesting period of the option to determine compensation expense for each period. In addition there are balance sheet effects of recording compensation expense. We discuss each in turn.

ILLUSTRATION 6B.1

A company's net income is \$100,000, and its weighted-average shares outstanding are 10,000. During the year, the company issues 2,000 ESOs at an exercise price of \$20. We compute both basic and diluted EPS here under two separate scenarios: (1) average stock price during the year is \$40 and (2) average stock price during the year is \$10.

	Scenario 1	Scenario 2		Scenario 1	Scenario 2
Number of ESOs outstanding.....	2000 shares	2000 shares	Net income (d).....	\$100,000	\$100,000
Exercise price.....	\$20	\$20	Compute (d)/(c).....	\$9.09	\$12.50
Proceeds of ESOs issuance.....	\$40,000	\$40,000	Basic EPS		
Average stock price.....	\$40	\$10	(\$100,000/10,000 shares)...	<u>\$10.00</u>	<u>\$10.00</u>
Treasury shares that can be purchased	1,000 shares	4,000 shares	Dilutive or antidilutive?	Dilutive	Antidilutive
Number of ESOs less treasury shares (a)....	1,000 shares	(2,000) shares	Diluted EPS	<u>\$9.09</u>	<u>\$10.00</u>
Average number of shares outstanding (b)...	10,000 shares	10,000 shares			
Number of diluted shares (c) = (a + b)....	11,000 shares	8,000 shares			

Determining ESO Cost

The cost of ESOs is determined at the time of the grant. ESO cost is the product of the fair value of each individual option and the number of options granted. The fair value of the ESO is determined by applying an option pricing model (usually the Black-Scholes or the Lattice model) as of the grant date. Exhibit 6.10 identified the factors affecting the fair value of an option. Note that the expected life of the option is based on the expected exercise date, not the vesting date. The number of options expected to vest is determined by adjusting the number of options granted for the expected employee turnover during the expected life of the option. As already noted, ESO cost is determined only once, at the time of the grant. No adjustments to this cost are made, even if the fair value of the ESO changes.

Amortizing ESO Cost

While companies hope ESOs motivate employees to work in the interest of shareholders, they also specify minimum vesting periods to further align employee and company incentives over the long run. This ESO benefit is expected to persist at least until the employee is free to exercise the option. Accordingly, the fair value of granted ESOs is amortized on a straight-line basis over the vesting period. Compensation expense for a period is based on the cumulative amortization of all past and current ESOs that are yet to vest.

Balance Sheet Effects

Under SFAS 123(R), cumulative compensation expense is credited to a special component of shareholder's equity called "Paid-in-Capital: Stock Compensation," which is subsequently transferred to regular paid-in share capital when options are exercised. Illustration 6B.2 provides an example of ESO accounting under *SFAS 123(R)*.

ILLUSTRATION 6B.2

Stock-Based Compensation Accounting under SFAS 123(R)—An Example

ABC Company issued 10,000 options to its CEO on January 1, 2006, at the prevailing market price of \$3 per share. The options were expected to vest over a 2-year period. The

(continued)

ILLUSTRATION 6B.2

(concluded)



Black-Scholes value of the option was valued at \$1 per share. On December 31, 2007, the CEO exercised all options. Market price on that day was \$6 per share. Assume a 35% tax rate. The accounting entries are given here.

January 1, 2006

No entry on grant date.

The total pretax “cost” to the company is $\$1 \times 10,000 = \$10,000$. However, this expense is amortized over 2006 and 2007.

December 31, 2006

The amortized pretax option expense recognized in 2006 is \$5,000. At a 35% tax rate, the tax saving is \$1,750, which results in a \$3,250 after-tax expense. The pretax expense will be charged to a special part of shareholder’s equity called paid-in-capital—stock-based compensation.

The journal entry will be as follows:

	Debit	Credit
Stock-based compensation expense	3,250	
Deferred tax asset	1,750	
Paid-in-capital—stock-based compensation		5,000

December 31, 2007 (before exercise)

The journal entry will be identical to that in 2006.

Therefore, the cumulative effect on the balance sheet as of December 31, 2007 (prior to the option exercise), is as follows:

Assets		Liabilities	
Deferred tax asset	\$ 3,500	Shareholder’s equity:	
		• Paid-in share capital—	
		stock-based compensation	\$10,000
		• Retained earnings	(6,500)

December 31, 2007 (after exercise)

What happens when the options are exercised? First, note that $\$3 \times 10,000 = \$30,000$ of cash is received from the CEO. In return, we issue 10,000 shares to the CEO. Second, because the options are no longer outstanding, we reverse the \$10,000 that is in paid-in share capital—stock-based compensation. The sum total is charged to normal paid-in share capital (it is split between the par-value and the additional paid-in share capital as required).

The journal entry is:

	Debit	Credit
Cash	\$30,000	
Paid-in-share capital—		
stock-based compensation		\$10,000
Paid-in-share capital		40,000

Therefore as of December 31, 2007, the net effect on the balance sheet is as follows:

Assets		Liabilities	
Deferred tax asset	\$3,500	Shareholder’s equity:	
Cash	30,000	Paid-in-share capital	\$40,000
		Paid-in share capital—	
		stock-based compensation	—
		Retained earnings	(6,500)

GUIDANCE ANSWERS TO ANALYSIS VIEWPOINTS

SUPPLIER

Your credit assessment of Chicago Construction is likely positive. While the company's extraordinary loss is real, it is not recurring. This implies the 23% increase in net income is more representative of the ongoing business activities of Chicago Construction than the 12% decrease after the extraordinary loss. You must also assess the extent to which the fire loss is extraordinary. That is, this loss might be more than what extraordinary implies, or it might signal a new risk exposure for Chicago Construction. Nevertheless, on the information provided, the credit terms should be at least as good and perhaps better in the coming year.

BANKER

Playground Equipment's recognition of revenue during production is probably too liberal. Recognizing revenue during production is acceptable only when total revenues and expenses are estimated with reasonable certainty *and* when realization (payment) is reasonably assured. For most companies, these conditions are not met. Unless we are highly confident that Playground Equipment's earnings process meets these stringent conditions, we should require restatement (or an alternative statement) using point of sale as the basis for revenue recognition. If Playground Equipment has considerable collection risks or costs, we might require restatement using

revenue recognition when cash is received. The more conservative the statements used in our analysis, the less risky should be our loan agreement with Playground Equipment. The primary risk we are exposed to in acting on its loan is risk of nonpayment or default. Additional risks include interest rate changes, renegotiation potential, delayed payments, industry changes, and personal employment/promotion.

ANALYST

All corporations wish to minimize expenses. When net income increases due to decrease in expenditures, this is generally good news. Nevertheless, our analysis must examine the source of the expenditure decrease *and* assess its potential ramifications. In the case of California Technology, our analysis reveals a less than comfortable situation. Because most R&D outlays are expensed as incurred, we know that each dollar decrease in R&D outlays increases current net income by a dollar. But because R&D is the essence of a high technology corporation, our analysis of California Technology is troubling. Unless R&D costs have generally fallen in the industry (which is unlikely), California Technology's decrease in R&D expenditures hints at a less than optimistic future. While short-term income rises from decreases in R&D outlays, long-run income is likely to suffer.

QUESTIONS

[Superscript^{A,B} denotes assignments based on Appendix 6A, 6B]

- 6-1. Explain why an analyst attaches great importance to evaluation of the income statement.
- 6-2. Define income. Distinguish income from cash flow.
- 6-3. What are the two basic economic concepts of income? What implications do they have for analysis?
- 6-4. Explain how accountants measure income.
- 6-5. Distinguish between net income, comprehensive income, and continuing income. Cite examples of items that create differences between these three income measures.
- 6-6. Although comprehensive income is the bottom line income number, it is rarely reported in the income statement. Where will you typically find details regarding comprehensive income?
- 6-7. Analysts often refer to the core income of a company. What is meant by the term *core income*?
- 6-8. Distinguish between operating and nonoperating income. Cite examples of items that are typically included in each category.
- 6-9. Operating vs. nonoperating and recurring vs. nonrecurring are two distinct dimensions of classifying income. Explain this statement and discuss whether or not you agree with it.

- 6–10. How does accounting define an *extraordinary* item? Cite three examples of such an item. What are the analysis implications of such an item?
- 6–11. Describe the accounting treatment for discontinued operations. How should an analyst treat discontinued operations?
- 6–12. What conditions are necessary for an item to qualify as a prior period adjustment?
- 6–13. Identify some accounting sources of income distortion.
- 6–14. For each of the three items, (1) depreciation, (2) inventory, and (3) installment sales, explain:
a. Two acceptable accounting methods for reporting purposes.
b. How each of the two acceptable accounting methods identified affect current period income.
(CFA Adapted)
- 6–15. Accounting practice distinguishes among different types of accounting changes. Identify three different types of accounting changes.
- 6–16. Explain what special items are. Give three examples of special items.
- 6–17. How do companies use special charges to influence investors' perceptions regarding company value?
- 6–18. How should an analyst treat special items?
- 6–19. Describe the conditions that are usually required before revenue is considered realized.
- 6–20. Identify the conditions that are usually required before a sale with right of return is recognized as a sale and the resulting receivable is recognized as an asset.
- 6–21. An ability to estimate future returns (when right of return exists) is an important consideration in revenue recognition. Identify factors impairing the ability to predict future returns.
- 6–22. Explain how accounting practice defines a product financing arrangement.
- 6–23. Distinguish between the two major methods used to account for revenue under long-term contracts.
- 6–24. Describe aspects of revenue recognition that an analyst must be especially alert to.
- 6–25. Discuss the accounting standards that govern R&D costs. What are the disclosure requirements?
- 6–26. What information does our analysis need regarding R&D outlays, especially in light of the limited disclosure requirements in practice?
- 6–27. What aspects of the valuation and the amortization of goodwill must analysts be alert to?
- 6–28. Contrast the computation of total interest costs of a bond issue with warrants attached to an issue of convertible debt.
- 6–29. a. What is the main provision of accounting for capitalization of interest, and what are its objectives?
b. How is interest to be computed, and how is the interest rate to be ascertained?
c. What restrictions to capitalization are imposed in practice and when does the capitalization period begin?
- 6–30. Distinguish between the intrinsic value and the fair value of an option.
- 6–31. List and discuss the factors that affect the fair value of an option.
- 6–32. Describe the calculation of compensation expense associated with employee stock options. Is it necessary for a company to charge option-related compensation expense to income? Where in the income statement is compensation expenses reported?
- 6–33. What are the economic costs to issuing employee stock options at the prevailing market price?
- 6–34. What is option overhang? What does it measure? How is it determined?
- 6–35. Net income computed on the basis of financial reporting often differs from taxable income due to permanent differences. What are permanent differences and how do they arise?
- 6–36. What factors cause the effective tax rate to differ from the statutory rate?
- 6–37. What are the main requirements of accounting for income taxes?
- 6–38. List four general cases giving rise to temporary differences between financial reporting and tax reporting.
- 6–39. What are the disclosure requirements when accounting for income taxes?
- 6–40. Identify and explain at least one flaw to which tax allocation procedures are subject.

- 6-41^A. Why is a thorough understanding of the principles governing computation of EPS important to our analysis?
- 6-42^A. Discuss uses of EPS and reasons or objectives for the current method of reporting EPS.
- 6-43^A. What is the purpose underlying the reporting of diluted EPS?
- 6-44^A. How does the payment of dividends on preferred stock affect the EPS computation?
- 6-45^A. EPS can affect a company's stock prices. Can a company's stock prices affect EPS?
- 6-46^A. Accounting for earnings per share has certain weaknesses that our analysis must consider for interpreting EPS data. Identify and discuss at least two weaknesses.
- 6-47^A. In estimating the value of common stock, the amount of EPS is considered an important element.
- Explain why EPS is important in the valuation of common stock.
 - Is EPS equally important in valuing a preferred stock? Why or why not?

(CFA Adapted)

EXERCISES

EXERCISE 6-1

*Analyzing
Discontinued
Operations*

Many companies report discontinued operations in their income statements and balance sheets.

Required:

- What is your best estimate of the summary journal entry recording the disposal of discontinued operations.
- What is included in the income (expense) items relating to discontinued operations as reported in the income statement?
- Discuss the importance of discontinued operations in analyzing a company's financial statements.
- What is the rationale for separately reporting the results of discontinued operations?

EXERCISE 6-2

*Analyzing
Accounting
Reserves*

The following quote is taken from an article (by L. Bernstein) scrutinizing use of reserves to recognize future costs and losses.

The growing use of reserves for future costs and losses impairs the significance of periodically reported income and should be viewed with skepticism by the analyst of financial statements. That is especially true when the reserves are established in years of heavy losses, when they are established in an arbitrary amount designed to offset an extraordinary gain, or when they otherwise appear to have as their main purpose the relieving of future income or expenses properly chargeable to it. The basic justification in accounting for the recognition of future losses stems from the doctrine of conservatism that, according to one popular application, means that one should anticipate no gains, but take all the losses one can clearly see as already incurred.

Required:

- Discuss the merits of Bernstein's arguments and apprehensions regarding reserves.
- Explain how this perspective can be factored into an analysis of past earnings trends, estimates of future earnings, and the valuation of common stock.
- Cite examples of such reserves—you can draw on those in the chapter.

(CFA Adapted)

EXERCISE 6-3

*Interpreting Disclosures
of Accounting Changes*

There are various types of accounting changes requiring different types of reporting treatments. Understanding the different changes is important to analysis of financial statements.

Required:

- Under what category of accounting changes is the change from sum-of-the-years'-digits method of depreciation to the straight-line method for previously recorded assets classified? Under what circumstances does this type of accounting change occur?

- b. Under what category of accounting changes is the change in expected service life of an asset (due to new information) classified? Under what circumstances does this type of accounting change occur?
- c. Regarding changes in accounting principle:
- (1) How does a company compute the effect of such changes?
 - (2) How does a company report the effect of these changes?
- Note:* Do not discuss earnings per share requirements.
- d. Why are accounting principles, once adopted, normally consistently applied over time?
- e. What is the rationale for disclosure of a change from one accounting principle to another?
- f. Discuss how your analysis of mandatory accounting changes might differ from that of voluntary accounting changes.
- g. Discuss how companies might time the adoption of mandatory accounting changes for their own benefit.
- h. Discuss how the adoption of mandatory accounting changes can create an opportunity to establish a hidden reserve. Cite examples.

(AICPA Adapted)

Harvatin Group reported net income totaling \$1,000,000 for the year 2006. The following is additional information obtained from the Harvatin Group's financial reports:

- The Company purchased 100,000 shares of Micron Specialists for \$10 per share during the fourth quarter of 2006. The investment is accounted for as "available for sale." The value of the shares is \$9 at the end of 2006.
- The Company purchased 10,000 shares of Sunswept Properties for \$20 per share during the fourth quarter of 2006. The investment is accounted for as "trading" securities. The value of the shares is \$22 at the end of 2006.
- The company began operations in the Baltic region of Europe during the year and reports a foreign currency translation gain at the end of 2006 totaling \$50,000.
- The actual return on assets in its pension fund total \$150,000. The expected return was \$110,000.
- The company has substantial prior service cost associated with its employee pension plan. As a result, the company had to record an additional minimum pension liability during the year totaling \$25,000.
- The company reported unrealized holding losses on derivative instruments totaling \$12,000.

Required:

- a. Compute comprehensive income for Harvatin Group.
- b. For each item in comprehensive income, discuss balance sheet accounts affected by the item.

EXERCISE 6-4

*Computing
Comprehensive
Income*

Revenue is usually recognized at the point of sale. Under special circumstances, dates other than the point of sale are used for timing of revenue recognition.

Required:

- a. Why is point of sale usually used as the basis for the timing of revenue recognition?
- b. Disregarding special circumstances when bases other than the point of sale are used, discuss the merits of both of the following objections to the sale basis of revenue recognition:
 - (1) It is too conservative because revenue is earned throughout the entire process of production.
 - (2) It is too liberal because accounts receivable do not represent disposable funds, sales returns and allowances can occur, and collection and bad debt expenses can be incurred in a later period.
- c. Revenue can be recognized (1) during production and (2) when cash is received. For each of these two bases of timing revenue recognition, give an example of the circumstances where it is properly used and discuss the accounting merits of its use in lieu of the sales basis.

(AICPA Adapted)

EXERCISE 6-5

*Analysis of
Revenue
Recognition
and Timing*

EXERCISE 6-6

*Analyzing
Percentage-of-
Completion
Figures*

Michael Company accounts for a long-term construction contract using the percentage-of-completion method. It is a four-year contract currently in its second year. Recent estimates of total contract costs indicate the contract will be completed at a profit to Michael Company.

Required:

- What theoretical justification is there for Michael Company's use of the percentage-of-completion method?
- How are progress billings accounted for? Include in your discussion the classification of progress billings in the Michael Company financial statements.
- How is income computed in the second year of the four-year contract using the cost method of determining percentage of completion?
- What is the effect on earnings in the second year of the four-year contract when using the percentage-of-completion method instead of the completed-contract method? Discuss.

(AICPA Adapted)

EXERCISE 6-7

*Interpreting Revenue
Recognition for Leases
(book and tax effects)*

Crime Control Co. accounts for a substantial part of its alarm system sales under the sales-type (capitalized) lease method. Under this method the company computes the present value of the total receipts it expects to get (over periods as long as eight years) from a lease and records this present value amount as sales in the first year of the lease. Justification for this accounting is that the 8-year lease extends over more than 75% of the 10-year useful life of the equipment. While the sales-type lease method is used for financial reporting, for tax purposes the company reports revenues only when received. Because first-year expenses of a lease are particularly large, the company reports substantial tax losses on these leases.

Required:

- Critics maintain the sales-type lease method "front loads" income and that reported earnings may not be received in cash for several years. Comment on this criticism.
- Will financial reporting income be improved from the company's tax benefit?
- The company insists it can achieve earnings results similar to those achieved by the sales-type lease method by selling the lease receivables to third-party lessors or financial institutions. Comment on this assertion.

(AICPA Adapted)

EXERCISE 6-8

*Revenue Recognition in
Dot.Com Companies*

Lookhere.Com and StopIn.Com enter into a reciprocal agreement whereby (1) StopIn.Com is given valuable advertising space on the home page of Lookhere.Com and (2) Lookhere.Com is given valuable advertising space on the home page of StopIn.Com. The main source of revenue for both StopIn.Com and Lookhere.Com is sales of advertising on their respective websites. Both companies recognize advertising revenue received from the other company and recognize advertising expense paid to the other company. Accounting regulators express support for the accounting treatment applied by these companies.

Required:

- Do you believe these companies should be allowed to recognize revenue in conjunction with the advertising agreements described above?
- Why do you believe these companies want to record revenue along with its offsetting expense for these transactions?
- How would you assess such transactions in an analysis of these companies?

An analyst must be familiar with the concepts involved in determining income. The amount of income reported for a company depends on the recognition of revenues and expenses for a given time period. In certain cases, costs are recognized as expenses at the time of product sale; in other situations, guidelines are applied in capitalizing costs and recognizing them as expenses in future periods.

Required:

- Explain the rationale for recognizing costs as expenses at the time of product sale.
- What is the rationale underlying the appropriateness of treating costs as expenses of a period instead of assigning the costs to an asset? Explain.
- Under what circumstances is it appropriate to treat a cost as an asset instead of as an expense? Explain.
- Certain expenses are assigned to specific accounting periods on the basis of systematic and rational allocation of asset cost. Explain the underlying rationale for recognizing expenses on this basis.
- Identify the conditions necessary to treat a cost as a loss.

(AICPA Adapted)

EXERCISE 6-9

Expensing vs. Capitalization of Costs

The annual research and development costs for Frontier Biotech for years 2002 through 2006 are shown here (\$ millions):

2002	2003	2004	2005	2006
\$5.1	\$5.9	\$6.0	\$6.2	\$3.3

Required:

- Comment on the manner in which research and development costs impact net income in both the current year and in future years.
- How would you assess the reduced research and development expenditure in year 2006?

EXERCISE 6-10

Analyzing Research and Development Costs

A current exposure draft requires companies to recognize the fair value of employee stock options as an operating expense. Options pricing models are used to estimate the fair value of the options. Under current GAAP, companies have the choice to provide footnote disclosure of pro forma effects on net income of the costs of employee stock options.

Required:

- Discuss whether an analyst would have a preference for recording ESO costs in the body of the income statement or disclosing the pro forma effect of ESO costs in the footnotes.
- If you are analyzing an annual report that footnotes ESO effects on net income describe how you can use the pro forma disclosures to recast your analysis for the impact of employee stock options.
- Identify at least four ratios in your financial analysis that are impacted by the recognition or nonrecognition (footnoting) of ESO cost.

EXERCISE 6-11

Analyzing Employee Stock Option Disclosures

On August 1, 2003, the board of directors of Incent.Com approved a stock option plan for its middle managers and software design professionals (100 employees). The plan awards 1,000 shares of \$5 par value common stock to each employee. The grant date is January 1, 2004. The option (exercise) price of the shares is the opening stock price on January 1, 2004 (\$20). The options are nontransferable and are exercisable after December 31, 2008. The options expire when the employee leaves the company or on December 31, 2015, whichever is first. Management estimates annual forfeitures will be 4% and that the expected life of the options is 6 years. The fair value of the options based on the Black-Scholes Options Pricing Model is \$8 per option. On the first exercise date, 50,000 options are exercised when the stock price is \$60 per share.

EXERCISE 6-12

Interpreting Employee Stock Options

Required:

- a. Is this a compensatory or noncompensatory stock option plan? Explain.
- b. Why would Incent.Com offer such a plan to its employees?
- c. What is the grant date, vesting date, and exercise date for this ESO plan?
- d. Are the stock options “in-the-money” at the grant date? Explain.
- e. When should total compensation cost be measured? Explain.
- f. How much compensation cost should be recognized in total in relation to this stock option plan?
- g. In which periods should total compensation cost be allocated to as compensation expense?
- h. Explain how this ESO plan transfers wealth from stockholders to employees.

EXERCISE 6-13

*Information Disclosures
and Employee
Stock Options*

Some research shows that the price of stock is likely to fall in the days leading up to the fixing of the exercise price for employee stock options. It is suggested that the price decreases are the result of selective news releases from managers. Specifically, managers are asserted to delay the release of good news until after the ESO grant date and, instead, selectively release bad news before the date that the stock option exercise price is fixed.

Required:

- a. Why do you believe managers are willing to announce bad news but not good news in advance of the stock option grant date?
- b. How might you adjust your reaction to news announcements (or lack thereof) around the date when employee stock option exercise prices are set?

EXERCISE 6-14

*Interpreting Deferred
Income Taxes*

Primrose Co. uses the deferred method for interperiod tax allocation. Primrose reports depreciation expense for machinery purchases for the current year using the modified accelerated cost recovery system (MACRS) for income tax purposes and the straight-line basis for financial reporting. The tax deduction is the larger amount this year. Primrose also received rent revenues in advance this year. It included these revenues in this year's taxable income. For financial reporting, rent revenues are reported as unearned revenues, a current liability.

Required:

- a. What is the conceptual underpinning for deferred income taxes?
- b. How does Primrose determine and account for the income tax effect for both depreciation and rent? Explain.
- c. How does Primrose classify the income tax effect of both depreciation and rent on its balance sheet and income statement? Explain.

EXERCISE 6-15

*Earnings
Management
Motives*

Companies sometimes use earnings management techniques to increase reported earnings per share by as little as 1 cent.

Required:

Explain why a 1 cent change in reported earnings per share would be insignificant for some companies but significant for other companies. Include in your answer references to at least two earnings targets toward which a company might be managing earnings per share.

Publicly traded companies are required to report earnings per share data on the face of the income statement.

Required:

Compare and contrast basic earnings per share with diluted earnings per share for each of the following:

- a. The effect of dilutive stock options and warrants on the number of shares used in computing earnings per share.
- b. The effect of dilutive convertible securities on the number of shares used in computing earnings per share data.
- c. The effect of antidilutive securities in computing earnings per share.

(CFA Adapted)

EXERCISE 6-16^A

*Analyzing
Earnings
per Share*

Accounting requires presentation of earnings per share data along with the income statement.

Required:

- a. Explain the meaning of basic earnings per share.
- b. Explain how diluted earnings per share differs from basic earnings per share.

(CFA Adapted)

EXERCISE 6-17^A

*Interpreting
Earnings
per Share*

Champion had 2 million shares outstanding on December 31, Year 7, its year-end. On March 31, Year 8, Champion paid a 10% stock dividend. On June 30, Year 8, Champion sells \$10 million of 5% convertible debentures, convertible into common shares at \$5 per share. The AA bond rate on the issue date is 10%.

1. Basic earnings per share for Year 8 is computed on the following number of shares:

a. 2,050,000	c. 3,200,000
b. 2,150,000	d. 4,200,000
2. Assume that Champion also has outstanding warrants to purchase 1 million shares at \$5 per share. The price of Champion common shares is \$8 per share at December 31, Year 8, and the average share price for Year 8 is \$4. For the computation of basic earnings per share, how many *additional* shares must be assumed to be outstanding because of the warrants?

a. Zero	c. 625,000
b. 375,000	d. 1,000,000
3. Given the same facts as in (2), how many *additional* shares must be assumed to be outstanding because of the warrants when computing diluted earnings per share?

a. Zero	c. 625,000
b. 375,000	d. 1,000,000

(CFA Adapted)

EXERCISE 6-18^A

*Earnings per Share
Computations
(multiple choice)*

CHECK

(1) b

PROBLEMS

The *unaudited* income statements of Dispo Corporation are reproduced below.

	Year 8	Year 7
Sales.....	\$1,100	\$900
Costs and expenses.....	990	860
Loss on asset disposal.....	10	—
Income before taxes.....	100	40
Tax expense.....	50	20
Net income.....	\$ 50	\$ 20

PROBLEM 6-1

*Disclosing
Discontinued
Operations*

Note: On August 15, Year 8, the company decided to discontinue its Metals Division. The business was sold on December 31, Year 8, at book value except for a factory building with a book value of \$25 that was sold for \$15. Operations of the Metals Division were:

	Sales	Income (Loss)
Year 7	\$300	\$8
Jan. 1 to Aug. 15, Year 8.....	250	(3)
Aug. 16 to Dec. 31, Year 8	75	(1)

CHECK

Year 8 Continuing income, \$59

Required:

Correct the Year 7 and Year 8 income statements to reflect the proper reporting of discontinued operations.

PROBLEM 6-2

Revenue Recognition (multiple choice)

- In preparing its Year 9 adjusting entries, the Singapore Company neglected to adjust rental fees received in advance for the amount of rental fees earned during Year 9. What is the effect of this error?
 - Net income is understated, retained earnings are understated, and liabilities are overstated.
 - Net income is overstated, retained earnings are overstated, and liabilities are unaffected.
 - Net income, retained earnings, and liabilities all are understated.
- The Sutton Construction Company entered into a contract in early Year 8 to build a tunnel for the city at a price of \$11 million. The company estimated total cost of the project at \$10 million and three years to complete. Actual costs incurred (on budget) and billings to the city are as follows:

	Costs Incurred	Billings to City
Year 8	\$2,500,000	\$2,000,000
Year 9	4,000,000	3,500,000
Year 10	3,500,000	5,500,000

Using the percentage-of-completion method for revenue recognition, what does Sutton Construction report for revenues and profit for Year 9?

	Revenues	Profit		Revenues	Profit
a.	\$4,000,000	\$300,000	c.	\$3,850,000	\$350,000
b.	\$4,400,000	\$400,000	d.	\$3,500,000	\$500,000

CHECK

(2) b

- Using the percentage-of-completion method in accounting for long-term projects, a company can increase reported earnings by:
 - Accelerating recognition of project expenditures.
 - Delaying recognition of project expenditures.
 - Switching to completed-contract accounting.
 - Overestimating the total cost of the project.
- Revenue can be recognized at the time of:
 - Production.
 - Sale.
 - Collection.
 - All of the above.
- In October, a company shipped a new product to retailers. Which one of the following conditions would prohibit immediate recognition of revenue?
 - Terms of the sale require the company to provide extensive promotional materials to retailers before December 1.
 - Retailers are not obligated to pay the purchase price until February, after their holiday sales are collected.
 - On the basis of past performance, reliable estimates are that 20% of the product is returned.
 - The company is unable to enforce agreements concerning discounting of the retail sales of the product.
- In accounting for long-term contracts, how does the percentage-of-completion method of revenue recognition differ from the completed contract method? (Choose one answer from a, b, c, or d below.)
 - Present value of income tax payments is minimized.
 - Revenue for each period reflects more closely the results of construction activity during the period.

- iii. Current status of uncompleted contracts is reported more accurately.
 - iv. Percentage-of-completion method relies less on estimates for both the degree of completion and the extent of future costs to be incurred.
 - a. i and ii.
 - b. i and iii.
 - c. ii and iii.
 - d. ii and iv.
7. R. Lott Corporation, which began business on January 1, Year 7, uses the installment sales method of accounting. The following data are available for December 31, Year 7 and Year 8:

	Year 7	Year 8
Balance of deferred gross profit on sales account		
Year 7.....	\$300,000	\$120,000
Year 8.....	—	\$440,000
Gross profit on sales.....	30%	40%

The installment accounts receivable balance at December 31, Year 8, is:

- a. \$1,000,000
- b. \$1,100,000
- c. \$1,400,000
- d. \$1,500,000

CHECK
(7) d

(CFA Adapted)

Cendant was formed on December 18, 1997, via the merger of CUC International and HFS, Inc. The company owns the rights to franchises and brands including Avis, Century 21 Real Estate, Coldwell Banker, Days Inn, Howard Johnson, and Ramada. The consolidated entity got off to a bad start when it was revealed that CUC International executives had been committing “widespread and systemic” accounting fraud with intent to deceive investors. When the company announced that it had discovered “potential accounting irregularities” the stock dropped from \$36 to \$19 per share. Eventually the stock would fall to as low as \$6 per share as the company struggled to convince investors about management’s integrity. According to the company’s own investigation, CUC executives had inflated earnings by over \$650 million over a three-year period using several tactics, including: (1) failing to timely record returned credit card purchases and membership cancellations, (2) improperly capitalizing and amortizing expenses related to attracting new members, and (3) recording fictitious sales.

Cendant

PROBLEM 6–3

Revenue Recognition and Fraudulent Behavior

Required:

- a. For each of three fraudulent tactics employed by CUC, identify an analysis technique that could have identified the accounting improprieties.
- b. Both the investors and the management of HFS had relied on audited financial statements in making decisions regarding CUC International. What do you believe was the external auditor’s culpability in not detecting these fraudulent practices?

Refer to the financial statements of **Campbell Soup Company** in Appendix A.

Campbell Soup Company

PROBLEM 6–4

Analyzing Income Tax Disclosures

Required:

- a. Estimate the amount of depreciation expense reported on Campbell’s tax returns for each of the Years 11, 10, and 9. Use a tax rate of 34%.
- b. Identify the amounts and sources in each of the Years 11, 10, and 9 for the following (*note*: combine federal, foreign, and state taxes).
 - (1) Earnings before income taxes.
 - (2) Expected income tax at 34%.
 - (3) Total income tax expense.

CHECK

(a) Year 11, \$211.9 mil.

- (4) Total income tax due.
- (5) Total income tax due and not yet paid at end of Years 11, 10, and 9.
- c. Why does the effective tax rate for Years 11, 10, and 9 differ from 34% of income before taxes? Answer with a reconciliation including explanations.
- d. There is a small tax benefit derived from the divestiture and restructuring charges in Year 10. Can you estimate the cash outlays for these charges in Year 10?

CHECK

(d) \$110 mil.

PROBLEM 6-5

Understanding Revenue Recognition and Deferred Income Taxes

Big-Deal Construction Company specializes in building dams. During Years 3, 4, and 5, three dams were completed. The first dam was started in Year 1 and completed in Year 3 at a profit before income taxes of \$120,000. The second and third dams were started in Year 2. The second dam was completed in Year 4 at a profit before income taxes of \$126,000, and the third dam was completed in Year 5 at a profit before income taxes of \$150,000. The company uses percentage-of-completion accounting for financial reporting and the completed-contract method of accounting for income tax purposes. The applicable income tax rate is 50% for each of the Years 1 through 5. Data relating to progress toward completion of work on each dam as reported by the company's engineers are given here:

Dam	Year 1	Year 2	Year 3	Year 4	Year 5
1	20%	60%	20%		
2		30	60	10%	
3		10	30	50	10%

Required:

For each of the five years, Year 1 through Year 5, compute:

- a. Financial reporting (book) income.
- b. Taxable income.
- c. Change in deferred income taxes.

CHECK

Year 2, Increase in Def. Inc. Taxes, \$62,400;
Year 5, Decrease in Def. Inc. Taxes, \$67,500

PROBLEM 6-6

Analyzing Preoperating Costs and Deferred Income Taxes

Stead Corporation is formed in Year 4 to take over the operations of a small business. This business proved very stable for Stead, as is evidenced here (\$ in thousands):

	Year 4	Year 5	Year 6
Sales.....	\$10,000	\$10,000	\$10,000
Expenses (except taxes).....	9,000	9,000	9,000
Income before taxes.....	\$ 1,000	\$ 1,000	\$ 1,000

Stead also expends \$1,400,000 on preoperating costs for a new product during Year 4 (not included in the above figures). These costs are deferred for financial reporting purposes but are deducted in calculating Year 4 taxable income. During Year 5, the new product line is delayed; and in Year 6, Stead abandons the new product and charges the deferred cost of \$1,400,000 to the Year 6 income statement. The applicable tax rate is 50%.

Required:

- a. Prepare comparative income statements for Years 4, 5, and 6. Identify all tax amounts as either current or deferred.
- b. Compute both current and deferred taxes payable for the balance sheet for each of the Years 4, 5, and 6 (assume all tax payments and refunds occur in the year following the reporting year).

CHECK

Year 5 income, \$500;
Year 6 loss, \$(200)

Playgrounds, Inc., is granted a distribution franchise by Shady Products in Year 1. Operations are profitable until Year 4 when some of the company's inventories are confiscated and large legal expenses are incurred. Playgrounds' tax rate is 50% each year (all expenses and costs are tax deductible). Relevant income statement data are (in thousands):

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
Sales	\$50	\$80	\$120	\$ 100	\$200	\$400	\$500	\$600
Cost of sales	20	30	50	300	50	120	200	250
General and administrative	<u>10</u>	<u>15</u>	<u>20</u>	<u>100</u>	<u>20</u>	<u>30</u>	<u>40</u>	<u>50</u>
Pretax income.....	<u>\$20</u>	<u>\$35</u>	<u>\$ 50</u>	<u>\$(300)</u>	<u>\$130</u>	<u>\$250</u>	<u>\$260</u>	<u>\$300</u>

Required:

Compute tax expense for each of the Years 1 through 8, and present comparative income statements for these years (assume a 3-year carryback period, a 20-year carryforward period for any losses, and a 100% valuation allowance for the loss carryforward).

PROBLEM 6-7

Accounting for Income Tax Expense

CHECK

Year 4 loss, \$(247.5);
Year 8 income, \$150

The financial data below should be used to answer the following two questions.

WRESTLING FEDERATION OF AMERICA, INC.

Capital Structure and Earnings for Year 7

Number of common shares outstanding on December 31, Year 7	2,700,000
Number of common shares outstanding during Year 7 (weighted average)	2,500,000
Market price per common share on December 31, Year 7	\$ 25
Weighted-average market price per share during Year 7	\$ 20
Options outstanding during Year 7:	
Number of shares issuable on exercise of options	200,000
Exercise price	\$ 15
Convertible bonds outstanding (December 31, Year 3, issue date):	
Number of convertible bonds	10,000
Shares of common issuable on conversion (per bond)	10
Coupon rate	5.0%
Proceeds per bond at issue (at par value)	\$ 1,000
Net income for Year 7	\$6,500,000
Tax rate for Year 7	40.0%

PROBLEM 6-8^A

Earnings per Share Computations (multiple choice)

- Basic earnings per share for Year 7 is (choose one of the following):
 - \$2.41
 - \$2.57
 - \$2.60
 - \$2.50
- Diluted earnings per share for Year 7 is (choose one of the following):
 - \$2.43
 - \$2.55
 - \$2.54
 - \$2.60

PROBLEM 6-9^A

*Computing
Earnings
per Share*

Ace Company's net income for the year is \$4 million and the number of common shares outstanding is 3 million (there is no change in shares outstanding during the year). Ace has options and warrants outstanding to purchase 1 million common shares at \$15 per share.

Required:

- If the average market value of the common share is \$20, year-end price is \$25, interest rate on borrowings is 6%, and the tax rate is 50%, then compute both basic and diluted EPS.
- Do the same computations as in *a* assuming net income for the year is only \$3 million, the average market value per common share is \$18, and year-end price is \$20 per share.

CHECK

(b) Diluted EPS, \$0.95

CASES**CASE 6-1**

*Understanding
Revenue Recognition*

BIKE Company starts with \$3,000 cash to finance its business plan of producing bike helmets using a simple assembly process. During the first month of business, the company signs sales contracts for 1,300 units (sales price of \$9 per unit), produces 1,200 units (production cost of \$7 per unit), ships 1,100 units, and collects in full for 900 units. Production costs are paid at the time of production. The company has only two other costs: (1) sales commissions of 10% of selling price when the company collects from the customer, and (2) shipping costs of \$0.20 per unit paid at time of shipment. Selling price and all costs per unit have been constant and are likely to remain the same.

Required:

- Prepare comparative (side-by-side) balance sheets and income statements for the first month of BIKE Company for each of the following three alternatives:
 - Revenue is recognized at the time of shipment.
 - Revenue is recognized at the time of collection.
 - Revenue is recognized at the time of production.

Note: Net income for each of these three alternatives is (1) \$990, (2) \$810, and (3) \$1,080, respectively.
- The method where revenue is recognized at time of collection, known as the *installment method*, is acceptable for financial reporting in unusual and special cases. Why is BIKE Company likely to prefer this method for tax purposes?
- Comment on the usefulness of the installment method for a credit analyst in using both the balance sheet and income statement.

CASE 6-2

*Analyzing
Operating
Activities*

Refer to the annual report of **Campbell Soup** in Appendix A.

Campbell Soup

Required:

- Compute all of the expense categories as a percentage of sales for each of the three years shown. Analyze and comment on the percentages computed.
- Comment on the extent to which each component in (a) is expected to persist into future years.
- The provision for income taxes makes up what percent of earnings before income taxes? What factors might cause this percentage to deviate from the statutory percentage of 35%?
- Campbell Soup reports divestiture and restructuring programs in Years 9 and 10. What amount of expense is recorded relating to these programs? To what activities do these costs relate? How do you interpret these costs?
- How might large liabilities such as Campbell Soup's restructuring liabilities be used to manage earnings?

On September 16, 20X8, Toys “R” Us [ToysRUs.Com], the world’s largest Toys “R” Us toy seller, announced strategic initiatives to restructure its business. The total cost to implement these initiatives yielded a charge of \$508 million, which exceeded operating earnings from the prior year. The \$508 million charge consisted of costs to close and/or downsize stores, distribution centers, and administrative functions to streamline store formats, inventories and supply chains; and for changes in accounting estimates and provisions for legal settlements. These initiatives included the closing of 50 toy stores in the international division, predominantly in continental Europe, and 9 in the U.S. that did not meet the company’s return on investment goals. It also closed 31 Kids “R” Us stores and converted 28 nearby U.S. toy stores into combination stores. Combination stores sell toys and apparel. These initiatives were expected to save more than \$75 million in 20X9 and even more in subsequent years. At the time of the restructuring announcement, the company had 116,000 employees and 1,145 stores worldwide. Of the 1,145 stores, 697 are in the U.S. The company also ran 214 Kids “R” Us stores, 101 Babies “R” Us stores, and 2 KidsWorld stores. It hoped to reverse a trend of losing sales to Wal-Mart and other discount retailers. Toys “R” Us had an 18.4% U.S. toy market share in 20X7, down from 18.9% in 20X6. Wal-Mart’s share and Target’s share rose from 15.3% to 16.4%, and 6.4% to 7.1%, respectively, during that time. Toys “R” Us selected financial reports follow:

CASE 6-3*Analyzing Restructuring Activities***Letter to Stockholders****To Our Stockholders**

20X8 was indeed a year of enormous challenge and change. We’ve spent the year intensively reviewing every aspect of our business and making some tough calls aimed at repositioning our worldwide business. Key elements of our strategic plan include a Total Solutions Strategy focused on our C-3 plan, which includes the reformatting and repositioning of our toy stores; development of a customer-driven culture; expanding product development; improving our customer value proposition; accelerating our supply chain management program; and expanding our channels of selling. In conjunction with these restructuring efforts, we have been proactively rebuilding and reshaping a stronger management team which will serve to build the foundation for repositioning your Company in the years ahead. We believe that the sum total of these efforts will serve as the springboard toward implementing our expanded vision for the future: to position Toys“R”Us as the worldwide authority on kids, families and fun.

20X8 Restructuring Benefits

We ended 20X8 a much healthier and vibrant company. This was attributable to some tough strategic decisions that will shape the Company’s future. We recorded restructuring and other charges of \$508 million net of taxes, which caused the Company to incur a net loss in 20X8. The impact of making these tough calls will be evident in our future operations, growth, and financial performance. These charges are the result of an exhaustive review of all our operations in 20X8 from both a strategic and an Economic Value Added (EVA[®]) perspective. These reviews prompted the following significant actions:

- The closing and/or downsizing of approximately 50 toy stores in the International arena, predominantly in continental Europe, and about 9 U.S. toy stores which do not meet the Company’s strategic or financial objectives. This will free our management to focus on higher return opportunities;
- The conversion of 28 existing U.S. toy stores into “combo” stores, which will enable us to close 31 nearby Kids “R” Us stores. In addition to reducing operating costs and releasing working capital, this will allow us to enhance our productivity by further expanding kids’ apparel into additional Toys“R”Us stores;
- The consolidation of several distribution centers and over half a dozen administrative offices. These actions will reduce administrative support functions in the U.S. and Europe, which will not only generate selling, general and administrative efficiencies, but “flatten” our organization and bring our management even closer to our stores and customers;
- The continuation of taking aggressive markdowns on clearance product to optimize inventory levels, accommodate new product offerings and accelerate our store reformatting. In conjunction with the initial stages of our supply chain re-engineering, we have already been

able to reduce same store inventories in all our divisions by over \$560 million or 24% at year end 20X8, with roughly \$480 million or 31% of this favorable swing coming from reduced inventory in the U.S. toy stores division alone. This brought us into the new year with heightened merchandise flexibility and increased “open to buy” as we begin the rollout of the initial phase of our store reformat program in 20X9.

One of our other key priorities in 20X8 was to build a strong executive team, and we are well on our way towards assembling a truly outstanding management team. Since the beginning of 20X8, more than 50 percent of our officer team has either joined the company from the outside, or has been promoted or transferred to new assignments, bringing fresh perspectives and proven skills to our business.

It is obvious our 20X8 sales and earnings were not what we wanted them to be. However, we’ve spent a year making tough calls and hard decisions, and we’re now ready to move forward stronger and more focused than ever.

Total Solutions Strategy

Our restructuring program, in September 20X8, was the first step required to launch a winning strategy for Toys “R” Us—a strategy which will realign our assets, organization and thinking based on customer-driven priorities in a more competitive marketplace. In the “R” Us brand, we have one of the best-known brand names in the world: our challenge is to more effectively develop this strong customer franchise potential. Today’s retail marketplace demands stores that are exciting, easy to shop and customer-friendly. While our selection is still superior to our competitors, that alone is not compelling enough to rebuild market share and brand loyalty. We must become more focused on developing greater everyday customer value in terms of price, service, and the total shopping experience.

Management’s Discussion and Analysis

Results of Operations and Financial Condition

During 20X8 the Company announced strategic initiatives to reposition its worldwide business and other charges including the customer-focused reformatting of its toy stores into the new C-3 format, as well as the restructuring of its International operations which resulted in a charge of \$353 million (\$279 million net of tax benefits, or \$1.05 per share). The strategic initiatives resulted in a restructuring charge of \$294 million. The other charges of \$59 million primarily consist of changes in accounting estimates and provisions for legal settlements. The Company is closing and/or downsizing underperforming stores and consolidating distribution centers and administrative offices. As a result, approximately 2,600 employees will be terminated worldwide. Stores expected to be closed had aggregate store sales and net operating losses of approximately \$322 million and \$5 million, respectively, for the year ended January 30, 20X9. The write-down of property, plant, and equipment relating to the above mentioned closures and downsizings were based on both internal and independent appraisals. Unused reserves at January 30, 20X9, should be utilized in 20X9, with the exception of long-term lease commitments, which will be utilized in 20X9 and thereafter. Details on the components of the charges are described in the Notes to the Consolidated Financial Statements and are as follows:

Description	Charge	Utilized	Reserve Balance
Closings/downsizings:			
Lease commitments	\$ 81	\$ —	\$ 81
Severance and other closing costs	29	4	25
Write-down of property, plant & equipment	155	155	—
Other	29	5	24
Total restructuring	<u>\$294</u>	<u>\$164</u>	<u>\$130</u>
Changes in accounting estimates and			
Provisions for legal settlements	<u>\$ 59</u>	<u>\$ 20</u>	<u>\$ 39</u>

In 20X8 the Company also announced markdowns and other charges of \$345 million (\$229 million net of tax benefits, or \$.86 per share). Of this charge, \$253 million relates to markdowns required to clear excess inventory from stores. These markdowns should enable the Company to achieve its optimal inventory assortment and streamline systems so that it can proceed with the C-3 conversions on an accelerated basis. The Company's objective with its new C-3 concept is to provide customers with a better shopping experience leading to increased sales and higher inventory turns. In addition, the Company recorded \$29 million in markdowns related to the store closings discussed previously. The Company also recorded charges to cost of sales of \$63 million related to inventory system refinements and changes in accounting estimates. Unused reserves at January 30, 20X9, are expected to be utilized in 20X9. Details of the markdowns and other charges are as follows:

Description	Charge	Utilized	Reserve Balance
Markdowns			
Clear excess inventory	\$253	\$179	\$ 74
Store closings	29	2	27
Change in accounting estimates & other	63	57	6
Total cost of sales	<u>\$345</u>	<u>\$238</u>	<u>\$107</u>

The strategic initiatives, markdowns, and other charges described above are expected to improve the Company's free cash flow and increase operating earnings.

CONSOLIDATED STATEMENTS OF EARNINGS

Toys "R" Us, Inc., and Subsidiaries

(In millions except per share data)	Year Ended		
	January 30, 20X9	January 31, 20X8	February 1, 20X7
Net sales	\$11,170	\$11,038	\$9,932
Cost of sales.....	8,191	7,710	6,892
Gross profit	2,979	3,328	3,040
Selling, advertising, general, and administrative expenses	2,443	2,231	2,020
Depreciation, amortization, and asset write-offs	255	253	206
Restructuring and other charges.....	294	—	60
Total operating expenses.....	2,992	2,484	2,286
Operating income (loss).....	(13)	844	754
Interest expense	102	85	98
Interest and other income.....	(9)	(13)	(17)
Interest expense, net.....	93	72	81
Earnings (loss) before income taxes.....	(106)	772	673
Income taxes	26	282	246
Net earnings (loss)	<u>\$ (132)</u>	<u>\$ 490</u>	<u>\$ 427</u>
Basic earnings (loss) per share.....	<u>\$ (0.50)</u>	<u>\$ 1.72</u>	<u>\$ 1.56</u>

CONSOLIDATED BALANCE SHEETS

Toys "R" Us, Inc., and Subsidiaries

(In millions)	January 30, 20X9	January 31, 20X8
Assets		
Current assets		
Cash and cash equivalents	\$ 410	\$ 214
Accounts and other receivables	204	175
Merchandise inventories	1,902	2,464
Prepaid expenses and other current assets	81	51
Total current assets	2,597	2,904
Property and equipment		
Real estate, net	2,354	2,435
Other, net	1,872	1,777
Total property and equipment	4,226	4,212
Goodwill, net	347	356
Other assets	729	491
	<u>\$7,899</u>	<u>\$7,963</u>
Liabilities		
Current liabilities		
Short-term borrowings	\$ 156	\$ 134
Accounts payable	1,415	1,280
Accrued expenses and other current liabilities	696	680
Income taxes payable	224	231
Total current liabilities	2,491	2,325
Long-term debt	1,222	851
Deferred Income taxes	333	219
Other liabilities	229	140
Stockholders' equity		
Common stock	30	30
Additional paid-in capital	459	467
Retained earnings	4,478	4,610
Foreign currency translation adjustments	(100)	(122)
Treasury shares, at cost	(1,243)	(557)
Total stockholders' equity	3,624	4,428
	<u>\$7,899</u>	<u>\$7,963</u>

Financial Statement Footnote

Restructuring and Other Charges

On September 16, 20X8, the Company announced strategic initiatives to reposition its worldwide business. The cost to implement these initiatives, as well as other charges resulted in a total charge of \$333 (\$266 net of tax benefits, or \$1.00 per share). The Company determined that the strategic initiatives required a restructuring charge of \$294 to close and/or downsize stores, distribution centers, and administrative functions. This worldwide plan includes the closing of 50 toy stores in the International division, predominantly in continental Europe, and 9 in the United States that do not meet the Company's return on investment objectives. The Company will also close 31 Kids "R"Us stores and convert 28 nearby U.S. toy stores into combination stores in the new C-3 format discussed below. Combination stores include toys and an apparel selling space of approximately 5,000 square feet. Other charges consist primarily of changes in accounting estimates and provisions for legal settlements of \$39 recorded in selling, general, and administrative expenses. Of the total restructuring and other charges, \$149 relates to domestic operations and \$184 relates to International operations. Remaining reserves of \$149 should be utilized in 20X9, with the exception of long-term lease commitments, which will be utilized in 20X9 and thereafter.

Also on September 16, 20X8, the Company announced mark-downs and other charges to cost of sales of \$345 (\$229 net of tax benefits, or \$.86 per share). The Company has designed a new store format called C-3. The Company plans to convert approximately 200 U.S. toy stores to the new C-3 format in 20X9. Of this charge, \$253 related to markdowns required to clear excess inventory from its stores so the Company can proceed with its new C-3 store format on an accelerated basis. Another component of the charge was inventory markdowns of \$29 related to the closing and/or downsizing of stores discussed above. The Company also recorded charges to cost of sales of \$63 related to inventory system refinements and changes in accounting estimates. Of these charges, \$288 relate to domestic operations and \$57 relate to International operations. Remaining reserves of \$107 are expected to be utilized in 20X9.

Additionally, in the fourth quarter of 20X8, the Company recorded a charge of \$20 (\$13 net of tax benefits, or \$.05 per share), related to the resolution of third party claims asserted from allegations made by the Federal Trade Commission. This charge was in addition to a \$15 charge relating to the same matter, included in the charges mentioned above.

At January 30, 20X9, the Company had approximately \$45 of liabilities remaining for its restructuring program announced in 20X5 primarily relating to long-term lease obligations.

The Company believes that reserves are adequate to complete the restructuring and other programs described previously.

On July 12, 20X6, an arbitrator rendered an award against the Company in connection with a dispute involving rights under a license agreement for toy store operations in the Middle East. Accordingly, the Company recorded a provision of \$60 during 20X6 (\$38 net of tax benefits, or \$.14 cents per share), representing all costs in connection with this matter.

Required:

Refer to the Toys "R" Us financial information to answer the following questions.

1. What is the total amount that Toys "R" Us spent for its restructuring plan? Analyze the breakdown of charges and identify where the charge is reported in the income statement.
2. Recast the income statement without the restructuring charge and analyze operating performance for 20X9 by comparing with 20X8 performance.
3. Identify the major elements of its restructuring strategy and their economic effects. What will be the effect on future income and how are the savings expected to arise?
4. Discuss how the restructuring liability could be used by Toys "R" Us as a vehicle for earnings management. In your opinion is Toys "R" Us managing earnings through this charge?
5. Describe how an analyst would recast the balance sheet and income statement of Toys "R" Us to reflect the restructuring costs as an investment to create future cost savings.
6. How can the relative success of these restructuring activities be measured?

CASE 6-4^A*Analyzing
Earnings per Share
with Convertible
Debentures*

The officers of Environmental, Inc., considered themselves fortunate when the company sold a \$9,000,000 subordinated convertible debenture issue on June 30, Year 1, with a 6% coupon. They had the alternative of refunding and enlarging the outstanding term loan, but the interest cost would have been one-half point above the AA bond rate. The AA bond rate was as high as 8½% until March 29, Year 1, when it was lowered to 8%, the rate that prevailed until September 21, Year 1, when it was lowered again to 7½%. As of December 31, Year 1, Environmental, Inc., had the following capital structure:

7% term loan*	\$3,000,000
6% convertible subordinated debentures [†]	9,000,000
Common stock, \$1 par, authorized 2,000,000 shares, issued and outstanding	900,000
900,000 warrants, expiring July 1, Year 6 [‡]	—
Additional Paid-In Capital.....	1,800,000
Retained earnings.....	4,500,000

*Term loan (originally \$5,000,000) is repayable in semiannual installments of \$500,000.

[†]Convertible subordinated debentures, sold June 30, Year 1, are convertible any time at \$18 until maturity. Sinking fund of \$300,000 per year to start in Year 6.

[‡]Warrants entitle holder to purchase one share for \$10 to expiration on July 1, Year 6.

Additional data for Year 1:

Interest expense	\$ 500,000
Net income	1,500,000
Dividends paid	135,000
Earnings retained.....	900,000
Market prices December 31, Year 1 (averages for Year 1)	
Convertible debentures 6%	\$107
Common Stock.....	\$13
Stock Warrants	\$4.5
Treasury bills interest rate at 12/31/Year 1.....	6%

*Required:***CHECK**

(a) Diluted EPS, \$1.20

- Calculate and show computations for basic and diluted earnings per share figures for common stock for the Year 1 annual report (assume a 50% tax rate).
- What is the times-interest-earned ratio for Year 2 assuming net income before interest and taxes is the same as in Year 1 (a 50% income tax rate applies)?

(CFA Adapted)

Part I. Information concerning the capital structure of Dole Corporation is reproduced below:

	DECEMBER 31	
	Year 5	Year 6
Common stock.....	90,000 shares	90,000 shares
Convertible preferred stock	10,000 shares	10,000 shares
8% convertible bonds	\$1,000,000	\$1,000,000

CASE 6-5^A

*Determining
Earnings
per Share*

During Year 6, Dole pays dividends of \$1 per share on its common stock and \$2.40 per share on its preferred stock. The preferred stock is convertible into 20,000 shares of common stock. The 8% convertible bonds are convertible into 30,000 shares of common stock. Net income for the year ended December 31, Year 6, is \$285,000. The income tax rate is 50%.

Required:

- a. Compute basic earnings per share for the year ended December 31, Year 6.
- b. Compute diluted earnings per share for the year ended December 31, Year 6.

CHECK

(a) Diluted EPS, \$2.32

Part II. The R. Lott Company's net income for the year ended December 31, Year 6, is \$10,000. During Year 6, R. Lott declares and pays \$1,000 cash dividends on preferred stock and \$1,750 cash dividends on common stock. At December 31, Year 6, 12,000 shares of common stock are issued and outstanding—10,000 of which were issued and outstanding throughout the entire year and 2,000 of which were issued on July 1, Year 6. There are no other common stock transactions during the year, and there is no potential dilution of earnings per share.

Required:

Compute the Year 6 basic earnings per common share of R. Lott Company.